

Archaeological Monitoring at St. James' Hospital Chapel, Horning, Norfolk.



Prepared for Ted Brewster

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August 2013

Report No: 32

NHES Event No: ENF131296

Job Ref: NVC/2012/GE120

OASIS ID: norvicar1-158220

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Archaeological Monitoring of drainage improvement works and a cable trench at St. James' Hospital Chapel, Horning, Norfolk.

Location: Horning
Grid Ref: TG 3722 1631
NHES Event No: ENF131296
Date of fieldwork: 17th to 20th June 2013

1.0 Introduction

Norvic Archaeology was commissioned by Ted Brewster, to undertake archaeological monitoring of groundworks associated with drainage improvement works and a cable trench serving St. James' Hospital Chapel, Horning, Norfolk. Funding for this work was from grant-aid issued by Norfolk County Council as part of the Norfolk Monuments Management Project, which itself has received funding from English Heritage. This funding was provided to contribute to a programme of repairs and a management programme (initiated in 2012) which will run for a five year period.

The monitoring work was primarily based on the requirements set out in the SECTION 17 AGREEMENT: SCHEDULE 3 - Accompanying Brief for the Monitoring of Works under Archaeological Supervision and Control issued by David Robertson of the Historic Environment Service (NHES issue: 19/10/2012).

St. James' Hospital Chapel is a Grade II listed building/Scheduled Monument associated with St. Benet's Abbey, a pre-conquest Benedictine foundation, the precinct of which lies c.1km to the east. The two sites are linked by a raised causeway across the marshes. The role of the site as a medieval hospital may have served a variety of functions. It would have been a place to offer 'hospitality' to travellers and pilgrims, which the monks were obliged to offer in accordance with the rule of St Benedict. It may also have been a place of care for the sick, elderly and poor.

The aim of the monitoring work was to record the presence/absence, date, nature, and extent of any buried archaeological remains and features identified during groundworks. This report presents a brief description of the methodology followed and an archaeological interpretation of the results. On completion of the project, the site archive will be offered for long term deposition with Norfolk Museums and Archaeology Service, following the relevant policy on archiving standards.

2.0 Summary of Results

The chapel building appears to have been well sited on a relatively high occurrence of sandy-clay amongst an area of alluvial clay-silts. A layer of clean redeposited sandy-clay above organic stained deposits may be a consolidation horizon associated with medieval construction.

Two stone-packed, linear features of medieval date were revealed on the south side of the chapel, these are tentatively interpreted as pads or footings for a structure. A medieval ditch was discovered which runs below the north-west corner of the chapel. This may indicate some form of reorganisation of land use, possibly coinciding with a rebuilding programme at the hospital site following fire damage to an earlier building in the 1340s.

Partial exposure of several buttress pads and part of the chapel wall footings allowed for limited examination of the fabric and form of their construction. A small area of the southern chapel wall footings was exposed, which appear to show a fairly shallow footing constructed upon a foundation trench containing mortar debris.

The remnants of two lean-to agricultural buildings of 19th century date were identified on the north side of the chapel from their footings.

A small number of prehistoric flints were collected as residual finds which indicate Late Neolithic to Bronze Age activity in the vicinity of the chapel site.

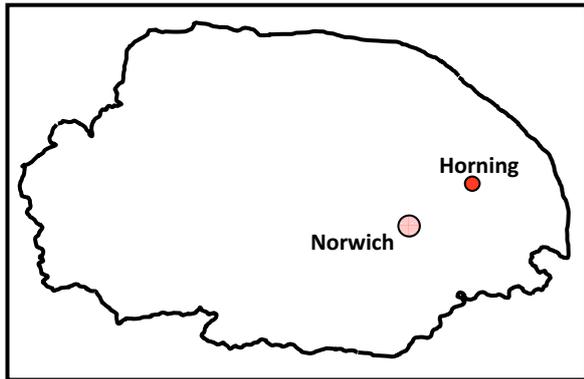


Figure 1: General Location Plan

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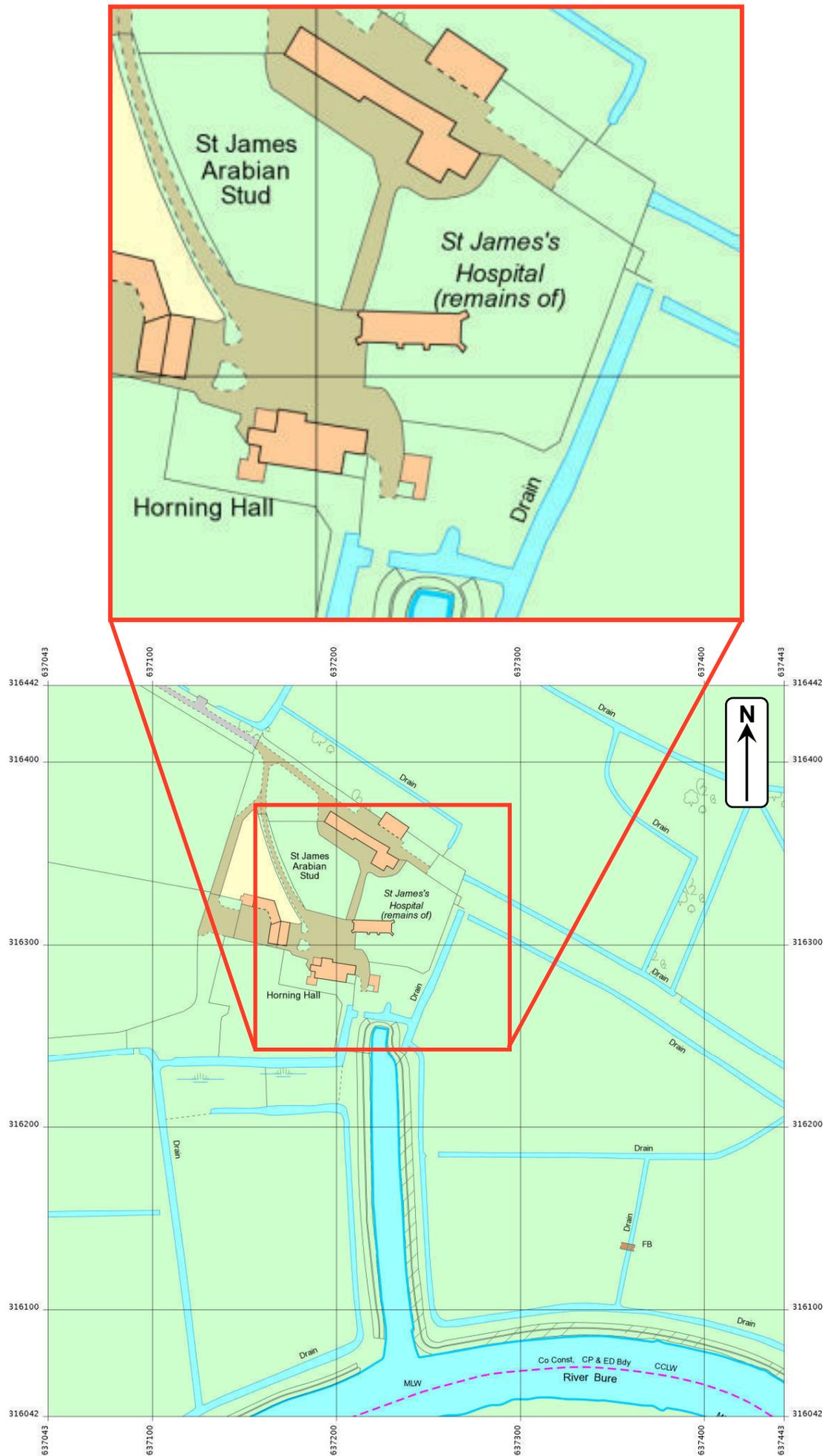


Figure 2: Site Location Plan

3.0 Geology and Topography (Figures 1 & 2)

St James' Hospital Chapel is located within the private grounds of Horning Hall, close to the confluence of two rivers; 250m from the banks of the River Bure to the south and c. 325m from the banks of the River Ant to the east.

The underlying geology is of sedimentary formed Crag sands and gravels with more superficial deposits of ancient peats with beds of clay and silts more predominant within the area of the site at the confluence of the Rivers Bure and Ant - Geology of Britain Viewer at a scale of 1:50 000 (<http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>). The sub-surface geology of the site encountered during the fieldwork can be characterised as orange clay-sands below dense clay-silts.

4.0 Brief Archaeological and Historical Background

The site is located in the parish of Horning, located southwest of Ludham and northeast of Woodbastwick. Horning parish lies on the northern bank of the River Bure south of the River Thurne and is located in the Broads National Park. For the purposes of local government, it falls within the district of North Norfolk, although areas alongside the rivers and broads fall into the executive area of the Broads Authority. The unusual shape of the parish mirrors the meandering path of the River Bure.

A parish summary of the large amount of information held for Horning's Historic Environment can be viewed on the Norfolk Heritage Explorer website. The parish has generated over 100 records which give evidence of human occupation and activity of most periods in the form of find scatters, cropmarks, listed buildings and excavated sites.

The most significant sites of interest are that of St Benet's Abbey and St James' Hospital Chapel. The Saxon foundation of the Abbey dates to 800AD, although no remains of the early religious centre have been identified. The remains of St Benet's Abbey on Cowholme Island (NHER 5199) date to the Benedictine foundation that was endowed here in 1020. The Abbey was combined with the Bishopric of Norwich at the Dissolution in 1539. The extant remains include a 14th century gatehouse encased in an 18th century windmill tower, parts of a precinct wall and ruins of a church. There are also earthworks of monastic buildings, an early monastic boundary and a complex series of fishponds.

The Abbey was linked to the mainland by a causeway (NHER 5200) that extended across wet land to the medieval hospital of St James (NHER 8444). The hospital site provided care and welfare for pilgrims, travellers, and the poor, aged and sick. The 14th century building at the site of the hospital may have served as a chapel.

A recent report on St James' Hospital Chapel (compiled in March 2012, in advance of the recent programme of repair) summarises the buildings historic development and significance (Heywood & Yardy 2012). Summary extracts are included here to outline the known history of the site and structure:

History of the site

St. James' hospital Chapel (NHER 8444) is a particularly significant building. This is reflected in its status as a scheduled ancient monument (No. 142). It is also a Grade II listed building. As a medieval hospital chapel, it is also a very rare building type. It has additional importance through its connection with the St. Benet's Abbey precinct complex, itself a scheduled site (No. 6) of considerable significance in the county.

St. James' Hospital Chapel, Horning was associated with St. Benet's Abbey (NHER 5199), a pre-conquest Benedictine foundation, the precinct of which lies a short distance to the east. The two sites are linked by a raised causeway (NHER 5200) across the marshes.

St. James' Hospital was founded by Abbott Daniel in the 1150s and operated under the direction of the Almoner, the monk who was responsible for dispensing alms to the poor and sick. The function of the site as a medieval 'hospital' may have served a variety of functions. It would have been a place to offer 'hospitality' to travellers and pilgrim, which the monks were obliged to offer in accordance with the rule of St Benedict. It may also have been a place of care for the sick, elderly and poor.

Monastic life at St Benet's ceased in the 1530s and ownership of its holdings was transferred to the Bishop of Norwich. The land on the west side of the River Ant in Horning as leased out as a parcel known as the Hospital Lease and later the Horning Hall estate. The Horning Hall estate, then totalling 416 acres, was offered for sale in 1923 but would seem not to have sold. In fact it remained in church ownership until its sale to the present owners in 1994.

The hospital chapel is positioned to the south of the causeway that connects the site to St. Benet's abbey and perfectly aligned east-west. The hospital was re-built in the 1340s after fire damage to the earlier building. The building which survives today is believed to be the result of that rebuilding (Pestell 2008).

The present house and majority of the buildings on the site appear to date from the later nineteenth century. There is a reference in 1879 to Horning Old Hall then being rebuilt (Loftus Brock 1879). Stalham Fire Brigade was also apparently called out to a great fire at Horning Hall in 1884. The earliest available maps of the site date from the eighteenth century but are not of sufficient scale to be useful in charting the development of the chapel. There are, however, a number of nineteenth century maps available. Certainly throughout the nineteenth century and until the 1970s, the building had a series of lean-tos and additions attached to it. Maps dated 1818 and 1822 indicate that there was then an addition to the south western corner of the building.

The building appears to have been used for a range of agricultural uses. There is a single threshing floor inside. An account of a visit to Horning Hall in 1895 implies that the chapel was then holding cattle (Bowman Dodd 1895). The 1923 sale particulars make reference to the 'Chapel Barn (14th century) of great antiquarian interest and now used as a Repair Shop and Loose Box' (NRO/ BR 241/4/61).

A photograph of the building taken in 1972 shows small lean-tos to the north just prior to their removal. They were probably used for pig keeping. There is still a brick wall attached to the south side of the building which remains from the ranges on that side.

Assessment of the Chapel Structure

The building is of fourteenth century construction (presumably dating from the documented 1340s re-building) with an eighteenth century roof structure and rebuilt parapets. It is of a simple rectangular plan with staged diagonal buttresses to the four corners (B1, B2, B5, B6) and a pair of buttresses to each side wall (B3, B4 and B7, B8). Those on the north side (B7 and B8) are ruinous.

The building is primarily built of coursed knapped flint with ashlar dressings. There are areas of high quality knapped and galleted flint, notably on the western entrance façade and the southern façade. The roof covering is of water reed thatch over fleeking.

Both side walls appear to have originally been of the same design that is, three large two-centred arch windows. The area of the central window of the south façade appears to have

collapsed and has been infilled though it is still just possible to discern part of the top of a window opening.

The window in the centre of the north façade has been replaced with a large cart entrance. At the eastern end of this façade there is a low blocked four centred arch that appears to be inserted. It is later than the surviving medieval fabric yet appears earlier than the eighteenth century modifications. The north façade also has clear scars from the former lean-to buildings.

There is a large blocked east window and a smaller western window above the western entrance doorway. The west window has lost all its dressings and is blocked with brickwork although here the brick blocking partly consists of a honeycomb ventilation. Above this, the limestone dressings of a smaller window survive which has been truncated by alterations to the parapets. The western entrance door has stone dressings with a two-centred arch.

No tracery survives and the survival of the stone dressings around the openings are fragmentary. All window openings are blocked with brick work. The building has a number of eighteenth and nineteenth century openings which have also been blocked in red brick, as have other areas of repair.

The eighteenth century roof structure is of five bays with tie beams and principal rafters. The tie beams do not correspond to the principal rafters. There are two sets of staggered butt side purlins with a ridge purlin and cambered collars. .

The interior of the building contains a number of recesses of various size, that are difficult to interpret and more notably occur in the eastern half of the building. The two small recesses at either side of the east window are suggestive of aumbry cupboards.

Part of the brick threshing floor can be seen but the floor is otherwise of modern concrete. Two concrete bases for fixed barn engines remain in situ.

Sites in the immediate proximity or of particular relevance or interest which fall in close proximity to the site include:

The following information has been sourced from the Norfolk Historic Environment Record (NHER)

NHER 8444: St James' Hospital. One building remains of this medieval hospital for pilgrims, travellers, the poor, aged and sick. The hospital was founded in 1153 and dissolved in 1539. It was the last pilgrimage stop before St Benet's Abbey (NHER 5199). The remaining 14th century flint building has a later thatched roof and this was probably the chapel.

Descriptive comments (E.Rose 1979): Squared flint with stone trimmings and panelling on buttresses (mostly gone). Brick putlog holes. Pointed stone door in west wall; above it a pointed stone window, now converted to a brick louvre. In apex of gable blocked small window or niche. Three large pointed windows in south wall, two in north (the central one having been replaced by barn doors) one east window; all blocked in 18th century brick. Diagonal buttresses at each corner and two buttresses on each side. Much brick patching in walls, presumably blocking holes from use as barn; large patches above and below east window, between west window and door; blocked round-headed culvert or doorway at east end of north wall, and smaller one through southwest buttress. Later thatched roof.

March 2012. Report produced as part of Natural England Higher Level Stewardship Management Plan. Summary (A. Yardy (HES): The available map evidence charts the various lean-tos and additions to the chapel building. Early 19th-century maps show an addition to the south western corner. Mid 19th-century maps show a further addition to the east end. By 1889, there were 2 long ranges to the south and 2 lean-to additions to the north. The building is primarily of coursed knapped flint with ashlar dressings. There are areas of high quality knapped and galleted flint, notably on the western entrance façade and the southern façade. The interior of the building contains a number of recesses of varying size that are difficult to interpret but more notably occur in the eastern half of the building. Two small recesses at either side of the east window are suggestive of aumbry cupboards.

NHER 49293: Linear ditch earthworks. Earthworks of linear ditches of medieval to post medieval date are visible on aerial photographs. Two roughly west to east aligned linear earthwork ditches are present identified. These are located on marshland just to the south of Horning Hall. It is possible that these earthworks relate to drainage ditches of medieval to post medieval date. [c. 60m S]

NHER 8458: Site of a post medieval drainage windmill and late 19th century steam engine house. Drainage Pumps are marked at this spot on late 19th century Ordnance Survey maps. The site is now marked by a redundant electric pumphouse.[c. 400m SE]

NHER 14668: Drainage Mill. Remains of a late 19th century skeleton drainage mill. The lower part of the mill survives as the turbine was later adapted to be belt driven by a tractor or similar.[c. 600m NNE]

NHER 51560: Finds Scatter. Metal detecting in fields to the south-west of Horning Hall in 2008 recovered medieval pottery, medieval and post medieval metal objects; including a crotal bell, cloth seal, weight and a post medieval token.[c. 300m SW]

NHER 51560: Finds Scatter. Metal detecting in fields to the south-west of Hall Farm Cottages recovered a Middle Saxon to Late Saxon brooch and a medieval brooch. Medieval and post medieval coins and jettons were also found. [c. 450m W]

NHER 52950: Finds Scatter. Metal detecting in a field to the north of Hall Farm Cottages in 2009 recovered a Roman coin. [c. 600m NW]

NHER 18890: Medieval Seal. Metal detecting in 1983 within a field close to the riverside recovered a medieval lead seal. [c. 400m SE]

NHER 8845: Medieval pottery sherds (mostly of 13th to 14th century date) were found 'at the point where the St Benet's causeway crosses the river'. [c. 400m SE]

NHER 20865: Medieval Papal Seal. Metal detecting just off the causeway to St Benet's Abbey recovered a medieval lead papal seal (bull) of Pope Urban IV. This would have been used by the pope to seal a document. The document was sealed between 1261 and 1264. [c. 720m SW]

NHER 5200: Medieval causeway between St James' Hospital and St Benet's Abbey. Earthworks of a causeway between St James' Hospital (NHER 8444) and St Benet's Abbey (NHER 5199) can be seen on aerial photographs. The causeway remains in part on the western side of the River Ant up to the grounds of Horning Hall. In 1896 the foundations of a bridge over the River Ant were said to have been found at the western end of the causeway. A round tower is said to have stood at the eastern end in front of the abbey gatehouse. This record also includes earthworks of boundary banks and ditches previously recorded as NHER 34540.

NHER 5200: St Benet's Abbey, Cowholme. St Benet's Abbey was originally founded on an island called Cowholme in AD 800. The current remains are part of the Benedictine foundation that was endowed in 1020 and was combined with the Bishopric of Norwich in 1539. These remains include a 14th century gatehouse encased in an 18th century windmill tower, parts of a precinct wall and ruins of a church. The church was extensively rebuilt in the 14th and 15th century. There are also earthworks of monastic buildings south of the church, an earlier monastic boundary, a series of elaborate fishponds and a range of monastic buildings on the edge of the river. Cropmarks of further buildings at the site are visible on aerial photographs. The abbey and windmill were a common subject for painters of the Norwich School. A Late Saxon lead tablet inscribed with Scandinavian long-twig runes has been found at the site. [c. 1km SE]

5.0 Methodology (Figure 3)

The objective of the archaeological monitoring was to record any archaeological evidence revealed during machine excavation of trenches associated with the installation of modern drainage works. In addition the installation of a power cable trench was monitored on the southern side of the chapel building.

The groundwork was carried out by 1.8 ton and 2.5 ton 360° machines fitted with ditching buckets. Work for the drainage runs consisted of creating a sloping cut against both sides of the chapel followed by the excavation of west-east drainage runs falling gradually down to meet the existing dyke to the east.

Spoil, exposed surfaces and features were scanned with a metal detector (Minelab XTerra 705). All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

All archaeological features and deposits were recorded using Norvic Archaeology pro forma sheets. The trench location, plans and sections were recorded at appropriate scales and photographs were taken of all relevant features and deposits.

Levels made use of existing information supplied by Anglian Planning Services and were taken using a temporary benchmark of 1.69m OD located on concrete on the eastern side of a small outbuilding just south of the chapel.

The work was undertaken in good weather, with one light rain shower on the third day of monitoring works.



Plate 2: Cable trench on south side of the chapel (looking NW) [1x2m scale]

6.0 Results *(Appendix 1a) (Figures 3 to 10)*

- **'Main deposit horizons'** *(Figures 8 to 10)*

Natural deposits

Groundworks on the northern side of the chapel revealed a sequence of deposits down to sterile sub-surface geology. Clean dark-orange clay sand natural (31) was identified at the base of a medieval ditch [05] (see below). Above this was a dense layer of fine pale clay-silt (30) which, although stained by more organic particles, appears to represent a sterile and naturally formed deposit c. 0.4m deep.

Medieval deposits

A very firm layer of mottled, dirty sandy-clay (heavily stained by organic activity) (04) was identified above (31). This layer may represent the earliest level of medieval occupation activity on the site. Above it was much cleaner horizon of firm sandy-clay (03) which appeared to seal ditch [05] and could be interpreted as an area of make-up/consolidation associated with the construction of the chapel building. Similar deposit horizons were noted along the southern side of the chapel where clay-sand/silty-sand layer (12) was of a similar character to the make-up layer (03).

Late medieval & Post-medieval deposits

Upper soil layers on the northern side of the chapel comprised of a sandy-loam with various quantities of post-medieval and late-post-medieval brick fragments (02) below an active topsoil (01). The soil layer (02) appears to include post-medieval make-up and consolidation spreads to level and consolidate the area.

Beyond the eastern end of the chapel upper deposits consisted of a dark grey sandy-loam (silt>clay) (21) up to 0.4m deep overlaying a relatively continuous layer of clean redeposited sand and clay-sand up-to 0.15m in depth (32). The clean redeposited sand marks a consolidation event of uncertain date while deposits above this appear to represent post-

medieval soil-build up. Below the redeposited sand (32) was a fairly sterile, dense mid yellowish-grey silty-sand with occasional stones and rare flecks of charcoal (33).

Medieval deposits & ?Stone packed features (on the southern side of the chapel; Figure 9/Section E)

The lowest deposits revealed by groundworks, on the southern side of the chapel, consisted of a dense mid-grey sandy-clay (09) below a more mottled layer of similar material (11) both of which were stained by organics. At the interface of the two, a seemingly linear patch of densely packed flint cobbles was revealed within the confines of the cable trench (10). This enigmatic feature was aligned c.east-west. A similar feature (20) was recorded within the confines of the pipe trench at the same stratigraphic horizon, although the alignment of this cobble feature was less clear but may have been roughly north-south. Interpretation of these features must remain tentative although they appear to resemble linear footings or pads for a timber or robbed out stone structure.



Plate 3: Stone packed feature (10)
(looking NE) [1x0.5m scale]

Finds collected from the lowest deposit (09) (within which the cobble feature (10) was inset) amount to oyster shells, a fragment of butchered animal bone and three sherds of unabraded medieval pottery with a broad late 12th to 14th century date range.

- **Medieval ditch**
(Figure 8, Section A)

A large ditch ([05]) was revealed by the drainage trench on the north side of the chapel. It measured c.2.15m wide and was orientated on a NNE-SSW alignment, running below the north-west corner of the chapel. The ditch therefore clearly pre-dates the existing 14th century building. An investigation slot found the ditch to be c. 0.7m deep, with a profile which may suggest at least one significant recut event. The base of the ditch was filled by silting deposits followed by a fairly homogenous deposit of dark-brown clay-silt with moderate frequencies of charcoal and degraded burnt-clay lumps/flecks (08). A single cow bone, a residual prehistoric flint and two sherds of medieval pottery were collected from the main fill. The pottery sherds offer only a broad date range of late 12th to 14th century.



Plate 4: Medieval Ditch [05]
(looking WNW) [1x1m scale]

The discovery of a medieval boundary/drainage ditch which both predates the existing building and runs below its western end suggests a reorganisation of land use prior to the construction of the existing building sometime in the 14th century, possibly coinciding with a rebuilding programme at the hospital site following fire damage to an earlier building documented in the 1340s. It can be conjectured that the current 'chapel' building may have been significantly extended or even re-sited at this time.

- **Buttress footings** (Figures 8 & 9; Plates 5 to 8)

During the course of the drainage works, the bases of four of the eight buttresses were partly exposed - the central pair on both the north and south sides (B3, B4, B7 & B8):

Buttresses B3 & B4

The ground level was temporarily reduced at the bases of both buttresses by up to 0.3m which allowed for the recording of the exposed footing work. Although both buttresses feature significant late 19th century to 20th century above ground repair, which has made use of red brick, below this the footing construction remains unmodified. The exposed footings consisted of regular courses of medium to large flint cobbles (with very rare use of chalk lump). The larger flints were partly fractured and shaped prior to use. Much of the mortar has washed out at this level although traces of coarse yellow sandy mortar were present. The buttress pads were not significantly larger than the buttresses they supported (extending out by only c.0.2m to 0.25m).

Buttresses B7 & B8

Both buttresses were in a highly ruinous state prior to recent consolidation and repair work. The below ground fabric of Buttress B7 had suffered some damage to its northern elevation in recent years, during the installation of an electric power cable trench. Both buttress pads make use of exceptionally large nodules of flint (up to 300mm in diameter). The pads are fairly regularly constructed and extend out beyond the buttresses they support by between 0.2 to 0.3m. The partly damaged buttress pad of B7 showed that the core of the pad was evenly constructed of smaller rounded flints (unstruck) in alternating bands of material. These banded layers measured c. 150mm thick and consisted of firm silty-clays and sandy-clays and a layer of crushed mortar and sand.



Plate 5: B7 & Wall-footing 24
(looking south) [1x0.5m scale]



Plate 6: B8 & Brick-wall 22
(looking south) [2x0.5m + 1x1m scale]



Plate 7: B4
(looking north-east) [1x0.5m scale]



Plate 8: B3
(looking north-east) [1x0.5m scale]

- **N-S Wall footings**

Evidence for former agricultural lean-to buildings was recorded on the north side of the chapel. At the western area the fragmentary remains of a thin concrete slab floor were noted just below the modern surface while more substantial brick footings were recorded further along the chapel (22). These footings match with former lean-to buildings cleared in 1972 which are reported to have housed pigs. The presence of lean-to buildings on the north side of the building was first recorded on the 1st Edition OS plan of 1889. Two north-south ranges were also depicted on the southern side of the building, one brick wall of which partly survives at the south-west corner of the chapel. The earliest maps which depict the chapel building at any meaningful scale, show extensions only to the southern and eastern sides of the building – as depicted on the 1822 Map of the Bishop’s Estate at Horning.



Plate 9: Brick-walls 22 at NE corner of the Chapel (looking east) [1x1m + 2x2m scales]

A north-south flint & mortar wall (23) footing was revealed at the eastern end of the chapel at B1, discovered below the brick wall here (22). The mortar bond was a soft pale sandy-mortar while the large fractured cobbles were set upon a thin bed of silty-clay with occasional small fragments of mortar and limestone.

North-south flint & mortar wall footings of similar construction (24) were also discovered at B7 where the flints included very large unstruck nodules up to 350mm in diameter. A modern electric cable trench had broken up the wall here, large flints from which were noted within the backfill, although some remnant of the wall fabric survived where it met with the corner of B7 – no clear joint was present and the wall footings appeared to be well bonded with the buttress pad foundations.

A further north-south flint & mortar wall footing was also discovered close to B6, which exhibited two different fabrics, an upper of large flint cobbles set in a hard (lime-rich) chalky mortar (25) set above large cobbles bonded within a friable, yellow sandy mortar (26). They may represent either two different building methods, or simply a change in fabric from shallow footing fabric to wall fabric.



Plate 10: Brick-wall 22 at NE corner of the Chapel directly above flint footing 23 (looking east) [1x1m scale]

The flint footings were only exposed within the confines of the narrow drainage trench, although they appear to represent reused medieval fabric for the construction of footings for agricultural lean-to

buildings, rather than evidence for earlier structures. The flint mortar wall at B1 was found directly below the line of the 19th century brick wall, but it should be noted that no such footings were revealed below the other two brick walls. The walls at the western end could be the footings for the second lean-to building, if so the dimensions are very similar at just over 6m in length and mirrors well the position of the other.



Plate 11: Chapel footings
(looking north) [1x0.5m scale]

- **Chapel footings** (Figure 9, Section F)

The foundations of the south wall of the chapel were partly exposed by the electric cable trench below the late post-medieval doorway. Below two courses of post-medieval bricks for the door threshold, was a wall footing fabric (stepped out by 0.2m from the line of the chapel wall) of firm sandy-mortar with partly fractured flint cobbles (19). This was set upon a thin bed of sticky silty-clay & crushed mortar (18), above a densely packed uncoursed mix of friable mortar debris with frequent angular flints and occasional small fragments of limestone (17). This appears to demonstrate that the chapel wall footings here are shallow but may sit upon a construction trench containing crushed building debris, possibly the sorted residue from the pre-14th century hospital building.

- **Late-post medieval brick soakaway and drainage conduit** (Figure 7)

The southern half of the cable trench on the southern side of the chapel encountered two brick features of late post-medieval date; a circular brick lined soakaway and a brick lined drainage conduit. They were both constructed of the same sandy Norfolk-red brick and sherds of pottery collected within them are domestic fabrics of 18 to 19th century date. These subsurface structures testify to a significant investment of resources to improve drainage on what is historically a wet piece of land prone to seasonal flooding.

Soil horizons at this point and to the end of the cable trench appear to have seen some form of 19th century or later disturbance, marked by a well-mixed soil horizon of similar character to the infill of the brick drainage features (35). Above this was a levelling layer of later 19th century to modern soil (36).



Plate 12: Brick Soakaway & conduit
(looking NW) [1x2m scale]

7.0 Finds Analysis (Appendix 2)

• Pottery

Introduction

Nine sherds of pottery weighing a total of 182g were collected from four contexts. Aside from a single rim sherd of Westerwald stoneware, all pieces were body sherds with moderate or no abrasion. Table 1 shows the quantification by fabric:

Context	Description	Fabric	No	Wt/g	Eve	MNV	Date Range	Comments
08	Early medieval sandwich wares	EMSW	1	3	0.05	1	11-12 th	
08	Local medieval unglazed	LMU	1	6	0.05	1	11-14 th	Sooted exterior
09	Medieval coarseware	MCW	1	33	0.06	1	L.12-14 th	
09	Local medieval unglazed	LMU	2	19	0.11	2	11-14 th	Sooted exterior
<i>Total medieval</i>			5	61	0.27	5		
15	Westerwald stoneware	GSW5	1	15	0.07	1	E.17 -19 th	Rim sherd
16	Late Glazed Red Earthenware	LGRE	3	106	0.20	1	18-19 th	
<i>Total late post-medieval</i>			4	121	0.27	2		
Grand Total			9	182	0.54	7		

Table 1. Pottery quantification by fabric

Methodology

Basic quantification was carried out using sherd count and weight. All fabric types follow the post-Roman fabric series after Sue Anderson with form terminology following MPRG (1998). A catalogue with quantification by sherd and context is presented as Appendix 3.

Conclusions

The sherds collected from the brick soakaway and associated brick drain (features 13 & 14) were both late post-medieval and confirm an 18th to 19th century date for the features. A small quantity of unabraded medieval pottery was collected, two pieces from the medieval ditch ([05]) and three from a deep subsoil (09) which suggest a 12th to 14th century date for both. No sherds indicative of high status were found, with the sherds representing storage or cooking vessels of common use in domestic kitchens and households.

• Flint

Three struck flints (weighing a total of 30g) were collected during the monitoring works. Each piece was examined by eye and with the aid of a hand lens (x6 magnification) before being catalogued according to a basic typology, using standard lithic terminology where possible.

This small assemblage is made exclusively from fine grained opaque flint, with fairly frequent interclasts and flaws. The fabric is pale greyish-yellow honey colour when viewed through a strong white light. All of the pieces retain examples of cortex in the form of a thin, weathered, chalky skin and the collection source is likely to be local, selected either from surface stones or pebbles.

The condition of the assemblage is good, with most pieces in fresh condition, indicating minimal post-depositional damage or abrasion. This normally indicates that they have been recovered close to where they were originally discarded/buried.

All three pieces represent the *ad hoc* use and minor modification of irregular flakes – one of which has two notches from use against a hard surface.

The retention of cortex and the shortness of the tool are more typical of later prehistoric techniques of manufacture. The use of small pebbles as cores and shattered pieces for the

creation of *ad hoc* undeveloped tools, along with the presence of a notched 'chunk' flake indicates a Late Neolithic to Bronze Age date.

Although in fresh condition all three examples were collected as residual finds in medieval to post-medieval contexts and indicate prehistoric activity in the immediate vicinity of the site.

Context	Type	Qty	Weight (g)	Context Type
08	?Utilised Flake	1	4	Ditch-fill (medieval)
A fairly thin but short soft hammer tertiary flake with evidence for multi-directional scars. No platform preparation, in fact struck on an area of thin cortex. Fresh condition. Poss. very minor area of use/wear unilaterally.				
09	Utilised Flake	1	14	Lower subsoil
A thick flake from a pebble retaining its cortex prior to flake removal. Fairly hard struck, poss. to create or rejuvenate a platform. Previous strikes are at opposed directions and signs of platform abrasion are present. Bilateral unifacial neat retouch and wear for use as an <i>ad hoc</i> tool.				
27	Utilised Flake (notched)	1	12	Natural build-up
Hard struck shatter flake. This wedge shaped piece has received retouch and minor modification with neat unifacial retouch and two bilateral notches from its use as a tool.				

- **Oyster Shell**

Seven oyster shells in good condition (weighing a total of 42g) were collected from subsoil layer (09) from which medieval pottery was also collected. Five of the shell pieces are bottom elements of which at least three exhibit shucking damage in the form of both U and V shaped notches. This indicates that they are residual food waste.

- **Animal Bones**

Just two animal bone fragments were collected, weighing a total of 89g. The bone are in fair condition, although have minor surface concretions indicating that for quite some time they were preserved within waterlogged conditions.

A single bovine distal phalanx or 'hoof' bone was collected from the fill (08) of a medieval ditch. A proximal radius fragment from an adult sheep/goat bearing a shallow cut mark and small gnawing damage (such as from a rat species) was collected from a subsoil layer from which medieval pottery was also collected (09).

- **Ceramic Building Material**

A single fragment of ceramic building material was collected from the lowest deposit encountered during the machine excavation of the drainage runs on the eastern side of the chapel. It is a highly abraded fragment of medieval brick (weighing 666g) in a pinkish-purple estuarine clay fabric, with a thickness of 50mm. A few examples of medieval brick in a very similar fabric are set into the north facing elevation of the chapel.

- **Lead**

Two fragments of lead were collected from spoil as unstratified finds, one is a small piece of puddle lead (weighing 8g), while the other is thin fragment from a larger strip of partly melted and badly pitted lead (weighing 14g) with a single score mark along on edge. Neither piece can be dated but given the proximity to the chapel, can be assumed to be associated with the general use of lead within the structure as either window settings or masonry ties.

8.0 Conclusions

The groundworks allowed the sub-surface deposits in the immediate vicinity of the chapel building to be characterised down to a natural geology of sandy-clay below dense clay-silt deposits. A firm horizon of clean, redeposited sandy-clay associated with the chapel building appeared to be some form of levelling or consolidation deposit. Deposits to the immediate east of the chapel building fall away deeply with only relatively sterile deposits of post-medieval soil build-up recorded. The chapel appears to have been well sited on a naturally high occurrence of sandy-clay, amongst an area of alluvial clay-silts. Although subject to seasonal flooding, this particular location would have offered a sound platform on which to locate the building.

A medieval ditch was discovered which predates the current 14th century building and runs below the north-west corner of the chapel. This may indicate some form of reorganisation of land use prior to the construction of the existing building sometime in the 14th century, possibly coinciding with a rebuilding programme at the hospital site following fire damage to an earlier building documented to have occurred in the 1340s. It can be conjectured that the current 'chapel' building may have been significantly extended or even re-sited at this time.

The surface of two stone-packed, linear features of medieval date was revealed on the south side of the chapel. These are tentatively interpreted as pads or footings for a timber or robbed out stone structure, which may therefore pre-date the construction of the 14th century chapel.

Partial exposure of several buttress pads and part of the chapel wall footings allowed for limited examination of the fabric and form of their construction. The buttress pads made use of large flint nodules, with some evidence for a banded core made up of layers of smaller flints, clay and crushed mortar. A small area of the southern chapel wall footings was exposed, which appear to show a fairly shallow footing constructed upon a foundation trench containing mortar debris.

The remnants of two lean-to agricultural buildings of 19th century date were identified on the north side of the chapel from their footings. These brick animal shelters were cleared in the 1970s. A series of north-south flint & mortar footings were recorded which also match well with the expected footprints for these structures and may have served as subsurface footings. They make use of large flints similar in size and type to those used within the pads for the chapel buttresses and may therefore have been sourced from a medieval structure close to the site.

A small number of prehistoric flints were collected as residual finds which indicate Late Neolithic to Bronze Age activity in the vicinity of the chapel site.

9.0 Acknowledgements

Thanks are due to David Watt of Hutton & Rostron Environmental Investigations Ltd who commissioned Norvic Archaeology to carry out this work on behalf of Ted Brewster. Thanks are also due to the on-site team of R&J Hogg Ltd for their assistance and cooperation on site. All stages of the monitoring and post-excavation analysis work were carried out by the author. NHER data was obtained directly from records held at Gressenhall by the Norfolk Historic Environment Service.

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Appendix 1a: Context Summary

Context	Category	Fill of	Brief Physical Description	Interpretation	Period
01	Deposit		Firm, mid-yellowish brown sandy-loam, occ. cbm & stones c. 0.15m deep	Active Topsoil	<i>Modern</i>
02	Deposit		V.friable mid yellowish-brown sandy-loam, mod. cbm (inc. large brick frags) rare mortar lumps, c. 0.2m deep	Make-up	<i>Modern</i>
03	Deposit		Firm, pale brownish-grey sandy-clay, rare cbm flecks (? intrusive), mod. stones	?Make-up	? <i>Medieval</i>
04	Deposit		V.firm mottled pale brown + pale orange with organic stains of greyish-yellow-dark green, sandy-clay, occ. chalk flecks, mod. stones, rare charcoal	Lower subsoil	? <i>Medieval</i>
05	Cut		c. 2.15m wide ditch cut, c. 0.7m deep with steep. Concave sides and poss. recut	Ditch	<i>Medieval</i>
06	Deposit	[05]	Soft, dark-brown clay-silt, occ. charcoal flecks, rare stones, c. 0.08m deep	Ditch fill (primary)	<i>Medieval</i>
07	Deposit	[05]	Soft, v.pale grey lenses of silt c. 0.12m deep	Ditch fill (siltng)	<i>Medieval</i>
08	Deposit	[05]	Soft, dark-brown clay-silt, mod. charcoal flecks/pieces, occ. degraded burnt clay (flecks & small lumps), rare stones, c. 0.75m deep	Main ditch fill	<i>Medieval</i>
09	Deposit		Dense, mid-grey sandy-clay mottled by a greenish tinge, mod. chalk, occ. charcoal	Lower Subsoil	<i>Medieval</i>
10	Feature		Sub-rounded flint cobbles up to 150mm, tightly packed into a linear arrangement aligned E-W	?Pad/footing	<i>Medieval</i>

Context	Category	Fill of	Brief Physical Description	Interpretation	Period
11	Deposit		Dense, mid yellowish-brown/yellowish grey mottled, v.sandy-silt/clay mix, freq. organic stains, rare chalk/charcoal flecks	Subsoil	<i>Medieval</i>
12	Deposit		Firm, mid-brownish-yellow sandy-clay, mod. chalk flecks, occ. med brick lumps + p.med brick lumps, occ. stones c.0.35m deep	Upper subsoil/make-up	<i>Post-medieval+</i>
13	Masonry		Brick lined channel, 0.3m wide – internal channel 0.10m	Brick Conduit	<i>19th century</i>
14	Masonry		Brick lined, circular soakaway, int. diam. c. 1m	Brick Soakaway	<i>19th century</i>
15	Deposit	[13]	Soft, dark grey v.silty-sand with occ. cbm	Fill of conduit	<i>19th century</i>
16	Deposit	[14]	Well mixed, friable dark grey sandy loam, occ. cbm	Fill of Soakaway	<i>19th century</i>
17	Deposit		Dense, friable yellowish sandy mortar debris, freq. angular flints, occ. limestone pieces	Footing/make-up	<i>Medieval</i>
18	Deposit		Sticky, mid yellowish-brown silty-clay + crushed mortar, 30mm thick	Footing/make-up	<i>Medieval</i>
19	Masonry		Large flint cobbles & sub-ang. flints set in a firm yellowish sandy mortar c. 0.35m deep	Footing/make-up	<i>Medieval</i>
20	Feature		Sub-rounded flint cobbles up to 150mm, packed into a linear arrangement aligned. N-S	?Pad/footing	<i>Medieval</i>
21	Deposit		Friable, dark-grey to pale-grey sandy-loam (silt>clay), occ. p.med abraded brick frags.	Soil build-up	<i>Medieval</i>
22	Masonry		Brick walls of 'Norfolk-red' sandy brick bonded with soft, pale yellow sandy mortar	Pig-sty footing	<i>19th Century</i>
23	Masonry		N-S large flint cobbles and sandy yellow mortar footing below 22.	Wall footing	<i>?Post-medieval</i>
24	Masonry		N-S large flint cobbles and sandy yellow mortar footing	Wall footing	<i>?Post-medieval</i>
25	Masonry		N-S large flint cobbles and sandy yellow mortar footing below/part of 26	Wall footing	<i>?Post-medieval</i>
26	Masonry		N-S, large flint cobbles and hard, lime-rich chalky mortar	Wall footing	<i>?Post-medieval</i>
27	Deposit		Same as (33) but specifically along southern pipe run	Natural build-up	<i>?late med./P.med</i>
28	Cut		Large pit up to 3.2m	Horse burial pit	<i>Modern</i>
29	Deposit	[28]	Redeposited soil & natural with frequent voids		<i>Modern</i>
30	Natural		Dense, mottled pale grey to pale orangey brown firm clay-silt, v.fine, sterile, mod. mineralisation	Natural Clay-silt	-
31	Natural		Dense, dark orange clay-sand below (30)	Natural Clay-sand	-
32	Deposit		Firm, bright orange to mid yellow sand/clay-sand, freq. pebbles c. 0.15m deep	Redep. natural	<i>?late med./P.med</i>
33	Deposit		Dense, firm, mottled mid-yellowish-grey silty-sand, rare, charcoal, mod. stones	Natural build-up	-
34	Unstratified		Finds from spoil produced on N.side of chapel	-	-
35	Deposit		Well mixed, friable dark grey sandy loam, occ. cbm	Make-up	<i>19th Century+</i>
36	Deposit		Well mixed, loose dark grey sandy loam, occ. cbm	Make-up	<i>19th Century+</i>

Appendix 1b: OASIS feature summary table

Period	Feature type	Quantity
Medieval (1066 to 1539AD)	Chapel	1
	Ditch	1
Post-medieval (1540 to 1900AD)	Animal Shed	2
	Conduit	1
	Soakaway	1

Appendix 2a: Finds by Context

Context	Material	Quantity	Weight (g)	Comment
08	Animal bone	1	21	
08	Flint - worked	1	4	Prehistoric
08	Pottery	2	9	Medieval
09	Animal bone	1	62	
09	Flint – worked	1	14	Prehistoric
09	Pottery	3	52	Medieval
09	Shell - oyster	7	42	
15	Pottery	1	15	
16	Pottery	3	106	
27	Ceramic building material	1	666	Medieval
27	Flint - worked	1	12	Prehistoric
34	Lead	2	22	

Appendix 2b: Finds summary table

Period	Material	Quantity
Unknown	Lead	2
Prehistoric (500000BC to 42AD)	Flint	3
Medieval (1066 to 1539AD)	Animal bone	2
	Ceramic Building Material	1
	Pottery	5
	Shell – oyster	7
Post-medieval (1540 to 1900AD)	Pottery	4

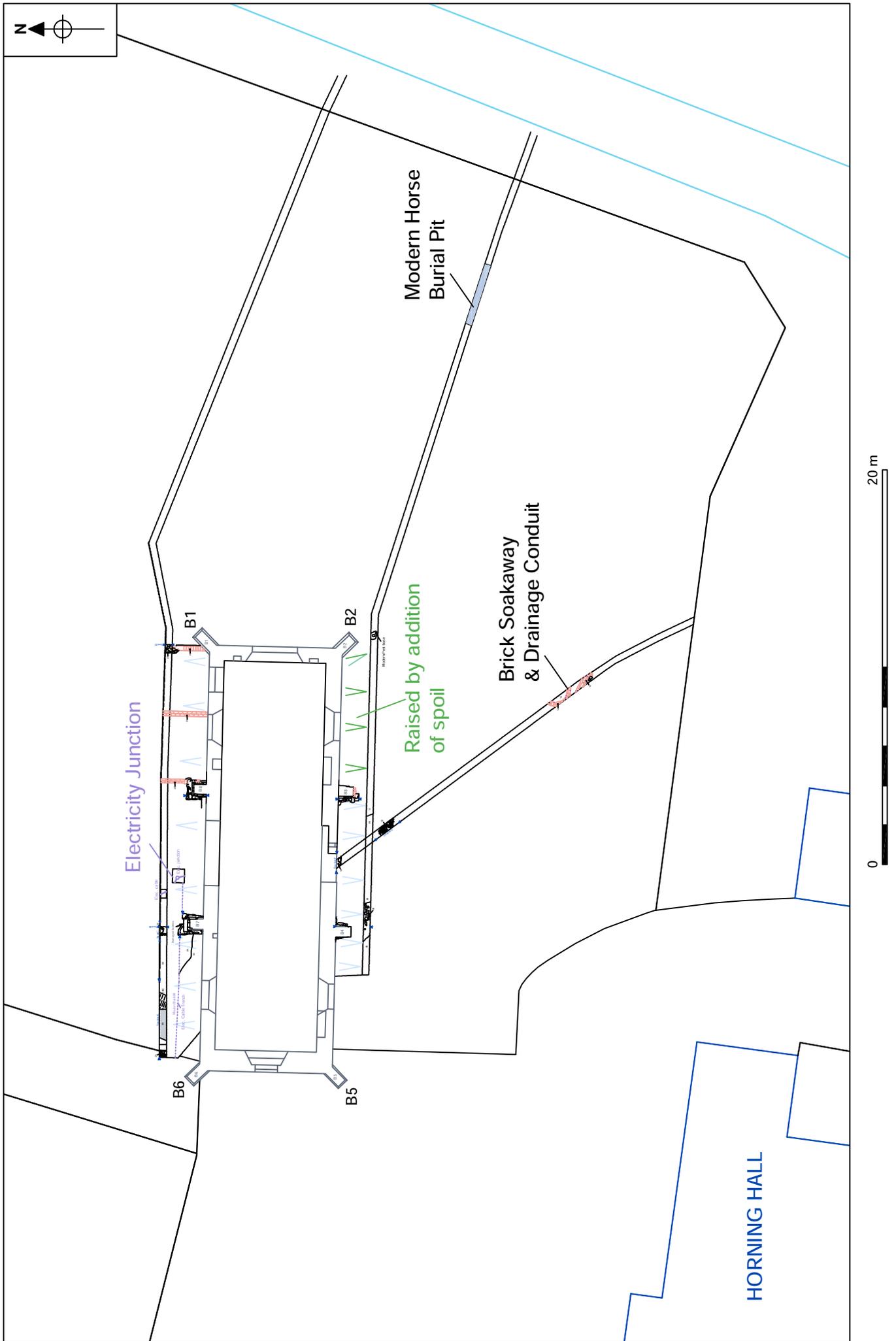


Figure 3. Site plan. Scale 1:250

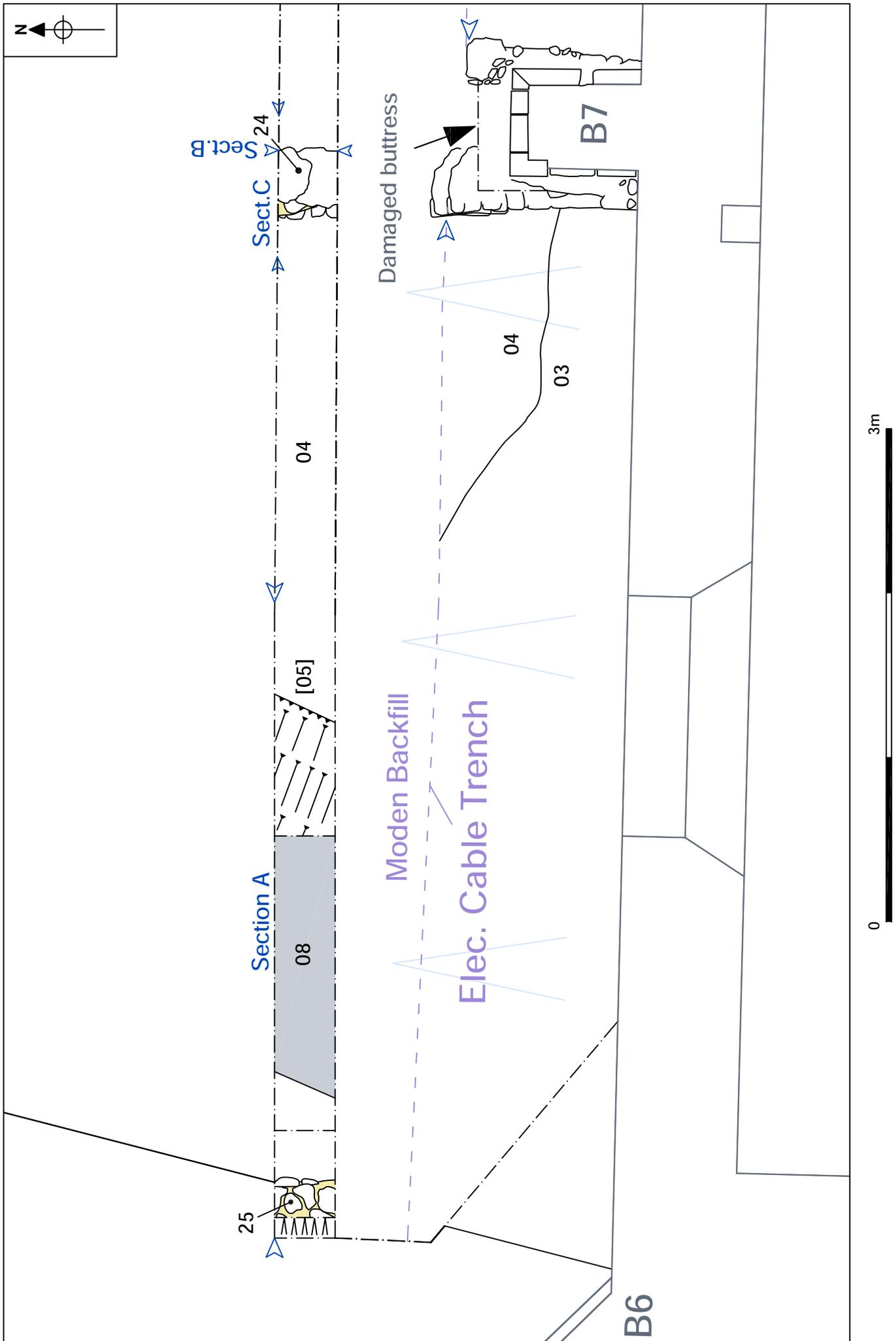


Figure 4. Groundworks - North-west zone. Scale 1:30

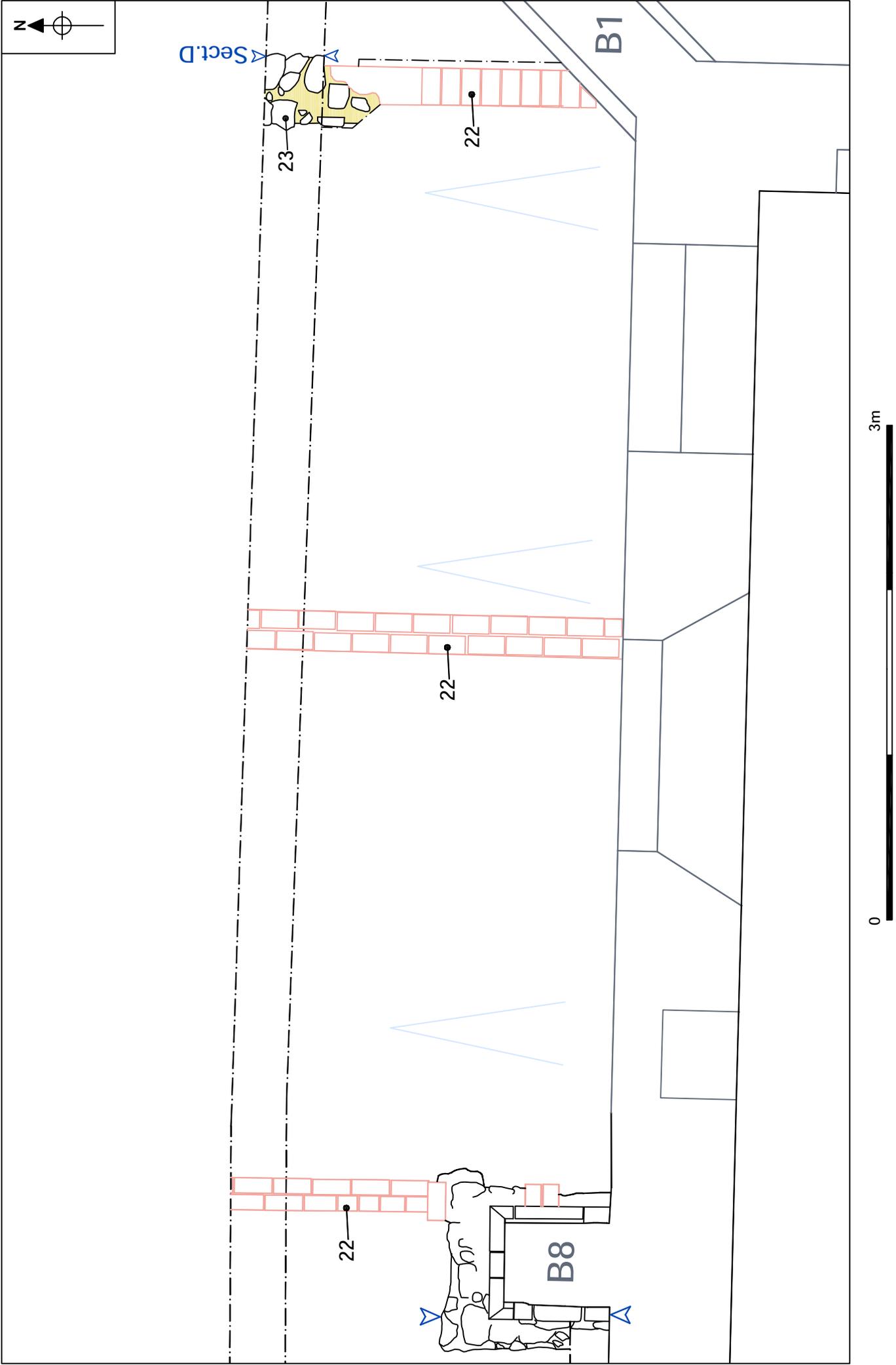


Figure 5. Groundworks - North-east zone. Scale 1:30

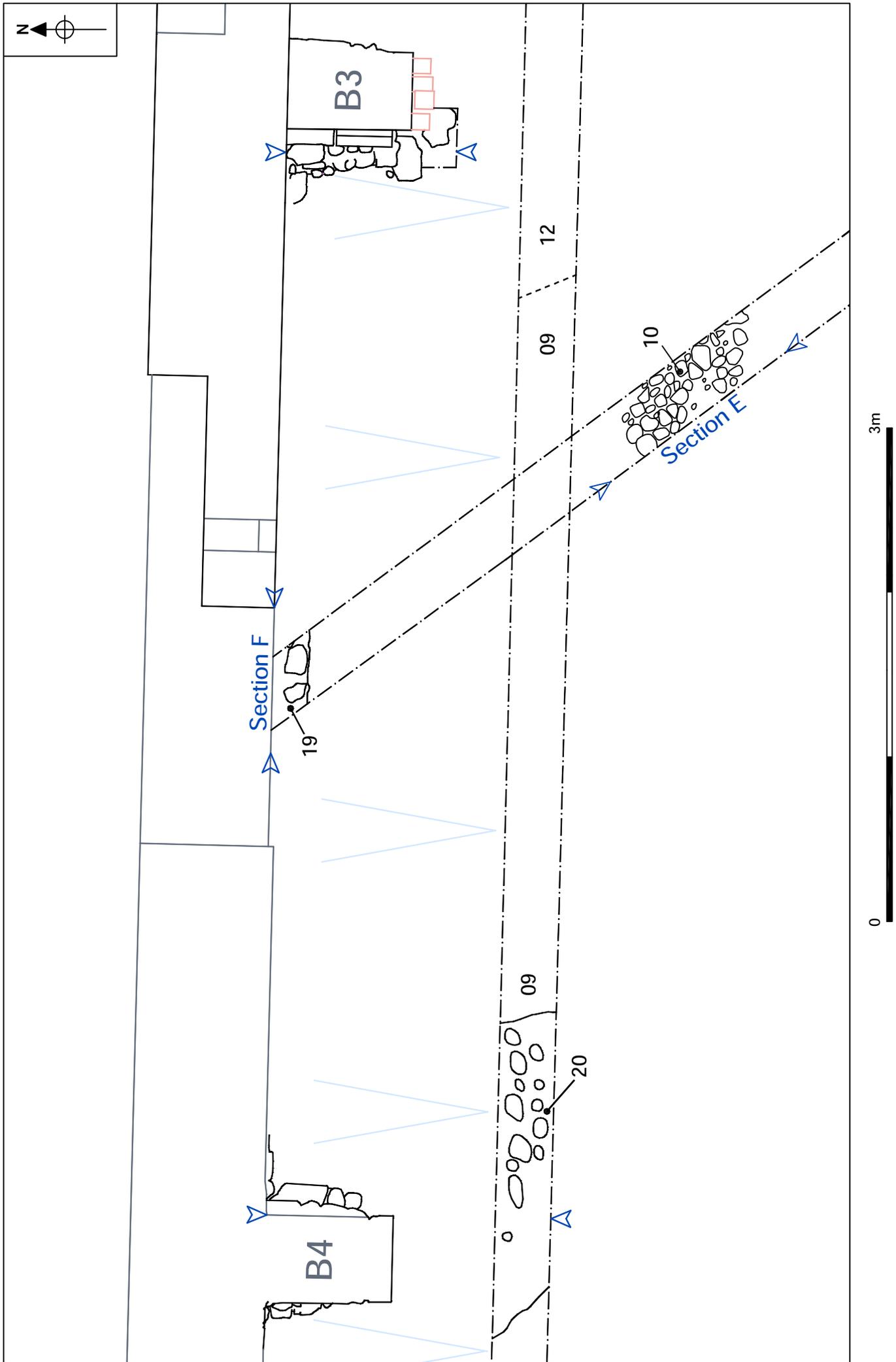


Figure 6. Groundworks - Southern zone. Scale 1:30

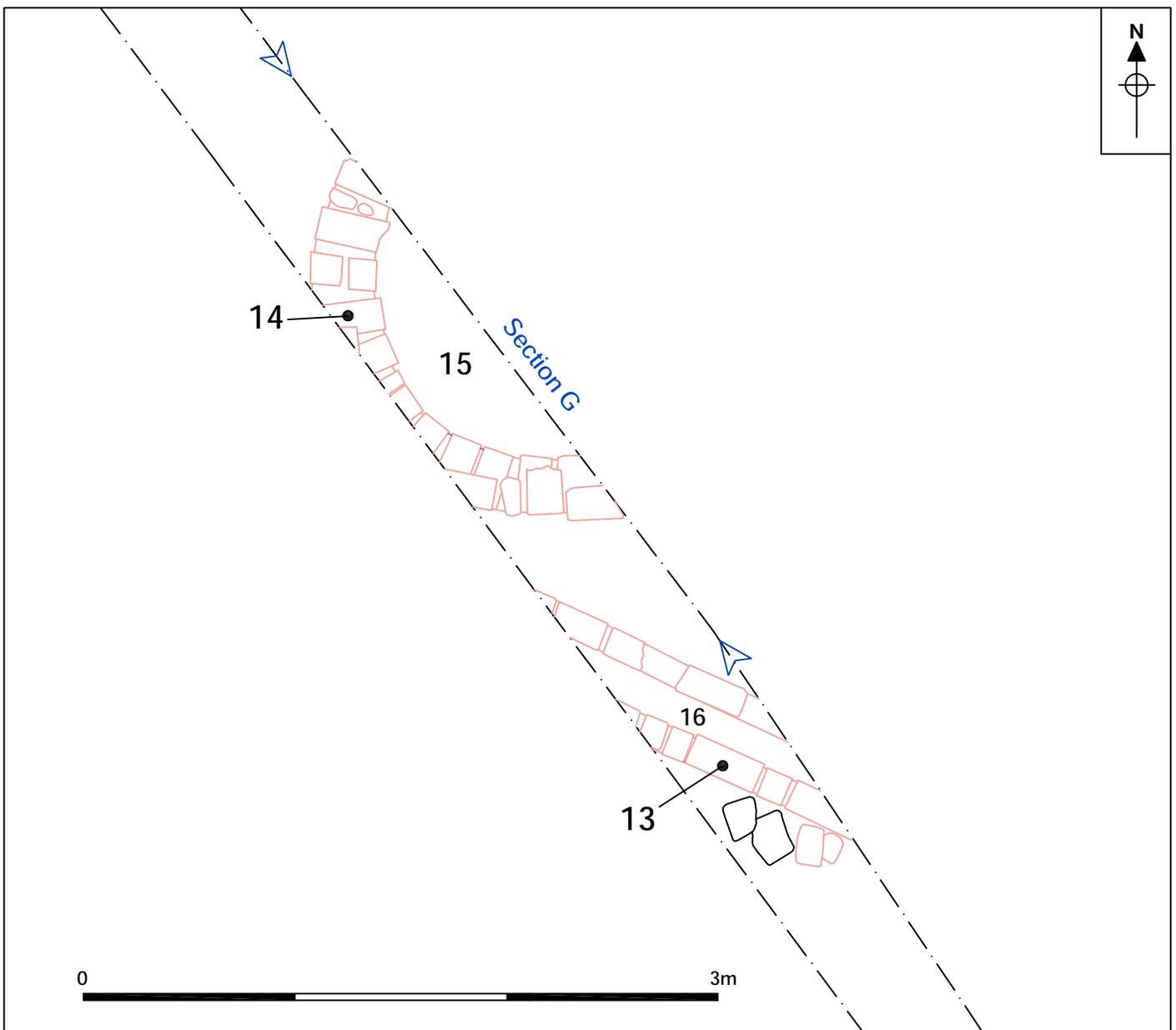
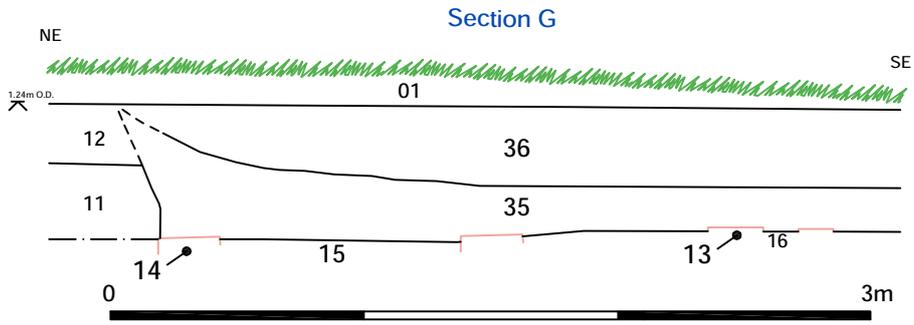
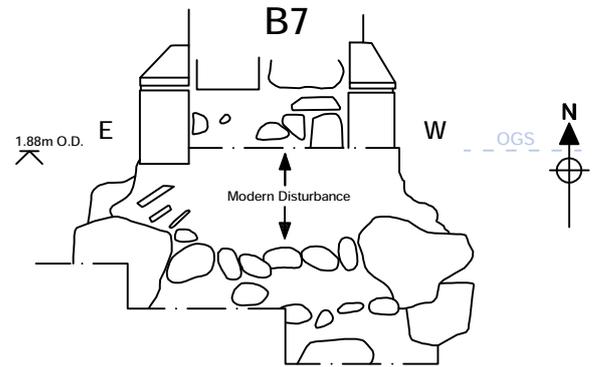
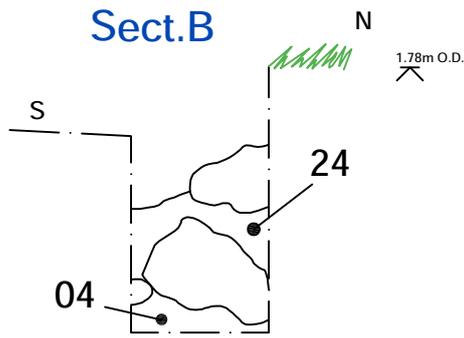
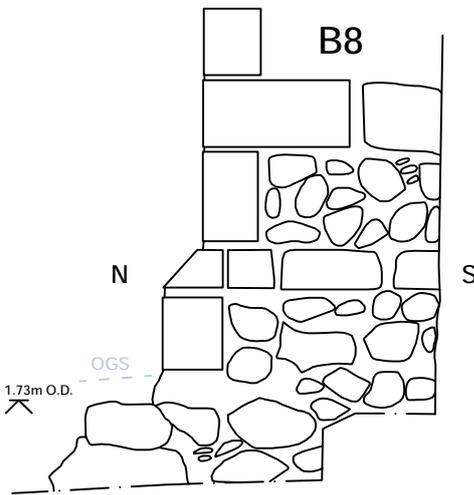
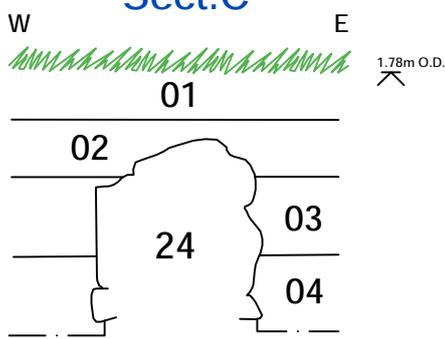


Figure 7. Soakaway & conduit within new cable trench. Scale 1:30

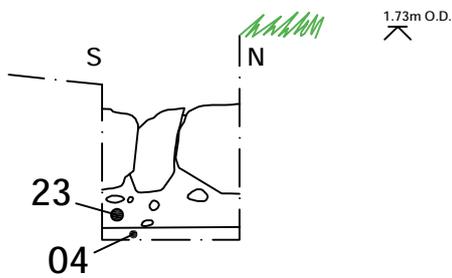
Sect.B



Sect.C



Sect.D



Section A

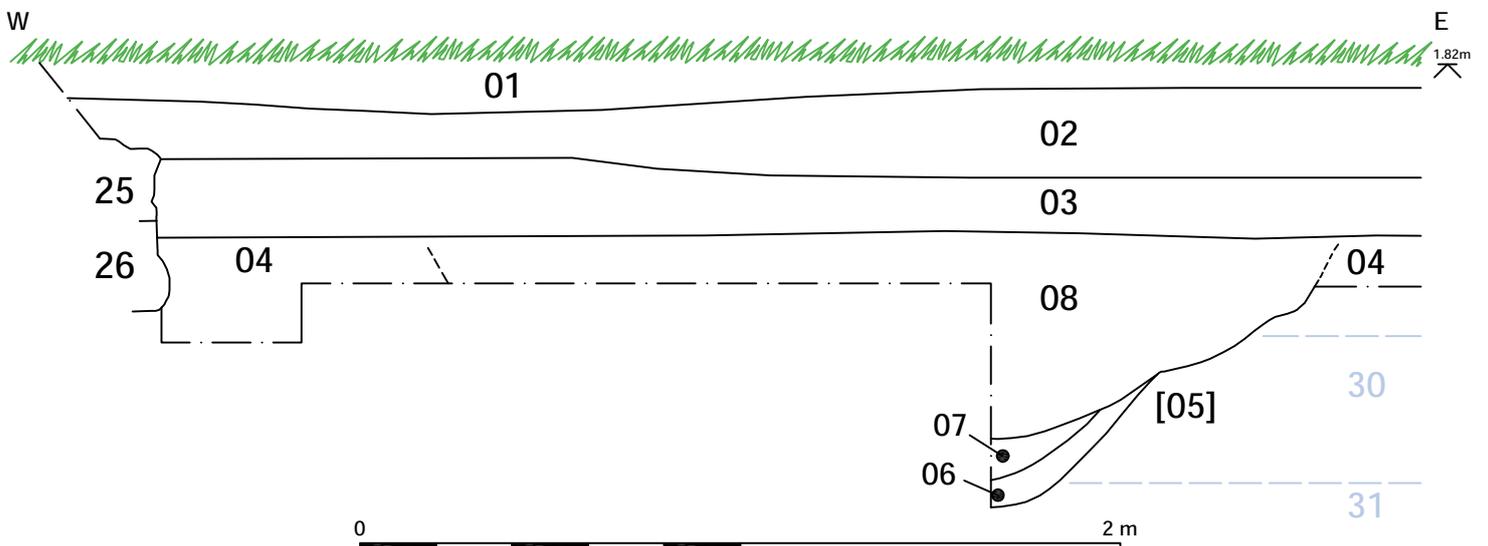


Figure 8. Recorded Sections/Elevations. Scale 1:20

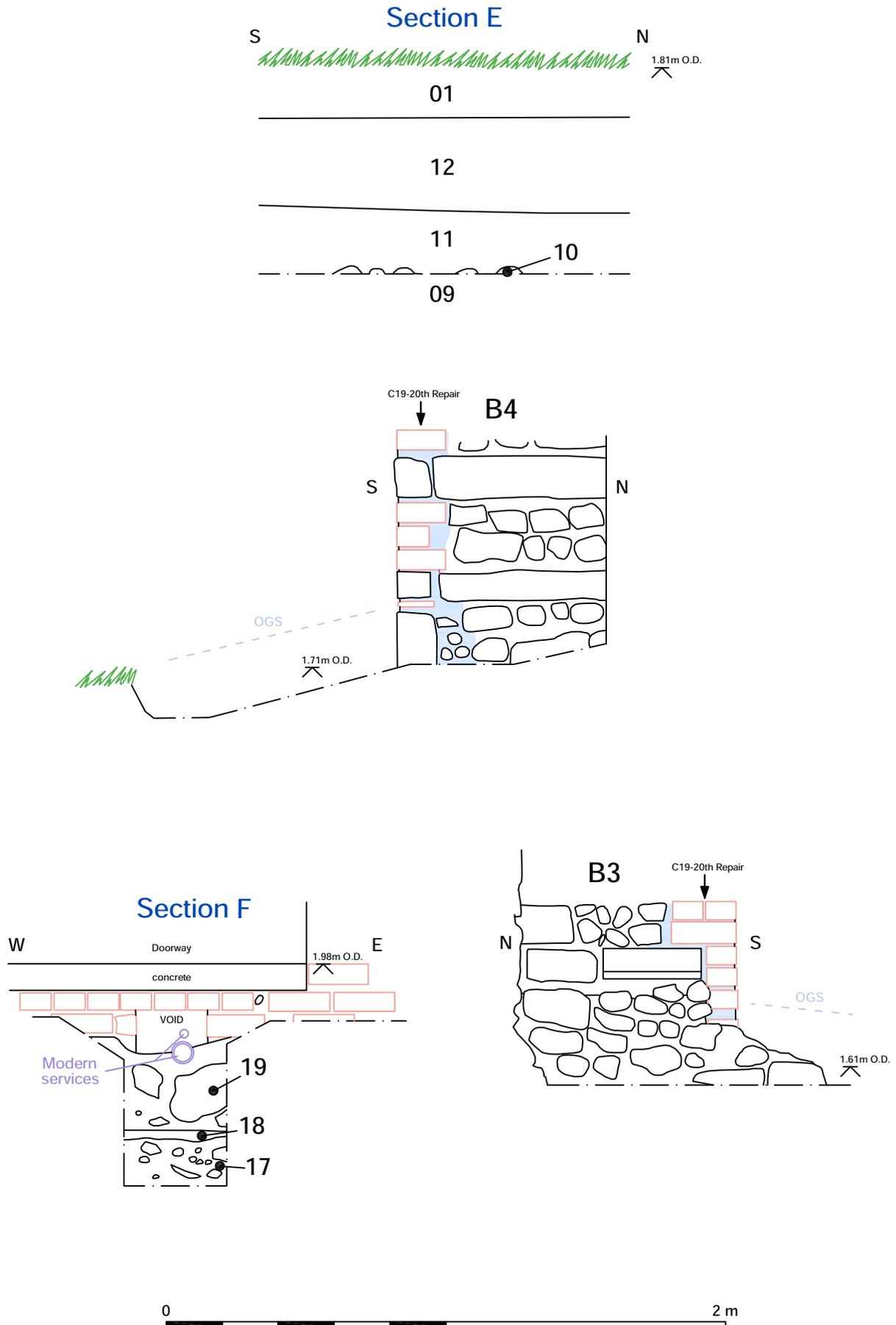


Figure 9. Recorded Sections/Elevations. Scale 1:20

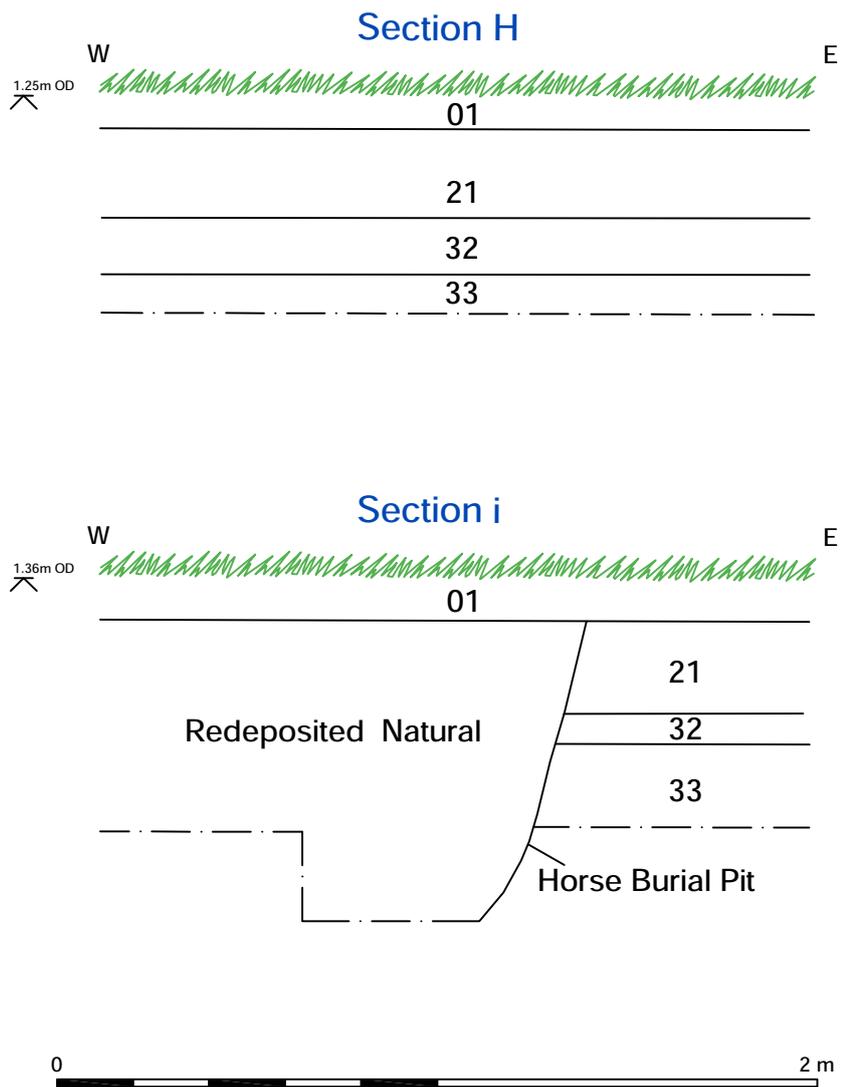


Figure 10. Recorded Sections H & i. Scale 1:20

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OASIS ID: norvicar1-158220

Project details

Project name	Archaeological Monitoring at St. James' Hospital Chapel, Horning, Norfolk
Short description of the project	<p>The results of archaeological monitoring of groundworks associated with drainage improvement works and a cable trench serving St. James' Hospital Chapel, Horning, Norfolk. The chapel building appears to have been well sited on a relatively high occurrence of sandy-clay amongst an area of alluvial clay-silts. A layer of clean redeposited sandy-clay above organic stained deposits may be a consolidation horizon associated with medieval construction. The surface of two stone packed linear features of medieval date were revealed on the south side of the chapel, these are tentatively interpreted as pads or footings for a structure. A medieval ditch was discovered which runs below the north-west corner of the chapel. This may indicate some form of reorganisation of land use, possibly coinciding with a rebuilding programme at the hospital site following fire damage to an earlier building in the 1340s. Partial exposure of several buttress pads and part of the chapel wall footings allowed for limited examination of the fabric and form of their construction. A small area of the southern chapel wall footings was exposed, which appear to show a fairly shallow footing constructed upon a foundation trench containing mortar debris. The remnants of two lean-to agricultural buildings of 19th century date were identified on the north side of the chapel from their footings. A small number of prehistoric flints were collected as residual finds which indicate Late Neolithic to Bronze Age activity in the vicinity of the chapel site.</p>
Project dates	Start: 17-06-2013 End: 20-06-2013
Previous/future work	No / No
Any associated project reference codes	NVC/2012/GE120 - Contracting Unit No.
Any associated project reference codes	ENF131296 - HER event no.
Type of project	Recording project
Site status	Scheduled Monument (SM)
Current Land use	Other 4 - Churchyard
Monument type	CHAPEL Medieval

Monument type	DITCH Medieval
Monument type	ANIMAL SHED Post Medieval
Monument type	CONDUIT Post Medieval
Monument type	SOAKAWAY Post Medieval
Significant Finds	FLINT Early Prehistoric
Significant Finds	ANIMAL BONE Medieval
Significant Finds	CBM Medieval
Significant Finds	POTTERY Medieval
Significant Finds	OYSTER SHELL Medieval
Significant Finds	POTTERY Post Medieval
Investigation type	"Watching Brief"
Prompt	Scheduled Monument Consent

Project location

Country	England
Site location	NORFOLK NORTH NORFOLK HORNING St. James' Hospital Chapel, Horning, Norfolk
Postcode	NR12 8NJ
Study area	0 Square metres
Site coordinates	TG 3722 1631 52 1 52 41 30 N 001 30 38 E Point

Project creators

Name of Organisation	Noric Archaeology
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Noric Archaeology
Project director/manager	Giles Emery
Project supervisor	Giles Emery
Type of sponsor/funding body	Landowner
Name of sponsor/funding body	Ted Brewster

Project archives

Physical Archive recipient	NMAS and Norvic Archaeology
Physical Contents	"Animal Bones","Ceramics","Metal","Worked stone/lithics"
Digital Archive recipient	NMAS

Digital Contents	"Survey"
Digital Media available	"Images raster / digital photography", "Text"
Paper Archive recipient	NMAS
Paper Contents	"Survey"
Paper Media available	"Context sheet", "Plan", "Report", "Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Monitoring at St. James' Hospital Chapel, Horning, Norfolk
Author(s)/Editor(s)	Emery, G.
Other bibliographic details	Norvic Archaeology Report No. 32
Date	2013
Issuer or publisher	Norvic Archaeology
Place of issue or publication	Norwich
Description	Spiral bound
Entered by	Giles Emery (giles.emery@norvicarchaeology.com)
Entered on	4 January 2014

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