

**ARCHAEOLOGICAL EVALUATION REPORT:  
TRIAL TRENCHING ON LAND AT GARAGES AND WORKSHOP SITE,  
MILL LANE, LINCOLN**

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Report prepared for  
Quaybronze Limited

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## Summary

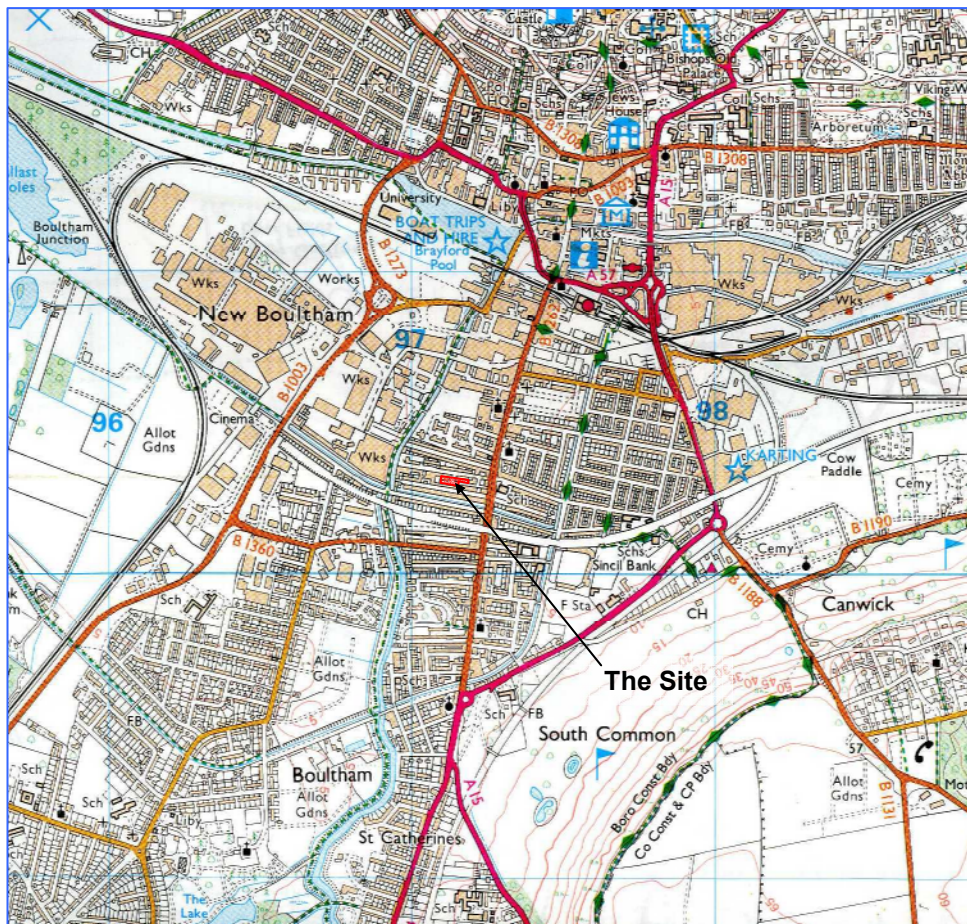
A programme of archaeological trial trenching was carried out in advance of a proposed development on land at Garages and Workshop Site on Mill Lane in Lincoln.

The site is situated within the former Roman and medieval suburbs of the city.

Five trenches were excavated following demolition of existing garages and a workshop, to the north of Mill Lane. Up to 2m of deposits were exposed within the trenches, dating from the Romano-British period to the present day. The sequence showed the site was probably wet, marginal ground in the Romano-British period, used for dumping of some refuse. There was then a break in activity until the 9<sup>th</sup>/10<sup>th</sup> century, when a cultivation layer was created. This continued to be worked and built up throughout the medieval period.

The remains of foundations of an 18<sup>th</sup>-19<sup>th</sup> century windmill were exposed below ground level. Some Victorian buildings with associated cellars that were constructed after the destruction of the mill were recorded.

A bone flute of probable medieval date was recovered from a layer beneath the foundations of a Victorian building.



**Figure 1:** Site location in red at scale 1:25,000

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## **1.0 Introduction**

- 1.1 Allen Archaeological Associates was commissioned by Quaybronze Limited to carry out an archaeological evaluation in advance of a proposed development at the Garage and Workshop site on land at the west end of Mill Lane in Lincoln.
- 1.2 The site works and reporting conform to current national guidelines, as set out in the Institute for Field Archaeologists '*Standards and guidance for archaeological evaluations*' (IFA 2001), procedures that are set out in the Lincolnshire County Council publication *Lincolnshire Archaeological Handbook: A Manual of Archaeological Practice* (LCC 1998), and a specification prepared by this company (Allen 2007).
- 1.3 The archive will be submitted to the museum in Lincoln (The Collection) for long-term storage, and will be accessible using LCCM Accession Number 2007.206.

## **2.0 Site location and description**

- 2.1 Lincoln is the regional centre of Lincolnshire, and is located approximately 58km to the west of the east coast of England. The site lies to the south of the core of the city, to the west of the High Street and immediately to the north of Mill Lane.
- 2.2 The site centres on NGR SK 97133 70305. It is relatively low-lying, flat ground at c.6m OD. At the time of the fieldwork, the garages and workshop had been demolished, leaving a surface comprising brick rubble fronting on to Mill Lane.
- 2.3 The local geology consists of drift deposits of undifferentiated river terrace sand and gravel, overlying a solid geology of Lower Lias clay, shale and rare limestone (British Geological Survey 1973).

## **3.0 Planning background**

- 3.1 Planning permission was granted for the development, subject to conditions, including the undertaking of an archaeological evaluation to assess the archaeological resource in advance of development (Planning Reference 2007/0152/F). The results of this evaluation will then be used to assess the impact of the development upon the archaeological resource, and to mitigate for this, if applicable.

## **4.0 Archaeological and historical background**

- 4.1 There is no evidence for prehistoric activity in the vicinity of the site. Recent discoveries of worked lithic material during commercial developments at St Catherine's Road, some 800m to the south of the development, and at the Brayford Pool (c.800m to the north), indicates that there was early prehistoric activity in the area of Lincoln however (LAS forthcoming). Excavations in 1972 at 181-183 High Street, approximately 700m to the north of the site exposed the remains of a late Iron Age structure, attesting to pre-Roman activity in the Lincoln area (Jones and Stocker 2003).
- 4.2 Romano-British activity in the region began with the imposition of a possible fort in the area of South Common, pre-dating the legionary fortress on the north side of the Witham Valley. The possibility of an early fort has been postulated due to the presence of a number of legionary tombstones of an early date found in this part of the city, largely around Monson Street, immediately to the north of the site (Jones 2002).

- 4.3 Following the abandonment of the legionary fortress in Lincoln in the latter part of the first century AD, the site was developed as a *colonia*, a settlement of retired legionary soldiers and their dependents, and an administrative centre. The city expanded rapidly beyond the confines of the former legionary fortress, and the area along the High Street, which follows the line of the Roman Ermine Street, developed as an industrial and residential suburb. The area of the current site was cut off from the suburbs to the north by a low-lying marshy area, until major landfill operations raised the ground surface in the 2<sup>nd</sup> and 3<sup>rd</sup> centuries, forming a continuous suburb of a kilometre or more from the river (Jones 2003). As with the suburbs to the east, west and north of the city, a number of burial areas have been identified in the lower suburb (*ibid.*).
- 4.4 Lincoln as a whole appears to have suffered a gradual decline in population and prosperity towards the end of the Roman period, leading to widespread abandonment and decay of much of the Roman city by the 5<sup>th</sup> century AD. In the area of the proposed development, there is little evidence of revival until the 9<sup>th</sup> or 10<sup>th</sup> century, with small quantities of pottery having been recovered from a number of sites across the lower city (Vince 2003a). From this period onwards the area along the High Street developed as the medieval suburb of Wigford, principally as an industrial quarter. The Witham ran along the west side of the suburb, with an extensive quayside developing along the riverside, probably for traffic from the Fossedyke. The area to the east of the suburb was gradually reclaimed throughout the middle ages (Vince 2003b).
- 4.5 Lincoln suffered widespread population decline and a downturn in commercial activity from the 13<sup>th</sup> century onwards, due to the effects of the loss of the cloth trade, followed by the Black Death in the mid 14<sup>th</sup> century. Revival of the fortunes of the city did not begin until the later 18<sup>th</sup> century, when the city developed an extensive heavy manufacturing industry. Rapid expansion of the urban area took place during the 19<sup>th</sup> century as rows of terraced houses were built to provide accommodation for the workers, as was the case within the area of the proposed development (Stocker 2003).
- 4.6 Historical mapping for Lincoln shows housing along the High Street in 1817, with strip plots to the rear of the properties, including the area of the development (Mills and Wheeler 2004). This early map shows no evidence for Mill Lane at this time. By 1820 windmills had appeared on open ground to the west of the High Street, and although Mill Lane still did not appear on contemporary plans, it is likely that a track led from the High Street westwards to the nearest mill. A further map dated to 1839 does show a narrow strip that may be interpreted as a lane or track, however this is far from clear, with the first formal mention of Mill Lane to be found on a map dated 1842.
- 4.7 The large tower of an existing windmill, Crown Mill, lies to the north-west of the site closer to the river. Crown mill was built around 1835 as a five sail mill. Passed to Henry Le Tall in 1871, the mill was converted to run under steam power with roller flour mills prior to 1860 (Jones *et al* 2003). The present mill tower and its associated buildings have been converted into flats.
- 4.8 A windmill is first shown to exist within the proposed development area the Ordnance Survey map of 1820 (Figure 3). It does not feature on W. Marrat's 1817 map of Lincoln (Mills and Wheeler 2004) however it is possible that the mill was in existence at this time. The windmill that stood on the site was used as a Subscription mill c.1848, a forerunner of the Co-operative movement. Milling began in November 1848 and it was reported that within a few months all other Lincoln millers were forced to reduce their prices to compete. The then owner of the larger tower mill in Princes Street (Crown Mill), Mr. Henry Lister filed for bankruptcy in 1849; possibly brought on by competition from

the Subscription mill. It is believed that the Subscription mill was in use for only a short period of time (Tinley 1999).

- 4.9 Although used as a Subscription mill in 1848, the mill was not constructed for this purpose. The mill was still an upstanding structure by the time of J.S. Padley's revised 1851 map, but is not depicted on Padley's 1868 map (Mills and Wheeler 2004). Instead, a block of four dwellings are shown to have occupied the area of the former mill (Figure 3). From this, a date for the destruction of the windmill between 1851 and 1868 can be deduced, probably to make way for the Victorian housing.

## **5.0 Methodology**

- 5.1 In order to evaluate the archaeological resource within the development area, a programme of intrusive archaeological investigation was undertaken between the 22<sup>nd</sup> and 26<sup>th</sup> October 2007. This required the excavation of five trenches, four measuring 5m x 1.6m (Trenches 1 – 4), and one measuring 10m x 1.6m (Trench 5). All five trenches were located to the north of Mill Lane, with Trenches 1 – 3 positioned to the west of the junction with Princess Street, and Trenches 4 and 5 located to the east of the junction (Figure 2). The location of the trenches was agreed with the City Archaeologist at Lincoln City Council prior to the works. The trenches were located with measuring tapes, offsetting from the site boundaries.
- 5.2 Topsoil and subsoil deposits were removed using a JCB 3CX excavator in spits no greater than 0.2m in depth, using a 1.6m wide toothless ditching bucket. All excavations were undertaken under close archaeological supervision, down to what was believed to be natural sand.
- 5.3 A full written record of all archaeological features and deposits was made on standard Allen Archaeological Associates recording sheets, accompanied by plan and section drawings at an appropriate scale (1:50 and 1:20). A full photographic record was also made, and selected prints have been included in this report.

## 6.0 Results

### 6.1 Trench 1

- 6.1.1 Trench 1 was aligned east-west. It was the western-most trench dug on the site (Figure 4). It was located five metres from the western boundary of the site.
- 6.1.2 The Removal of demolition horizon 100 exposed a layer of pitched cobbles 104 that formed a yard surface or narrow road in the western half of the trench.
- 6.1.3 The stone surface 104 sealed a series of deposits, the uppermost being dark brown/grey clayey silt, 105. This overlay a brown/grey sandy silt layer, 106, containing occasional flecks of charcoal and limestone fragments. A single residual sherd of pottery was recovered from this deposit of Roman-British date. The sherd has been dated to the 2<sup>nd</sup> to 3<sup>rd</sup> centuries A.D (see Appendix 2).
- 6.1.4 Beneath Layer 106 was 109, a yellow/grey sandy silt that appears to have formed through flooding from the River Witham to the west. This sandy horizon sealed a shallow band of organic dark brown/grey sandy clayey silt with rare charcoal flecks, 107. A total of 9 pieces of animal bone were recovered from this 0.1m thick deposit, including a very rare worked bone flute of probable 11<sup>th</sup> – 13<sup>th</sup> century date (See Appendix 4). Layer 109 sealed 108, a series of laminated sandy silts of brown, grey and yellow hue that were exposed at the base of the trench.
- 6.1.4 Within the east half of the trench this sequence of deposits had been removed by later development.
- 6.1.5 A north-south aligned wall 101 was exposed immediately below the modern overburden layer 100 in the eastern half of the trench. Wall 101 was perpendicular to the trench, extending beyond the northern and southern limits of excavation. It measured at least 1.35m deep and 0.60m wide, and comprised at least 9 courses of limestone blocks and bricks that typically measured 0.3m by 0.2m, bonded by a grey-brown mortar. The wall was two courses thick with a rubble core. Some broken bricks had been used in the make-up of the wall. The construction cut 102 for the wall was cut into the garden soil layer 105 which extended to the west of the wall. The undisturbed layers to the west of the wall suggest that it retained the area to its east.
- 6.1.6 An east-west aligned brick partition wall 103 that butted the north south wall 101 was recorded in the eastern portion of the trench. The wall extended beyond the eastern limit of excavation. Wall 103 was two courses thick with up to three courses of brick exposed in the trench. The bricks were bonded by a pale grey mortar and each measured 0.21m by 0.11m by 0.07m.
- 6.1.7 A brick rubble backfill deposit 110 had infilled two cellars to the north and south of the wall that were bounded by wall 101 to the west. The brick rubble 110 contained bricks similar to those recorded in the make up of walls 101 and 103. The rubble is likely to have derived from the demolition of the overlying building.

### 6.2 Trench 2

- 6.2.1 Trench 2 was aligned east-west and was situated to the north of the line of Mill Lane (Figure 5). The trench was located in order to expose the remains of a windmill that was known to have stood in this portion of the site. The trench was located just to the north of the line of Mill Lane.



- 6.2.2 A modern layer of overburden 200 was removed to expose masonry relating to two separate structures: the windmill and a Victorian building, possibly the other side of the building exposed at the eastern end of Trench 1.
- 6.2.3 The foundations 206 of the corner of a Victorian building that retained a possible cellar were exposed in the western portion of the trench. The north – south aligned portion of the wall extended into the northern extent of the trench for a distance of 1.70m before returning through 90° to an east-west alignment. The east-west portion of wall 206 was over 1m long, extending beyond the western limit of excavation. The wall measured 0.50m wide and was made up of at least 12 courses of limestone blocks that were bonded by a yellowish-brown mortar. The base of the wall was not exposed for health and safety reasons, but it was shown to be at least 1.7m deep. The upper six courses of the wall incorporated dressed limestone blocks that typically measured 0.3m by 0.2m. The lower six courses were noticeably rougher in the external edge of the wall that was exposed in the sondage to the east of the wall against the south-facing baulk section.
- 6.2.4 The wall 206 retained a possible cellar that extended beyond the western limit of excavation. The exposed portion of the cellar measured 1.25m long and 0.50m wide. This had been backfilled by a brick rubble deposit 215 which probably infilled the cellar when the building was demolished.
- 6.2.5 The construction cut 205 for wall 206 was cut into a mortar rich layer with ceramic building material fragments (i.e. brick and tile pieces, hereafter CBM) 213 which sealed the construction cut 203 for windmill footings 204. Layer 213 was interpreted as either a make-up layer to support the internal floor of the mill which has since been removed, or a layer that was created during the destruction of the windmill. If the layer 213 was the make up for the windmill internal floor, the level of the floor would have to have been at least 0.40m higher than the external ground surface (that is if the level of the external ground surface respected the step on the external portion of the wall).
- 6.2.6 The footings 204 for the windmill were exposed crossing the northern portion of the trench. The slightly curving wall was aligned broadly north – south within the trench. The overburden 200 was removed to the north of the trench to show that the wall extended a distance of approximately 3m north of the trench before being truncated by the projected line of the north-south aligned portion of wall 206. At this point the wall had curved round to a broadly north-west to south-east alignment. It is not known if the windmill wall continued to the west of wall 206 or whether it was completely removed by a cellar to the west of wall 206.
- 6.2.7 Sondages were dug either side of wall 204 within the trench in order to ascertain the depth and nature of the mill foundations. The base of the wall footings was exposed on each side of the wall.
- 6.2.8 The wall footings 204 were made up of up to 20 courses of brick bonded by a very strong pale grey mortar. The footings measured up to 0.70 m wide and 1.30m deep. The bricks themselves measured 0.21m long and were 0.10m wide and 0.06m deep. They were hand made and date from the 18<sup>th</sup> to 19<sup>th</sup> centuries (J. Young *pers com*).
- 6.2.9 An offset was recorded five courses down on the external eastern edge of the footings. The offset extended 0.06m from the wall and was made up of bricks that had been laid perpendicular to the line of the wall. This may have been the level of the external ground surface of the mill. The wall measured 0.50m wide above the step. The wall measured 0.70m wide at its base where the first two courses stepped out on either side of the wall.

- 6.2.10 The first two courses of brick were laid parallel to the wall. The offset recorded on the western side of the footings extended 0.07m from the main body of the wall, and 0.05m along the eastern side.
- 6.2.11 The construction cut 203 that contained wall footings 204 was cut into a thick dark brown/grey former garden soil layer 201 along its western internal edge and 214 along its eastern external edge.
- 6.2.12 The surviving portion of the construction cut 203 for mill footings 204 measured up to 1.20m wide and 1.15m deep, with vertical sides. A structure, perhaps of wooden planks, may have been used in order to retain the soft subsoil layers and prevent the sides from collapsing during the construction of the wall.
- 6.2.13 A series of layers laid down by flood events with a buried soil horizon that had formed during a drier period were recorded between walls 204 and 206.
- 6.2.14 Layer 201 (same as 214) overlay a build up of sandy silt 207. This layer contained charcoal flecks from previous human activity in the vicinity of the site. Layer 207 measured up to 0.40m deep, and overlay a grey sandy silt layer 208 that was interpreted as a flood horizon containing charcoal flecks. Layer 208 measured 0.40m deep and overlay another flood horizon 208. Layer 208 was a yellow/grey fine sandy layer that measured 0.20m deep. It overlay a thin layer of darker sandy silt 209. The undated layer 209, a brown/grey sandy silt was up to 0.08m thick. It exposed a clean orange/yellow sandy layer 210. Layer 209 may be a buried soil horizon attesting to a drier period when the area was less prone to flooding.
- 6.2.15 The undated clean sandy layer 210 was exposed at the bottom of the sondages dug next to windmill wall 204 and cellar wall 206. The lowest context recorded, layer 210 appeared not to have been disturbed. A similar horizon in Trench 1 to the west and Trench 5 to the east however, was shown to seal layers that contained Roman pottery.

### **6.3 Trench 3**

- 6.3.1 Trench 3 was aligned north – south, and was located three metres to the west of the junction with Princess Street (Figure 6).
- 6.3.2 A layer of overburden 300 was removed by machine to expose the remains of a possible Victorian rubble backfilled cellar that was similar to those recorded in Trenches 1 and 2.
- 6.3.3 A wall 302, comprising mortared limestone blocks, was recorded along the eastern side of the trench. A sondage that was excavated in the south-east portion of the trench showed the wall to be up to fourteen courses (2.02m) thick. A brick cellar floor 309 was recorded at the base of the sondage.
- 6.3.4 The floor 309 was made up of un-mortared bricks that butted wall 302 to the east and partition wall 308 to the south.
- 6.3.5 An east-west aligned brick partition wall 308 was recorded at the southern limit of the trench. Wall 308 was at least 20 courses of bricks (1.80m) thick. It measured two bricks (0.22m wide) and continued beyond the western limit of excavation. Wall 308 butted wall 302 which continued south of wall 308, possibly retaining a second cellar beyond the southern limit of excavation.

- 6.3.6 An east-west return of wall 302, wall 303 was recorded at the northern extent of the trench. Wall 303 appeared to be the northern extent of the building. A coal chute 305 (same as 306) was incorporated into wall 303. The coal chute was bounded to the west by wall 304, a continuation of wall 303, and measured 0.95m wide and at least 0.70m deep, and sloped approximately 0.50m in from the top of the wall.
- 6.3.7 A north-south aligned brick partition wall 307 butted wall 304 0.10m to the west of coal chute 305/306. Wall 307 extended 1.40m south of wall 304, parallel to the western limit of excavation. Up to 13 courses (1.24m) of the wall were exposed, with the bricks bonded by a yellow/brown mortar. The southern end of the wall formed an entrance into a space retained by wall 308 to the south and the western side of wall 307 to the west.
- 6.3.8 The cellar exposed in the trench was backfilled with a brick rubble deposit 301 that probably derived from the demolition of the overlying building.

#### **6.4 Trench 4**

- 6.4.1 Trench 4 was aligned east - west, and was located seven metres to the east of the junction with Princess Street (Figure 7).
- 6.4.2 A layer 400 of overburden measuring up to 0.30m thick was removed by machine to reveal a garden earth build up 401 that was 0.35m thick. This layer overlay a large pit 404 in the western portion of the trench.
- 6.4.3 The rubbish pit 404 extended beyond the western limit of excavation. A portion of the pit along the south-facing baulk section was removed to show that the pit was up to 1m deep. It extended 2.30m from the western end of the trench. The surviving portion of the pit in the base of the trench measured 1.50m wide. Pit 404 was filled by two distinct fills. The lower fill 405 contained a cow bone, two goose bones and mussel and cockle shells. A single sherd of a large jar dated to the 13<sup>th</sup> to 14<sup>th</sup> centuries was also recovered, and a fragment of residual roof tile dated to the mid 12<sup>th</sup> to 13<sup>th</sup> centuries (See Appendix 3). The upper fill 406 of the ditch was interpreted as a backfill deposit. The pit was probably backfilled to seal rubbish within the pit, or to level the ground surface after the pit was no longer in use.
- 6.4.4 The pit 404 was cut into layer 407, clay mixed with small limestone fragments. This context was interpreted as a demolition deposit that was 0.07m thick. It overlay a 0.5m thick dirty sandy deposit 402.

#### **6.5 Trench 5**

- 6.5.1 Trench 5 measured 10m long, it was aligned east – west and was the easternmost trench that was recorded to the east of the junction with Princess Street (Figure 8).
- 6.5.2 A layer of overburden 500 up to 0.35m thick, consisting of disturbed garden earth mixed with modern demolition materials was removed by machine to reveal a thick garden deposit 501. Layer 501, was 0.50m thick and was removed by machine to reveal another build up of soil 510. Layer 510, a 0.40m thick brown/grey build up of sandy silt was removed to expose a clean sandy layer 511 at the base of the trench. Three sherds of medieval pottery dating from the late 9<sup>th</sup> to the mid-late 12<sup>th</sup> century were recovered from layer 510 whilst cleaning the trench (see Appendix 3). Some animal bones, predominantly from sheep or goats were also recovered (See Appendix 5).

- 6.5.3 Pit 502 was cut into the post-medieval garden earth layer 501 below overburden 500. Pit 502 was 4.70m wide and at least 1.50m deep. It extended beyond the northern and southern limits of excavation. The eastern edge of the pit was vertical with a step that may have been machine cut. The western edge had a concave profile. Tip lines in the modern backfill deposits 504 and 505 of the pit showed it to have been infilled from its western side.
- 6.5.4 The large size of the feature suggested that it may have been a quarry pit for sand. Little or no material that derived from the digging of the pit had made its way back into it, suggesting that the sand was exported from the site for an unknown purpose.
- 6.5.5 Layer 511 that was exposed at the base of the trench appeared to be an undisturbed layer of yellow sand. A hand-dug slot through 511 recovered Roman pottery from deposit 513 below. The Roman pottery comprised the base of a beaker that probably dates from the first half of the 3<sup>rd</sup> century (See Appendix 2).
- 6.5.6 An undated pit 508 was recorded extending beyond the southern limit of excavation in the eastern portion of the trench, cutting sandy layer 511. The pit extended 0.20m into the trench. It was 0.60m wide and 0.12m deep. It was filled with a naturally deposited brown/grey sandy silt 509 that contained charcoal flecks. The butchered horn core of a cow and part of a skull from a goat or sheep were recovered from the fill 509 of the pit (See Appendix 5). An oval posthole 506 was recorded 0.70m to the north-west of pit 508.
- 6.5.7 Posthole 506 had near vertical sides and a tapering base. The posthole measured 0.40m long, 0.30m wide and 0.14m deep with no trace of the post surviving. The posthole was filled with dark brown/grey sandy silt deposit 507 that contained charcoal flecks and a fragment of burnt limestone. Two sherds of residual pottery dating to the Romano-British period were recovered from fill 507. A single sherd of Late Saxon pottery dated to the late 9<sup>th</sup> to late 10<sup>th</sup> centuries was also recovered (See Appendices 2 and 3).

## 7.0 Discussion

### 7.1 Trench 1

- 7.1.1 The yard surface 104 that was exposed in the western portion of Trench 1 may have been contemporary with the Victorian building that was recorded in the eastern portion of the trench. It was possibly also associated with later buildings that previously occupied this portion of the site.
- 7.1.2 Layer 106 was dated on the basis of a large unabraded sherd of Romano-British pottery of 2<sup>nd</sup> to 3<sup>rd</sup> century AD. This deposit however sealed 107, a layer containing animal bone, including a worked piece identified as a flute (See Appendix 4). Specialist analysis of the flute indicates that it may be of 11<sup>th</sup> – 13<sup>th</sup> century date; although it is acknowledged that such pieces were manufactured from the prehistoric to medieval periods. The Roman pottery that was recovered from the overlying layer 106 is likely to have been residual if the flute was medieval in date, although its lack of abrasion and size indicates this is not certain. Cattle bone and sheep/goat bones, some of which had been butchered, was also recovered from layer 107 (See Appendix 5).
- 7.1.3 The walls and associated cellars at the eastern portion of Trench 1 may be the western side of the building exposed in Trench 2, as the north – south aligned wall 101 was of similar dimension to wall 206 in Trench 2. Unlike wall 206, wall 101 incorporated both bricks and limestone in its makeup.

## 7.2 Trench 2

- 7.2.1 The later structure that is likely to have incorporated walls 206 and 101 are likely to be associated with the Victorian terrace block shown on J.S. Padley's 1868 map (Figure 3).
- 7.2.2 The remains of the windmill footings in Trench 2 show that up to 1.3m of the foundations for the mill survive below ground level. At the end of the evaluation works, the curvilinear windmill wall footing was exposed northwards from the trench by JCB, for a length of c.4.60m. At this point, the windmill foundations were truncated by later wall footings to the north of Trench 2. The windmill foundations may continue beyond the later wall, however the construction of the Victorian housing may have completely removed the western half of the windmill.
- 7.2.3 The surviving portion of the windmill wall which was exposed in the evaluation shows the windmill to have had an external diameter of approximately 7 metres. This makes it substantially smaller than the diameter of the surviving Crown Mill to the north-west which has an internal diameter of 8.78m (information taken from [www.waymarking.com](http://www.waymarking.com)). The mill is likely to have been a small tower mill similar to the restored four-sailed Ellis Mill near Burton Road in Lincoln (See Plate 11), approximately 1.92km to the north of the site. The Ellis Mill occupies the site of an earlier mill that was rebuilt in brick in 1784 (Jones *et al*, 2003).
- 7.2.4 Wall 101 in Trench 1 may be associated with wall 206 in the western portion of Trench 2. These walls are likely to be associated with housing that was built in the Victorian period and are shown on Figure 3. The width of the building that incorporated the two plots is approximately 11m.

## 7.3 Trench 3

- 7.3.1 The cellar that was exposed in Trench 3 was the remains of a building shown on the 1886 map. This is possibly a workman's cottage built in the later part of the 19<sup>th</sup> century. No features or deposits earlier in date than the Victorian building were exposed in Trench 3.

## 7.4 Trench 4

- 7.4.1 Unlike Trenches 1 – 3, no remains of intact masonry structures were found in Trench 4 (or Trench 5). Although a single sherd of 13<sup>th</sup> - 14<sup>th</sup> century pottery and piece of tile of 12<sup>th</sup> – 13<sup>th</sup> century date were recovered from the lower fill of rubbish pit 404, these are not thought to date the feature as modern brick and tile (not kept) were recovered from the upper fill.

## 7.5 Trench 5

- 7.5.1 The large modern feature in Trench 5 may have been a large quarry pit dug to extract sand. The nature of the cut suggested that it had been dug using a machine such as a JCB.
- 7.5.2 The Saxo-Norman posthole in Trench 5 was the only discreet feature that was dateable within Trench 5. The posthole may relate to a timber building that existed in this part of the site, although as only a single posthole was exposed, any interpretation remains tenuous.

- 7.5.3 A thick sequence of soil up to 1.95m deep and dating from the Roman period to the present day was recorded in Trench 5. The layers at the base of the sequence were predominantly of fine sands or fine sandy silts which were probably laid down during flood events associated with the river, probably during the Roman period. The uppermost layers indicate a build up of soil, probably a cultivation horizon, dating from the 9<sup>th</sup>/10<sup>th</sup> centuries to the post-medieval. A similar sequence of layers was recorded in a separate evaluation that was carried out on the other side of Mill Lane closer to the High Street to the east (Allen 2007).
- 7.5.4 The clean sandy deposit 511 that was recorded at the base of the trench was thought at the time of machine-excavation to have been an undisturbed natural layer. The probable late Saxo-Norman posthole 506 was cut into this layer. During the excavation of the western edge of the large sand quarry pit 502, a further layer (513) that was sealed by layer 511 was exposed. Romano-British pottery dating to the first half of the 3<sup>rd</sup> century AD was recovered from this deposit indicating that the upper sand 511 was probably post-Roman in date.
- 7.5.5 The uppermost deposits encountered are likely to be associated with the construction and subsequent demolition of structures along Mill Lane in the post-medieval period. The latest feature identified was a probable quarry pit that was dug to extract sand.

## 8.0 Conclusion

- 8.1 The sequence of deposits exposed within Trenches 1, 2, 4 and 5 showed that during the Roman period, probably from the 2<sup>nd</sup> century onwards, the area was marginal, wet ground unsuitable for habitation. This wet ground between the River Witham and the Roman High Street was used for some dumping of refuse, with occasional flooding events depositing sand, and periods of open water forming clay lenses across the site.
- 8.2 There then appears to be a hiatus from the 4<sup>th</sup> until the 9<sup>th</sup>/10<sup>th</sup> century (late Saxo-Norman), when this area of Lincoln was probably abandoned. Late Saxo-Norman activity is attested by dumping of pottery within a cultivation horizon that continued to be worked and raised into the medieval period. This deep soil indicates that there was both dumping of refuse, possibly for manuring, and cultivation occurring, probably to the rear of properties fronting onto the High Street.
- 8.3 A substantial portion of the foundations of the post-medieval windmill were shown to exist on the site below ground level. Later buildings that incorporated cellars were shown to have truncated the windmill footings. The construction date of the windmill remains unknown; it does not appear on the 1817 map but is shown on the 1820 of Lincoln (Figure 3). It was demolished between 1851 and 1868, probably to make way for the later buildings.
- 8.4 The later buildings relate to Victorian terrace blocks that were built on the site c.1868. The Victorian block terrace that was built over the demolished windmill incorporated cellars that have destroyed a large portion of the windmill's footings, along with earlier deposits.
- 8.5 Mill Lane was extended after the destruction of the windmill over the area once occupied by the southern portion of the windmill.

## 9.0 Effectiveness of methodology

- 9.1 The evaluation methodology employed was appropriate to the scale and nature of the proposed development. The position of Trench 2 was successful in identifying the nature and extent of the surviving windmill footings. It indicated that over 1.5m of deposits overlay the natural sands.

## 10.0 Acknowledgements

- 10.1 Allen Archaeological Associates would like to thank Quaybronze Limited for this commission. John Sass of the Lincolnshire Mill Group, John Herridge of Lincolnshire County Council and Professor Dennis Mills are all thanked for providing information on the mills of the area.

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## **12.0 Site archive**

- 12.1 The documentary and physical archive is currently in the possession of Allen Archaeological Associates. It will be deposited at The Collection, Lincoln, within six months, where it will be stored under the unique archive code 2007.206.



**Appendix 1: Colour Plates**



**Plate 1:** Post-ex Trench 1 looking west



**Plate 2:** Cobbled surface 104 looking north



**Plate 3:** Post-ex Trench 2 looking east



**Plate 4:** Windmill footings 204 looking north



**Plate 5:** Internal windmill footings 204 with step at base, looking east



**Plate 6:** External stepped windmill footings 204, looking north



**Plate 7:** Post-ex Trench 3, looking east



**Plate 8:** Pre-ex Trench 4, looking north-west



**Plate 9:** Pre-ex Trench 5, looking east



**Plate 10:** Post-ex quarry pit 502, looking northwest



**Plate 11:** Ellis Mill, Lincoln Copyright Chris Downer and licensed for reuse under this Creative Commons Licence.

**Appendix 2: Roman pottery assessment report****REPORT 268 ON POTTERY FROM EXCAVATION AT  
MILL LANE, LINCOLN, LIML07****For ALLEN ARCHAEOLOGICAL ASSOCIATES****By Margaret J. Darling, M.Phil., F.S.A., M.I.F.A.****10 November 2007 [updated 27 Nov. 07]**

The pottery from this work consists of just ten sherds, weighing 0.200kg, from four contexts. The condition is average but fragmented. No problems are anticipated for future storage. The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by *The Study Group for Roman Pottery*, using codes developed for the archive of the City of Lincoln (CLAU) excavations. The archive record is below (supplied as an Excel file), and will be curated for future study.

**Trench 1, context 106, occupation, urban build-up.**

Single sherd, a hand-made base from a BB1 cooking pot from Dorset, only the trimmed basal zone below the usually decorated zone. This ware first appears in the early 2<sup>nd</sup> century and continues through to the 4<sup>th</sup>. This example is probably 2<sup>nd</sup> to 3<sup>rd</sup> century in date.

**Trench 2, context 207, occupation, urban build-up.**

Five sherds, all body sherds, including grey sandy fabrics, and a single shell-gritted very small sherds, sooted externally. One of the grey sherds has a scar where either a handle or a decorative applique has been lost; the sherd is likely to have come from the closing of the neck area, so a handle is the most probable. There is no positive dating but the fabrics suggest a date in the 2<sup>nd</sup>, possibly into the 3<sup>rd</sup> century.

**Trench 5, context 507, fill of 506, possible Medieval post-hole.**

Two sherds, one a hard shell-gritted rim fragment, sparse shell, with a burnt edge, clearly from a cooking vessel. The rim type is unusual, but may be a variant type of an Iron Age tradition cooking pot, the dating more likely to be early 2<sup>nd</sup> century than earlier. The other sherd, a dark grey body sherd is flaked, and not datable.

**Trench 5, context 513, flood horizon.**

Two sherds, including a colour-coated beaker base, of small diameter, grooved underneath, with traces of a rouletted zone. The fabric is a fine light brown with a greyish core, similar light brown colour-coat, fugitive and matt, on the exterior only. This is not a product of the Nene Valley kilns, and its source is unknown. The other sherd is a sandy grey body sherd. The dating rests on the beaker base, and its typology, and is 3<sup>rd</sup> century, probably the first half.

The Roman dating is therefore confined to a period prior to the later 3<sup>rd</sup> and 4<sup>th</sup> century, as was the case with the pottery from earlier work (my Report 250).

**ARCHIVE DATABASE**

Cxt	Fabric	Form	Manuf+	Ve	Altn	D#	Details	Link	Shs	Wt
106	BB1	CP	HM	-	-	-	BASE;TRIMMED BASAL ZONE	-	1	66
106	ZDATE	-	-	-	-	-	E2+	-	-	-
207	GREY	J?	-	-	-	-	BASE STRING;SANDY	-	1	27
207	SHCM	-	?	-	SOOT	-	BS RB INT;BURNT SOOTED EXT;UNUSUAL FAB?	-	1	4
207	GREY	J?	-	-	-	-	BS PT NK;SHLDR;GROOVED;SANDY	-	1	10
207	GREY	-	-	-	-	-	BS DKGRY GRY CORE;LT CORTEX	-	1	16
207	GRSA	-	-	-	-	-	BS CLSD F;?SCAR POSS HDLE/APPLIED DEC?	-	1	12
207	ZDATE	-	-	-	-	-	2C?	-	-	-
207	ZZZ	-	-	-	-	-	1st 2 bag marked ROM;last 3, ROM RES? RIM FR;STRANGE FM;BURNT EDGE;HARD;SPARSE SHELL	-	-	-
507	SHEL	BNAT?	WM	-	BURNT	-		-	1	6
507	GREY	-	-	-	-	-	BS DKGRY;FLAKED	-	1	3
507	ZDATE	-	-	-	-	-	2C? BASE FTM;GROOVE BELOW;3CM+ DIAM;LTBN FB;GRYISH CORE;RED FE;SOME MICA;FUGITIVE SLIP EXT	-	-	-
513	CC	BK	ROUZ	-	-	-		-	1	40
513	GREY	-	-	-	-	-	BS HARD;SANDY	-	1	16
513	ZDATE	-	-	-	-	-	3C	-	-	-

**Appendix 3: Post-Roman pottery and ceramic building material**

By Jane Young

context	cname	full name	sub fabric	form type	sherds	vessels	weight	decoration	part	description	date
301	TGW	Tin-glazed ware		lobed dish	1	1	27		rim	plain white	mid 17th to mid 18th
405	POTT	Potterhanworth-type Ware		large jar	1	1	47		base	part int & part ext	13th to 14th
504	BL	Black-glazed wares	Staffs ?	small cup	1	1	12		base		mid 17th to mid 18th
504	ENGS	Unspecified English Stoneware		large flagon	1	1	85		LHJ		late 18th to mid 20th
504	CREA	Creamware		large vessel	1	1	31		base		mid/late 18th to mid 19th
504	PEARL	Pearlware		plate	1	1	14	blue	rim		late 18th to mid 19th
507	LSLOC	Late Saxon Local Fabrics	Fabric group W;shelly	jar	1	1	14		rim	EVERA1 rim;abundant fine-med fossil shell with fine background quartz;OX/R/OX	late 9th to late 10th
510	TORKT	Torksey-type ware		jar/bowl	1	1	21		base		late 9th to mid/late 11th
510	TORK	Torksey ware		bowl/pitcher	1	1	6	pressed strip	BS	abraded	late 9th to mid/late 11th
510	ST	Stamford Ware	A	small jar	1	1	6		BS	int & ext soot	10th to 11th

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context	cname	full name	sub fabric	form type	sherds	vessels	weight	decoration	part	description	date
510	LFS	Lincolnshire Fine-shelled ware		jar	1	1	7		BS	ridged shoulder	mid to late 12th
510	LFS	Lincolnshire Fine-	jar ?		1	1	21		BS	late 10th to 11th	

## Tile Archive

context	cname	full name	fabric	frags	weight	description	date
405	PNR	Peg, nib or ridge tile	Fabric 1	1	42	flat roofer	mid 12th to 13th

## Appendix 4: Registered Finds Report

### REGISTERED FINDS

*By Gary Taylor*

#### Introduction

Two 'other finds', a clay pipe and a bone implement, together weighing 9g, were recovered from separate contexts.

#### Results

*Table 1 Other Materials*

Context	Material	Description	NoF	W (g)	Date
107	Bone	Flute, 121mm long, 8mm across at mouthpiece, 12mm across at end	1	4	c. 11 <sup>th</sup> -13 <sup>th</sup> century
504	Clay pipe	Stem, bore 8/64"	1	5	17 <sup>th</sup> century

#### Provenance

The bone flute was recovered from a layer 107 which was recorded in Trench 1. A probable Lincoln product, the clay pipe was found in a backfill deposit (504) which infilled a large quarry pit 502 in the central portion of Trench 5.

#### Range

Created on a goose ulna (J. Wood, pers comm), the bone flute is complete except for lacking its fipple (block), which is almost invariably missing. It has been suggested that the fipple of such flutes may have been made from beeswax, which would help to explain why they are rarely found (MacGregor *et al.* 1999, 1977-8).

All of the holes, that is, the voicing lip and the finger stops, are on the posterior side of the bone. These holes, and the mouthpiece, have been knife cut and the entire instrument is well polished; wear around the finger holes show the flute was well-used. Slightly unusually, the mouthpiece is at the narrower, distal, end of the bone.

Pipes of broadly similar form, created from animal (both mammal and bird) bones, occur from prehistory to at least the 19<sup>th</sup> century (Megaw 1960). A near-identical example, fashioned from a goose ulna, was found at Southampton and dated to c. 1300 (Platt and Coleman-Smith 1975, 273-4). However, in contrast to the Lincoln find, this example from



Southampton had the mouthpiece at the proximal end and the holes on the anterior surface of the bone (Megaw 1975, 252). Another near-identical example, also on a goose ulna, was found at Thetford in a deposit of *c.* 1200. Like the Lincoln example, this had the holes on the posterior surface of the bone, though the mouthpiece was at the proximal end. Other bone flutes, on crane and goose bones, have also been found at Thetford in 11<sup>th</sup>-12<sup>th</sup> century contexts (Lawson 1993, 159; 163). A longer, though similar, flute utilising a swan ulna was found in a 12<sup>th</sup>-late 13<sup>th</sup> century context in Norwich. (Lawson and Margeson 1993, 211-2). Further afield, at Haithabu (Hedeby), Denmark, a very similar flute, said to be made from a crane or goose tibia, was found in a Migration Period (*c.* 5<sup>th</sup>-8<sup>th</sup> century AD) deposit (Megaw 1960, fig 1.3; 11).

Bone flutes and whistles have been found in Lincoln previously, one on a swan ulna, another on a goose bone. These have been recovered from deposits of mid 10<sup>th</sup> and mid 12<sup>th</sup> century date respectively (Mann 1982, 16; 54).

### **Condition**

The material is in good condition and presents no long-term storage problems. However, due to its innate fragility, the flute should be packaged with suitable padding.

### **Potential**

Although the potential of the clay pipe is restricted to providing dating evidence, the flute is quite significant. It is recommended that the flute is drawn.

### **Summary**

A fragment of clay pipe and a virtually complete bone flute were recovered. As a simple functional form, the flute is not particularly closely datable. However, closely comparable flutes from elsewhere have generally been found in 12<sup>th</sup>-13<sup>th</sup> century deposits, though also occur in earlier contexts.

### **SPOT DATING**

The dating in table 2 is based on the evidence provided by the finds detailed above.

*Table 2 Spot dates*

<b>Context</b>	<b>Date</b>	<b>Comments</b>
107	1th-13 <sup>th</sup> century	Based on object with conservative form
504	17 <sup>th</sup> century	Based on single object

## ABBREVIATIONS

NoF	Number of Fragments
W (g)	Weight (grams)

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Plate: The bone flute from context 107

## **Appendix 5: Animal Bone Report**

By Jennifer Wood

### **Introduction**

A total of 23 (545g) fragments of animal bone were recovered by hand during trial trench excavations undertaken by Allen Archaeology Associates at Mill Lane, Lincoln. The remains were recovered from a series of layers (107), (510), pits [404], [508] and possible post hole [506]; the remains have been provisionally dated to the medieval period.

### **Methodology**

Identification of the bone was undertaken with access to a reference collection and published guides. All the animal remains were counted and weighed, and where possible identified to species, element, side and zone (Serjeantson 1996). Also fusion data, butchery marks (Binford 1981), gnawing, burning and pathological changes were noted when present. Ribs and vertebrae were only recorded to species when they were substantially complete and could accurately be identified. Undiagnostic bones were recorded as micro (mouse size), small (rabbit size), medium (sheep size) or large (cattle size). The separation of sheep and goat bones was done using the criteria of Boessneck (1969) and Prummel and Frisch (1986). Where distinctions could not be made, the bone was recorded as sheep/goat (s/g).

The condition of the bone was graded using the criteria stipulated by Lyman (1996). Grade 0 being the best preserved bone and grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable.

The quantification of species was carried out using the total fragment count, in which the total number of fragments of bone and teeth was calculated for each taxon. Where fresh breaks were noted, fragments were refitted and counted as one.

Tooth eruption and wear stages were measured using a combination of Halstead (1985), Grant (1982) and Levine (1982), and fusion data was analysed according to Silver (1969). Measurements of adult, that is, fully fused bones were taken according to the methods of von den Driesch (1976), with asterisked (\*) measurements indicating bones that were reconstructed or had slight abrasion of the surface.

### **Results**

The remains were of a good to moderate overall condition, averaging between grades 2 and 3 on the Lyman criteria (1996).

#### *Butchery*

A total of five fragments of bone displayed evidence of butchery. These remains were recovered from layer (107), pit [508] and layer (510). A single cattle horncore recovered from [508] displayed cut marks which may suggest horn removal for working purposes. The remaining butchery marks were consistent with meat removal.

Remains recovered from a trial trench excavation on the adjacent site also undertaken by Allen Archaeological Associates (LIMI 07) also produced horncores with evidence of horn removal cut marks (Kitch, 2007). The synthesis report of animal remains from the city of Lincoln "of Butchers and Breeds" identified hornworking through out the city often mixed with domestic debris (Dobney *et al* 1995), with concentrations at the Waterfront and the Wigford suburb.

*Species Representation*

Table 1, Fragments Identified to Taxa, by Trench

Taxon	Trench No			Total
	1	4	5	
Cattle	2	1	1	4
Sheep/Goat	3		5	8
Goose		2		2
Large Mammal	2	2	2	6
Medium Mammal	1		2	3
Total	8	5	10	23

Two main domestic species were identified within the assemblage, cattle and sheep/goat, with two fragments of bird bone identified as domestic goose also present. Sheep/goat was the most predominant species within the assemblage. This is relatively typical within a medieval assemblage due to the heavy influence of the wool trade, prevalent at the time.

**Discussion**

The assemblage is too small to provide specific information on the animal utilisation and husbandry undertaken on site, save the presence/use of the identified species. The skeletal element representation suggests the remains probably represent mainly food waste with horn working debris also included, although not in significant amounts.

In the event of further work, the site is liable to yield more bone of a similar condition and nature.

*Jennifer Wood*

*Archaeological Project Services*

*November 2007*

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**Key:**

Codes and references used in cataloguing animal bone

**Taxon:** Species, family group or size category.

Non-species specific codes: -

- : Equid- Horse Family
- : Gadidae- Cod Family
- : Passer- *Passerine*, Small songbirds i.e. Sparrow or Finches
- : Turdid- *Turdidae*, Blackbird/Thrush family
- : Corvid- *Covidae*, Crow family i.e. Crow, Rook or Jackdaw
- : Galliform- Fowl or Pheasant
- : Large Mammal – Cattle, Horse, Red Deer size
- : Medium Mammal- Sheep/Goat, Pig, Dog, Roe Deer size
- : Small Mammal- Cat, Rabbit size
- : Micro Mammal- Mouse sized
- : Unidentified- Not identified to species

**Element:** Skeletal element represented.

- : Unidentified- Not identified to element

**Side:** L-Left, R- Right, B- Both

**Zones:** Records presence/absence of individual areas of the bone.

Based on Zone illustrations in Serjeantson, D, 1996 The Animal Bones, in *Refuse and Disposal at Area 16, East Runnymede: Runnymede Bridge Research Excavations*, Vol. 2, (eds) E S Needham and T Spence, British Museum Press, London.

**Prox & Dist:** Fusion of proximal and distal epiphyses

- : X- Not present, F- Fused, U- Unfused, B- Unfused diaphysis and epiphysis present, V- Fusion Line visible.

**Age Range:** Age range based on age at fusion. Based on

Silver, I, A, 1969, The Ageing of Domestic Animals, in D. Brothwell and E.S. Higgs, *Science in Archaeology*, Thames and Hudson.

- Path:** Presence of pathology, details in notes column.
- Butch:** Presence of butchery, details in notes column.
- Burnt:** Presence of burning, details in notes column.
- Gnaw:** Presence of gnawing, details in notes column.
- Worked:** Fragment shows evidence of working, details in the notes column.
- Fresh Break:** Fresh break noted, fragments re-fitted as one bone.
- Associated:** Articulating or adjoining bones.
- Measured:** Measurements taken as according to Von den Driesch, A, 1976 *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum.
- Tooth Wear:** Tooth wear score for aging data, taken as according to:  
 Grant, A, 1982 'The Use of Tooth Wear as a Guide to the Age of Domestic Ungulates', in B Wilson *et al. Ageing and Sexing Animal Bones from Archaeological Sites*, BAR British Series 109, 91-108, Oxford  
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 Levine, M A, 1982 The Use of Crown Height Measurements and Eruption-Wear Sequences to Age Horse Teeth. In Wilson, B et al. *Ageing and Sexing Animal Bones from Archaeological Sites*. BAR British Series 109. 223 – 250
- Surface:** Taphonomies noted on the bone surface:  
 W- Weathered  
 A- Abraded  
 R- Rootlet etched  
 D- Chemical etching from digestion
- Condition:** Grades 0-5, where 0 = pristine and 5= indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable. Based on Lyman, R L, 1996 *Vertebrate Taphonomy*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge
- No.:** Number of individual bones/fragments
- (g):** Weight in grams
- Notes:** Notes on observed taphonomies, differences and associations.

Ctxt No	Taxon	Element	Side	Prox	Dist	Path	Butch	Worked	Burnt	Gnaw	Fresh Break	Assoc'd	Measured	Tooth Wear	Surface	Condition	No.	(g)	Notes
107	Large Mammal	Rib	X	X	X	N	Y	N	N	N	N	N	N	N	X	2	2	36	Cuts on the anterior of the blade (both fragments)
107	Sheep/Goat	Innominate	L	X	F	N	N	N	N	N	N	N	N	N	X	2	1	8	
107	Sheep/Goat	Innominate	L	X	F	N	N	N	N	N	N	N	N	N	X	3	1	8	
107	Cattle	Horncore	L	X	X	N	N	N	N	N	N	N	N	N	X	2	1	60	
107	Cattle	Humerus	R	X	X	N	N	N	N	N	N	N	N	N	X	2	1	84	
107	Medium Mammal	Tibia	L	X	X	N	Y	N	N	N	N	N	N	N	X	2	1	17	Two cuts on the posterior shaft
107	Sheep/Goat	Femur	R	X	X	N	N	N	N	N	N	N	N	N	X	2	1	11	
405	Large Mammal	Patella	L	X	X	N	N	N	N	Y	N	N	N	N	X	2	1	48	Possible carnivore gnawing on the articulation
405	Large Mammal	Long Bone	X	X	X	N	N	N	N	N	N	N	N	N	X	3	1	11	
405	Cattle	Tooth	R	X	X	N	N	N	N	N	N	N	N	Y	X	2	1	17	Lower M1=f
405	Goose	Carpometacarpus	R	F	F	N	N	N	N	N	N	N	Y	N	X	2	1	5	
405	Goose	Tibiotarsus	R	X	X	N	N	N	N	N	N	N	N	N	X	3	1	2	
507	Large Mammal	Rib	X	X	X	N	N	N	N	N	N	N	N	N	X	3	1	12	
509	Cattle	Horncore	L	X	X	N	Y	N	N	N	N	N	N	N	X	2	1	111	Three cuts on the skull at the base of the horncore.
509	Sheep/Goat	Skull-zygomatic	R	X	X	N	N	N	N	N	N	N	N	N	X	2	1	6	

Ctxt No	Taxon	Element	Side	Prox	Dist	Path	Butch	Worked	Burnt	Gnaw	Fresh Break	Assoc'd	Measured	Tooth Wear	Surface	Condition	No.	(g)	Notes
509	Medium Mammal	Long Bone	X	X	X	N	N	N	N	N	N	N	N	N	X	2	1	5	
510	Large Mammal	Rib	X	X	X	N	Y	N	N	N	N	N	N	N	X	3	1	24	Cut on the medial side of the blade
510	Sheep/Goat	Skull-frontal	L	X	X	N	N	N	N	N	N	N	N	N	X	2	1	13	
510	Medium Mammal	Rib	X	X	X	N	N	N	N	N	N	N	N	N	X	3	1	6	
510	Sheep/Goat	Tibia	L	X	X	N	N	N	N	N	N	N	N	N	X	3	1	32	
510	Sheep/Goat	Tibia	L	X	X	N	N	N	N	N	N	N	N	N	X	3	1	15	
510	Sheep/Goat	Tibia	L	X	X	N	N	N	N	N	N	N	N	N	X	3	1	14	



## Appendix 6: List of archaeological contexts

### Trench 1

Context No	Type	Description	Interpretation	OD Height	Deposit Model Code
100	Layer	Frequent brick rubble	Modern demolition horizon	5.70m 5.55m	MODT EMODB
101	Wall	Dressed limestone blocks bonded with grey/brown mortar	Victorian wall footing for cellar	5.55m 3.85m	EMODT EMODB
102	Cut	Vertical linear cut with flat base	Foundation cut for wall 101	5.55m 3.85m	EMODT EMODB
103	Wall	3 courses of brick bonded with pale grey mortar	Internal partition wall	5.55m 3.85m	EMODT EMODB
104	Surface	Pitched sub-rectangular cobbles	Yard surface	5.60m	EMODT
105	Layer	Dark brown/grey clay silt	Former garden soil	5.60m 5.02m	?PMEDT ?LMEDB
106	Layer	Brown/grey sandy silt with rare charcoal flecks and occasional sub-angular limestone fragments	Occupation layer/urban build-up	5.00m 4.66m	?LMEDB ?MROMB
107	Layer	Dark brown/grey sandy clayey silt with rare charcoal flecks	Occupation layer/urban build-up	4.30m 4.12m	?OGSS-HMEDT ?OGSS-HMEDT
108	Layer	Brown/grey sandy silt with lenses of grey/brown clayey silt	Flood deposits	4.20m ≤3.80m	?OGSS ?OGSS
109	Layer	Yellow/grey sandy silt with rare charcoal flecks	Flood horizon	4.66m 4.26m	?SNB ?LROM
110	Fill	Frequent brick rubble	Cellar backfill	5.55m	EMODT
111	Fill	Grey/brown friable silty sand with frequent brick fragments and mortar	Backfill of construction cut 102	5.55m 3.85m	EMODT EMODB

**Trench 2**

Context No	Type	Description	Interpretation	OD Height	Deposit Model Code
200	Layer	Frequent brick and limestone rubble	Modern demolition horizon	6.03m 5.78m	MODT MODB
201	Layer	Dark brown/grey clay silt	Former garden soil	5.59m 5.19m	LPMEDT LPMEDB
202	Layer	Light grey/brown silt with frequent small limestones and rare charcoal	Construction horizon associated with mill structure	5.67m 5.55m	LPMED LPMED
203	Cut	Near vertical sides and flat base	Foundation cut for wall 204	5.69m 4.69m	LPMEDT EROMB
204	Wall	c.20 courses of brick with grey mortar	Mill wall	5.97m 4.67m	LPMEDT EROMB
205	Cut	Near vertical sides and flat base	Foundation cut for wall 206	5.74m ≤4.04m	LPMEDT NSAS
206	Wall	c.12 courses of sub-rectangular limestone blocks with yellow/brown mortar	Victorian cellar wall	5.99m 4.04m	LPMEDT EROMB
207	Layer	Brown/grey sandy silt with rare charcoal flecks and occasional sub-angular limestone fragments	Occupation layer/urban build-up	5.19m 4.80m	LROMT LROMB
208	Layer	Yellow/grey sandy silt with rare charcoal flecks	Flood horizon	4.75m 4.55m	?MROMT ?EROMB
209	Layer	Brown/grey sandy silt with rare charcoal flecks	Flood deposits - laminated	4.59m 4.52m	OGSS NSAN
210	Layer	Orange/yellow fine sand	Natural drift geology	4.49m	NSAN
211	Fill	Grey/brown friable sandy silt with frequent mortar fragments and rare charcoal flecks	Backfill of construction cut 203	5.95m 4.69m	LPMEDT NSAS
212	Fill	Grey/brown sandy silt with moderate mortar fragments and rare charcoal flecks	Backfill of construction cut 203	5.89m 4.49m	LPMEDT NSAN
213	Layer	Brown/grey friable silt with occasional mortar fragments	Possible make-up for mill floor	5.97m 5.83m	LPMEDT
214	Layer	Dark grey/brown coarse gritty clay silt with rare charcoal flecks and rare small limestone fragments	Former garden soil	5.85m ?5.19m	LPMEDT LPMEDB
215	Layer	Brick and limestone rubble	Modern rubble infill in cellar	5.93m ≤5.03m	LPMEDT

**Trench 3**

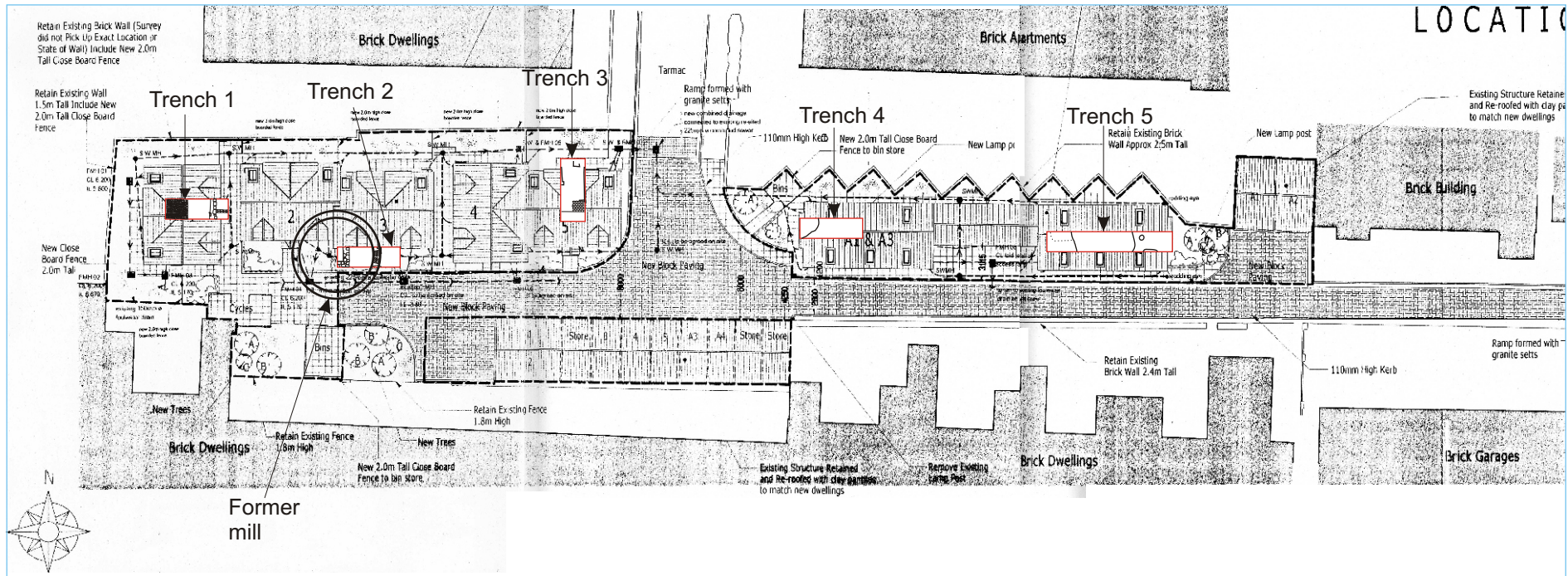
Context No	Type	Description	Interpretation	OD Height	Deposit Model Code
300	Void				
301	Layer	Brown sandy silt with very frequent brick and limestone fragments	Modern demolition spread	6.03m 5.90m	EMODT EMODB
302	Wall	Medium and large dressed limestone blocks with grey mortar	Victorian cellar wall	5.92m 3.63m	EMODT EMODB
303	Wall	Medium and large dressed limestone blocks with grey mortar	Victorian exterior cellar wall	5.94m 4.08	EMODT NSAN
304	Wall	Medium and large dressed limestone blocks with grey mortar	Victorian cellar wall	5.94m 4.50m	EMODT EMOD
305	Wall	Medium and large dressed limestone blocks and occasional bricks without mortar bonding	Victorian coal chute	6.28m 4.08m	EMODT NSAN
306	Layer	Yellow/brown mortar and silt mix	Victorian mortar collapse/dump	5.48m 4.02m	EMODT NSAN
307	Wall	Brick wall with grey mortar	Victorian internal cellar wall	5.87m 4.08m	EMODT NSAN
308	Wall	Medium and large dressed limestone blocks with grey mortar	Victorian cellar wall	5.88m 4.08m	EMODT NSAN
309	Surface	Single layer of bricks	Victorian cellar floor	4.08m 4.01m	EMODT NSAN

**Trench 4**

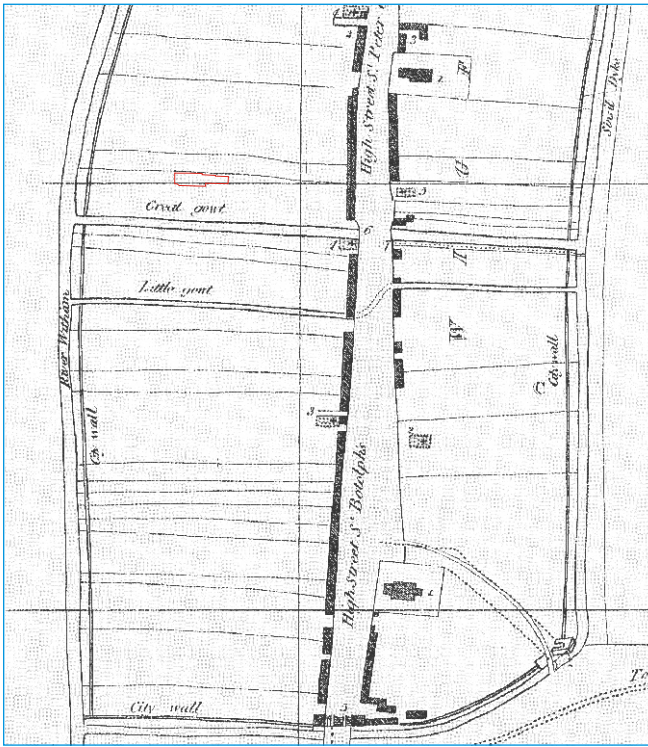
<b>Context No</b>	<b>Type</b>	<b>Description</b>	<b>Interpretation</b>	<b>OD Height</b>	<b>Deposit Model Code</b>
400	Layer	Mixed brick rubble	Modern demolition spread	6.10m 5.88m	MODT MODB
401	Layer	Dark brown/grey sandy clayey silt with occasional charcoal flecks, coke fragments, limestone and ceramic building material pieces	Former garden soil	5.88m 5.49m	LPMEDT HMEDT
402	Layer	Brown/grey sandy silt with rare charcoal flecking	Possible flood horizon	5.39m 4.29m	HMEDB ?EROMB
403	Layer	Pale grey sand	Possible palaeosoil or flood deposit	4.89m 4.69m	NSAN NSAN
404	Cut	Sub-circular cut with steep, convex sides and a flat base	Refuse pit of ?medieval date	5.59m 4.09m	HMEDT NSAN
405	Fill	Dark brown/grey humic sandy silt with rare charcoal flecks	Initial backfill of 404	5.19m 4.09m	HMED HMEDB
406	Fill	Grey/brown clayey silt with moderate mortar and limestone fragments	Secondary backfill of 404	5.49m 4.80m	HMEDT HMEDB
407	Layer	Green/grey sandy clay with frequent limestone fragments	Urban build-up/dump of material	5.49m 5.39m	HMEDT
408	Layer	Orange/yellow sand	Drift geology	4.89m	?NSAN

**Trench 5**

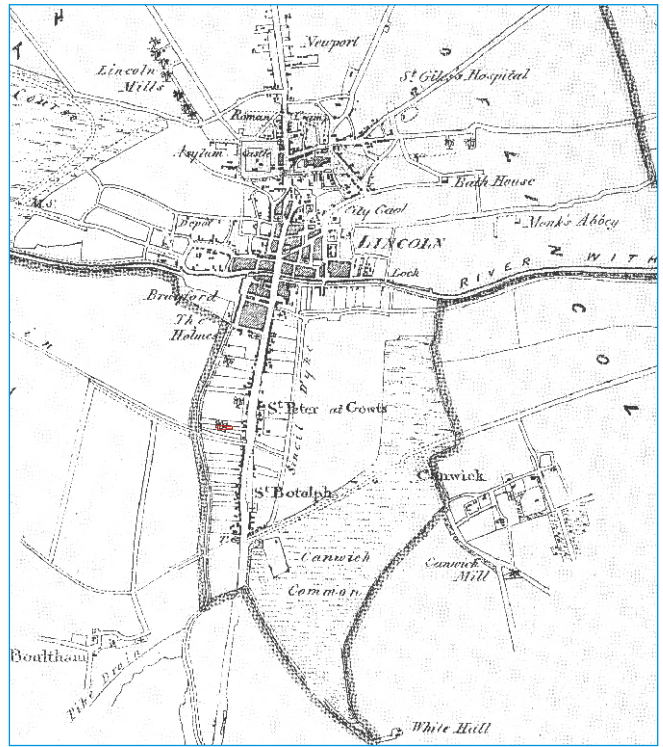
<b>Context No</b>	<b>Type</b>	<b>Description</b>	<b>Interpretation</b>	<b>OD Height</b>	<b>Deposit Model Code</b>
500	Layer	Mixed brick rubble with grey/brown humic silt	Modern demolition spread	6.07m 5.87m	MODT MODB
501	Layer	Dark brown/grey sandy clayey silt with rare charcoal, coal/coke and limestone	Former garden soil	5.87m 5.47m	EMODT PMEDB
502	Cut	Large cut with vertical, stepped east edge and collapsed concave west edge	Large modern pit – possibly for sand extraction	5.87m 4.27m	EMODT ?EROMB
503	Fill	Orange/yellow friable sand	Possible flood horizon	4.67m 4.47m	LROMT LROMB
504	Fill	Grey/brown sandy silt	Primary backfill of 502	5.47m 4.27m	EMODT EMODB
505	Fill	Mixed humic sandy silt with brick rubble	Secondary backfill of 502	5.47m 4.27m	EMED EMED
506	Cut	Oval cut with steep sides and concave base	Possible medieval posthole	4.87m 4.71m	ASCAT ASCAB
507	Fill	Brown/grey sandy silt with rare charcoal and burnt limestone	Backfill of 506	4.87m 4.71m	ASCAT ASCAB
508	Cut	Shallow cut with concave sides and flat base	Pit of unknown date or function	5.07m 4.80m	?ASCAT ?ASCAB
509	Fill	Brown/grey sandy silt with rare charcoal flecking and sub-angular limestone fragments	Backfill of 509	5.07m 4.80m	?ASCAT ?ASCAB
510	Layer	Brown/grey sandy silt with rare charcoal flecking and sub-angular limestone fragments	Possible urban build-up	5.27m 4.92m	?HMETD ?SAXB
511	Layer	Yellow/grey sandy silt	Possible flood horizon	4.87m 4.67m	?LROMT ?LROMB
512	Layer	Very compact yellow/orange sand	Natural iron panning, not bottomed	3.97m	?NSAN
513	Layer	Pale grey banded sands and silts	Flood horizon	4.47m 3.97m	?LROMT ?EROMB
514	Fill	Grey/brown sandy silt	Tertiary backfill of 502	5.87m 5.57m	EMODT



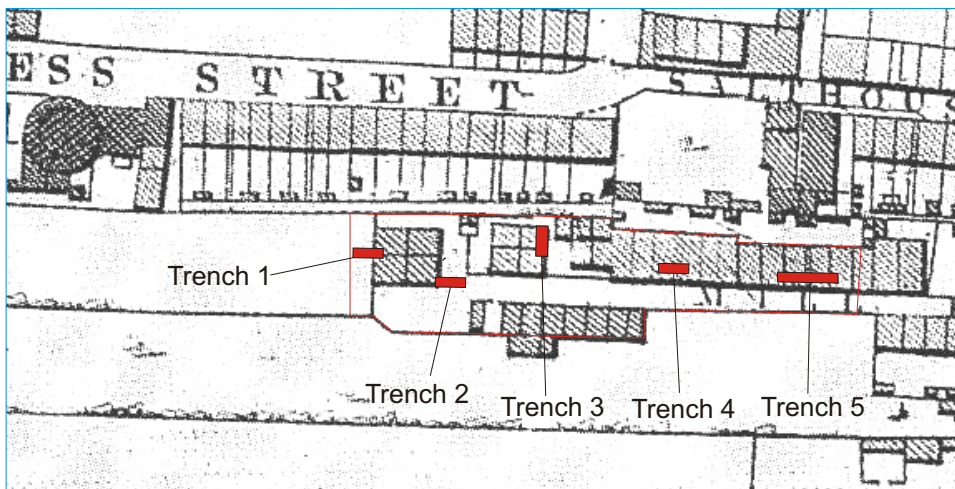
**Figure 2:** Trench location plan, showing principal features exposed, in relation to the proposed development (scale 1:500)



1817 Map of Lincoln (not to scale)



1820 Map of Lincoln (not to scale)



1868 Map of Lincoln approximately at scale 1:1250

Figure 3: Series of old maps of Lincoln showing location of site in red (from Mills, D. R. And Wheeler, R. C., 2004, Historical Town Plans of Lincoln 1610 - 1920. The Lincoln Record Society. The Boydell Press)

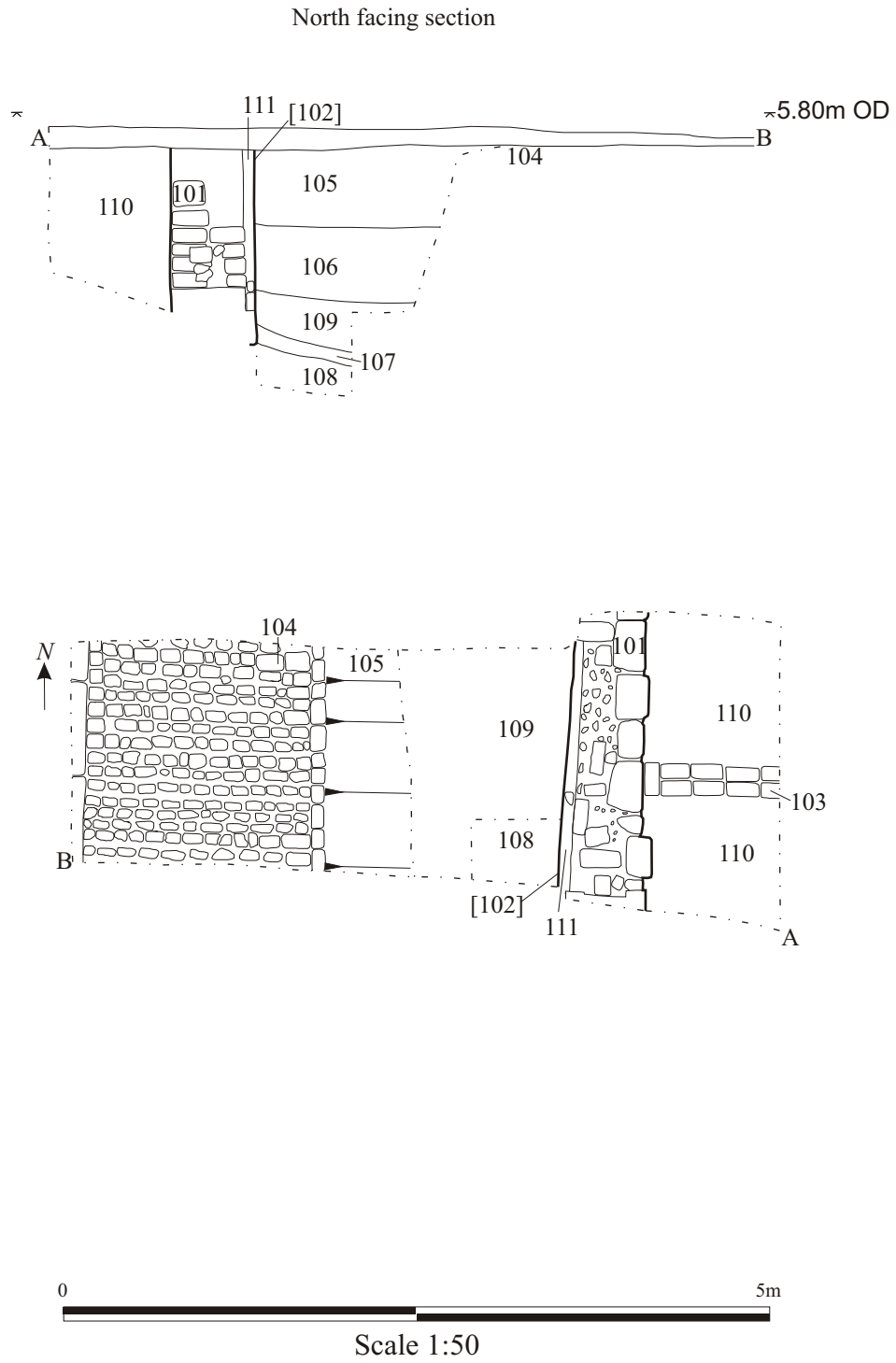


Figure 4: Trench 1 plan and section at scale 1:50





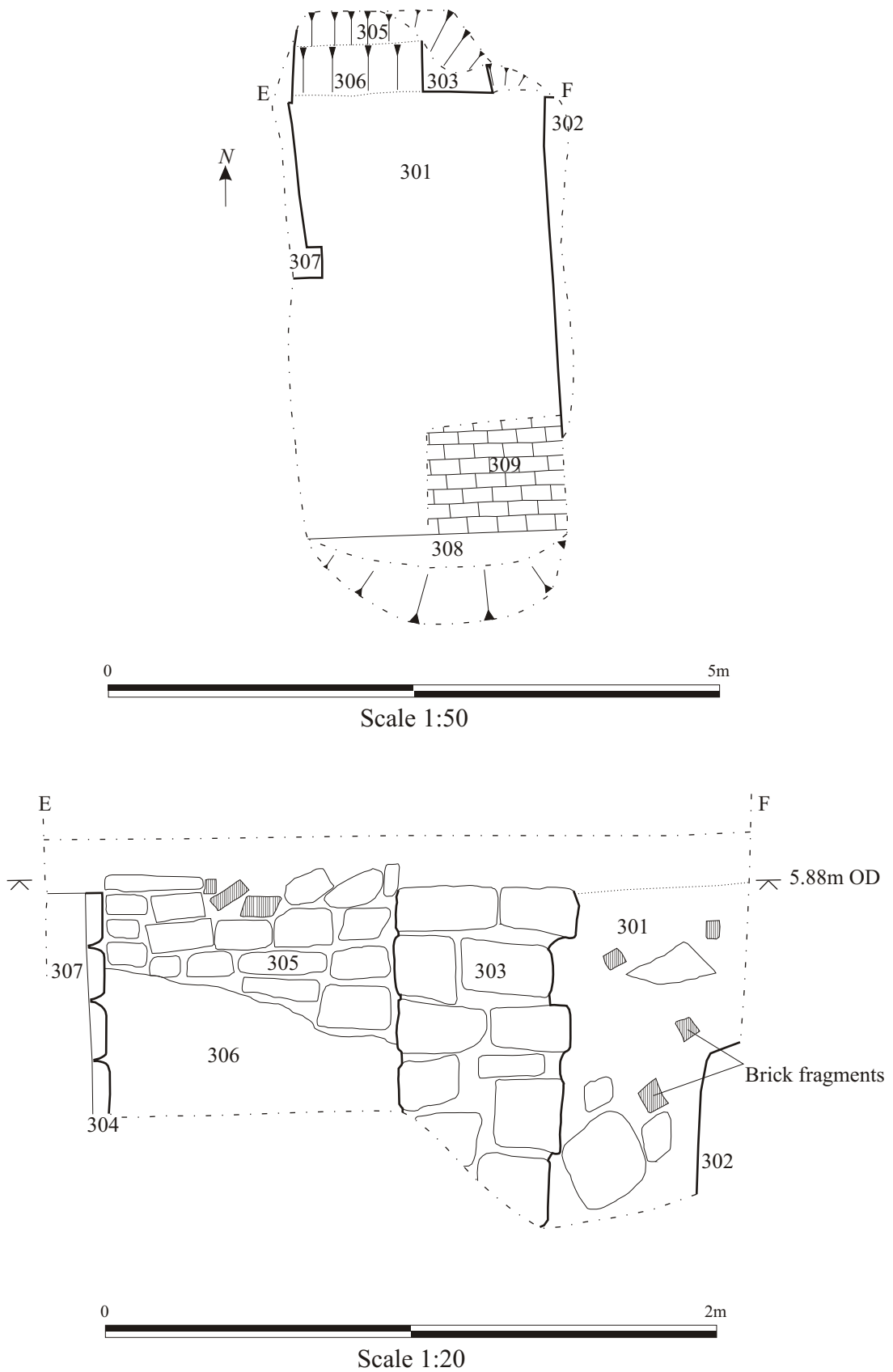


Figure 6: Trench 3 plan at scale 1:50 and section at scale 1:20

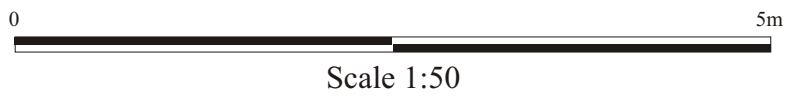
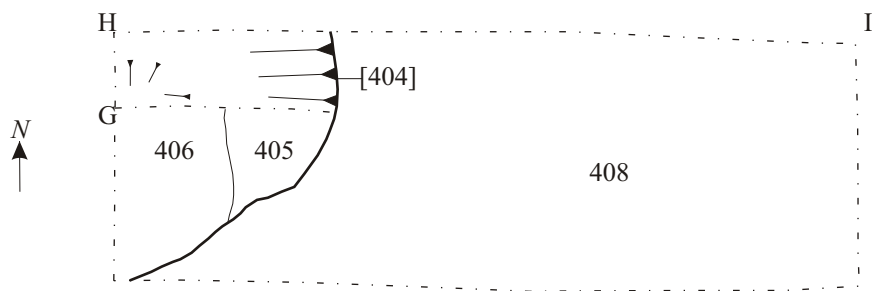
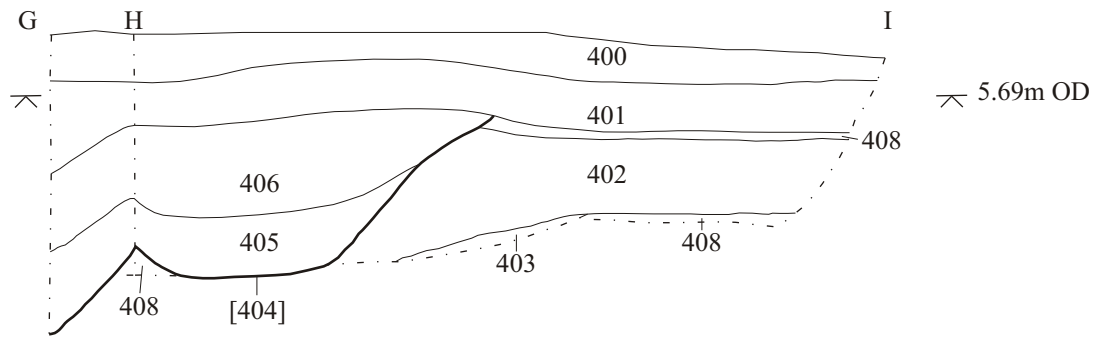


Figure 7: Trench 4 plan and section at scale 1:50

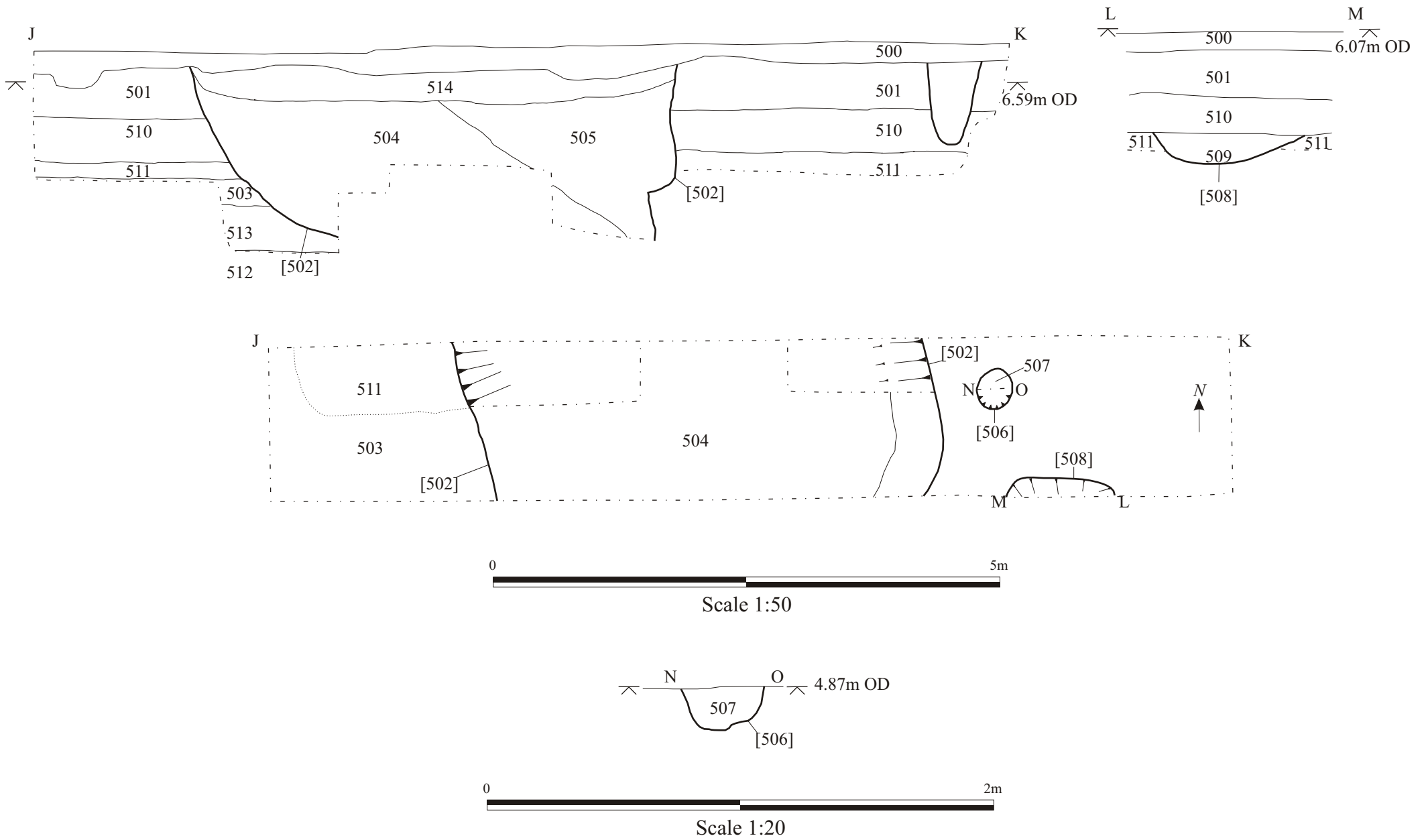


Figure 8: Trench 5 plan and sections at scale 1:50 and [506] section at scale 1:20