

Archaeology on Lincoln's Eastern Bypass

Progress Newsletter: September-December 2016



The road scheme and Lincoln's cultural heritage

The construction of the Lincoln Eastern Bypass has been long anticipated and, following the go-ahead for the project in 2016, preliminary works commenced in the summer. The scheme is seen as a great opportunity to improve Lincoln's infrastructure and to encourage growth for the communities of the City and the wider region.

The new road is due to be built between 2017 and 2019 and is part funded by the Department for Transport. It will link the south-east of Lincoln on the A15 Sleaford Road with the existing bypass to the north-east of the city on the A158 Wragby Road (**Plate 1**). The scheme will play an important part in bringing Lincoln's road network into the 21st century, but will also provide an opportunity to look back and learn a great deal about the history of this part of the City and county.

Cultural Heritage including archaeology forms just one part of a series of planning conditions for the scheme which have to be implemented. The archaeological conditions are there to ensure that any remains affected by the road are protected or recorded.



Plate 1: Route of Bypass

What do we already know?

One of Lincolnshire County Council's priorities is caring for the county's heritage, so during the many years of planning for the road, archaeological investigations were conducted in order to minimise the impact of the bypass route on known archaeology.

The identified archaeological sites span around 12,000 years of Lincoln's history, and include concentrations of flint tools defining Mesolithic hunter-gatherer activity near the River Witham, two Bronze Age barrow (burial mound) cemeteries, Iron Age and Roman villages, a high status Roman building - perhaps a villa, an Anglo-Saxon settlement, and a medieval monastic grange, which was founded by Kirkstead Abbey during the 12th century, and continued in use as a post-medieval farm after the dissolution of the monasteries in the 16th century. All of these sites are to be investigated in advance of the road's construction, and a programme of monitoring of other areas will be implemented during the scheme works in order to identify any as yet unknown archaeological remains.

The investigations and findings so far

The archaeological investigations commenced in September 2016 at an area located between the River Witham and the Washingborough Road (**Plate 2**). Here, the Lincoln to Spalding railway separates the land into two areas, and the installation of a new rail bridge will be necessary so that the Bypass can pass beneath the railway before crossing the River Witham via a new road bridge.

One drawback of working in such close proximity to the river is that the ground is very wet, peaty and prone to waterlogging, so much so that a special metal trackway has had to be laid to ensure that the heavy Plant does not sink (**left side of Plate 2; and Plate 3**).



Plate 2: Aerial view looking east; sites being investigated (Washingborough Road to right)



Plate 3: Laying of metal trackway close to the Witham; Cathedral in distance

The archaeological work is already providing a fascinating glimpse into past communities, settlements and landscapes, illustrating that this area has been a continuously favoured spot for human activity from as far back as 12,000 years ago. The evidence includes concentrations of Mesolithic and Neolithic flint tools; part of a Bronze Age barrow cemetery; possible Iron Age roundhouses and burials; high status Roman buildings, field systems, pottery kilns and a potential vineyard; a medieval monastic grange comprising a boundary wall, a potential stone tower, other substantial stone buildings, stone-lined wells and metalled trackways; and finally, the remains of post-medieval farm buildings, yards, and a water management system. Details of each of these findings are provided below.

Mesolithic hunter-gatherers to Neolithic farmers (12,000-4,500 years ago)

Hundreds of 1m square test-pits were dug to look for worked flint artefacts defining human activity of the Mesolithic and Neolithic periods (**Plate 4**). The soil and sand excavated from each test-pit was sieved to recover every flint, even those just 2mm across (**Plates 5-7**) and several concentrations of flint artefacts have been found which will soon be investigated. A great deal of information can be gathered by plotting the precise location of recovered flints, it is sometimes even possible to locate exactly where a flint-knapper was sat working. What is certain is that the presence of the Mesolithic flints illustrates that small communities of hunter-fisher-gatherers were exploiting the natural resources present by the river and its creeks. The later Neolithic occupants of this area were the first settled farmers, and whilst we have found flint artefacts of this period, we have yet to find any evidence of their settlements, which were probably sited away from the river on higher, drier ground.



Plate 4: Aerial view looking towards Washingborough: array of test-pits



Plate 5: Sieving sand for prehistoric flint artefacts



Plate 6: Completed hand-dug test-pit



Plate 7: Neolithic flint knife

Bronze Age beliefs and burials (4,500-2,700 years ago)

In addition to being the advent of metallurgy, the Bronze Age saw the construction of funerary monuments called round barrows (burial mounds). Several barrow cemeteries are recorded along the Witham valley, with examples extending across the route of the Bypass either side of the Witham (**Plate 8**). South of the river three barrows are affected by the Bypass; it may be feasible to alter construction methods to avoid one, but at least two of the barrows will have to be excavated. Up to now, numerous Bronze Age flint artefacts have been recovered during test pitting, complementing the barrow evidence (**Plate 9**).



Plate 8: Bronze Age barrows visible as earthworks (pale areas in centre of image)



Plate 9: Bronze Age barbed-and-tanged arrowhead

Prehistoric ceremonies by the Witham (4,500-2000 years ago)

The River Witham was an important focus of ceremonial activity during the Bronze and Iron Ages. Votive deposits, including deliberately buried timber boats and metal artefacts (e.g. large numbers of weapons such as swords) have been discovered in the Witham Valley, often in close proximity to timber causeways or tracks. The most famous Iron Age finds include the Witham Shield from near Stamp End (now in the British Museum), and two log boats and a timber causeway found near Fiskerton. The Bypass crosses an infilled former channel of the Witham (a palaeochannel), located to the south of the current river, and this is an area where prehistoric ceremonial remains might be located. Current investigation involves sampling/dating the palaeochannel (using augering/coring and radio-carbon dating) to confirm its age and to help work out whether such ceremonial evidence may be present (**Plate 10**).



Plate 10: Soil augering across a former course (palaeochannel) of the Witham

Iron Age to Roman pre-Christian settlement & burial (2,800-1800 years ago)

The change from the prehistoric to the historic is often considered to be when the Romans came to Iron Age Britain in 43AD. Archaeologists have a particular interest in such 'transition' sites, or those that span both periods, and there are indications that the area between the Lincoln to Spalding railway and Washingborough Road contains such evidence. Findings since September 2016, alongside plentiful Roman remains, include the possible remnants of an Iron Age roundhouse, and two **north-south** oriented human graves (**Plates 11-12**). The Christian burial tradition is to align a grave **east-west**, so it is most likely that these interments are pre-Christian (Emperor Constantine formally converted the Romans to Christianity in 313AD). In addition, one of the burials contains pottery 'grave goods' (**Plate 12**), a non-Christian practice. One of these grave goods is a complete pottery storage jar, and it has an oval-shaped recess on its body (**Plate 13**): this was probably created by spalling during/after firing; however, the regularity of the recess, and the use of the vessel as a grave good, suggests it may have been put to good use to hold an 'intaglio' design, perhaps an image of the dead person or one of their loved ones; if so, it was presumably created in an organic medium that has long since rotted away.



Plate 11: Pre-Christian burial during excavation



Plate 12: Pre-Christian burial with Roman pottery grave goods



Plate 13: Detail of Roman pottery vessel with ?re-used spall-damage

Roman villa life, farming, industry and possible vineyard (43-410 AD)

For many years the field between the Lincoln to Spalding railway and Washingborough Road has produced artefacts spanning the entire Roman period, including hundreds of coins found by metal detectorists. In 2004 the results of preliminary archaeological work suggested that a large high status building, perhaps a villa, was present here. The site is currently being stripped of topsoil (**Plate 14**) and a building is yet to be uncovered. However, nearby are rubble spreads, quantities of pottery (**Plates 15-18**), roof tile (**Plate 19**), tiles from a 'hypocaust' (Roman central heating system), and a range of domestic objects such as bone pins (**Plate 20**). The cumulative evidence is suggesting that the preliminary work was correct and that a building of high status will shortly be revealed.



Plate 14: Mechanical topsoil stripping over Roman 'villa' site; DGPS survey in left foreground



Plate 15: Roman Samian Ware pottery vessel rim



Plate 16: Roman Samian Ware pottery vessel with embossed figures



Plate 17: Roman pottery vessel spout and handles



Plate 18: Roman amphorae (storage jar) spout and handle



Plate 19: Roman 'tegula' roof tile (curving finger marks were a 'signature' prior to firing)



Plate 20: Roman bone pin

Evidence for small-scale Roman industrial activity has also been discovered between the railway and Washingborough Road, including a lime kiln (for producing lime for preparing mortar for building (**Plate 21**), and two well-preserved pottery kilns, which seem to have been used to produce 'fine wares', perhaps further evidence of a well-off community living here (**Plates 22-23**). Piles of damaged pottery vessels or 'wasters' near to the kilns show that the firings didn't always work (**Plates 24-25**).



Plate 21: Roman lime kiln



Plate 22: Roman pottery kiln with clay lining



Plate 23: Roman pottery kiln with overheated lining



Plate 24: Roman pottery rim and handle 'wasters' found near to kiln



Plate 25: Roman pottery bowl 'wasters' found near to kiln

One of the more enigmatic discoveries has been a series of irregular parallel channels, together with several large well-type pits (**Plate 26**); the current hypothesis is that this may be evidence for the presence of a vineyard associated with the high status building. Very little evidence for Roman vineyards has been discovered north of the home counties, so this could prove to be an important discovery.



Plate 26: Roman well-pit (possibly connected to vine cultivation)

Anglo-Saxon continuity? (410-1066 AD)

Preliminary work completed in 2004 recovered a small amount of Anglo-Saxon pottery within the area between the Lincoln to Spalding railway and Washingborough Road, hinting that activity here may have continued after the Roman period. So far there are no confirmed Anglo-Saxon 'features' (e.g. pits, ditches). A shallow, flat-bottomed, pit south of the railway does bear a resemblance to a 'sunken feature building' (or SFB) (**Plate 27**), though it is perhaps a little small to qualify, since genuine SFBs are larger in plan. These well-known structures of the Anglo-Saxon period were partly constructed below ground. The pit here was not dated by artefacts, but samples will be submitted for radio-carbon to hopefully provide a date.



Plate 27: Pit (similar in form to Anglo-Saxon sunken feature buildings)

Medieval grange: monastic farm, cemetery, & beacon or fort (1066-1540 AD)

Historic documents reveal that a medieval monastic grange was established close to Washingborough by the Cistercian monastery of Kirkstead Abbey in the twelfth century AD. The name sheepwash seems to have already existed here, suggesting that a facility for rinsing sheep was located at or near the river; and it was this which resulted in the grange being named “Sheepwash Grange”. Documentary evidence indicates that a riverside wharf and warehouses (‘Calscroft’) may have been situated close to the grange, although this is not yet proven. We do know that the grange farmed sheep and exported wool, so it is possible that ‘Calscroft’ was used for the export and import of these goods.

What was not known until the archaeological work began was where the remains of the medieval grange were actually located, although it has long been suggested that localised areas of raised ground or ‘mounds’ situated either side of the railway were its site (**Plate 28**).

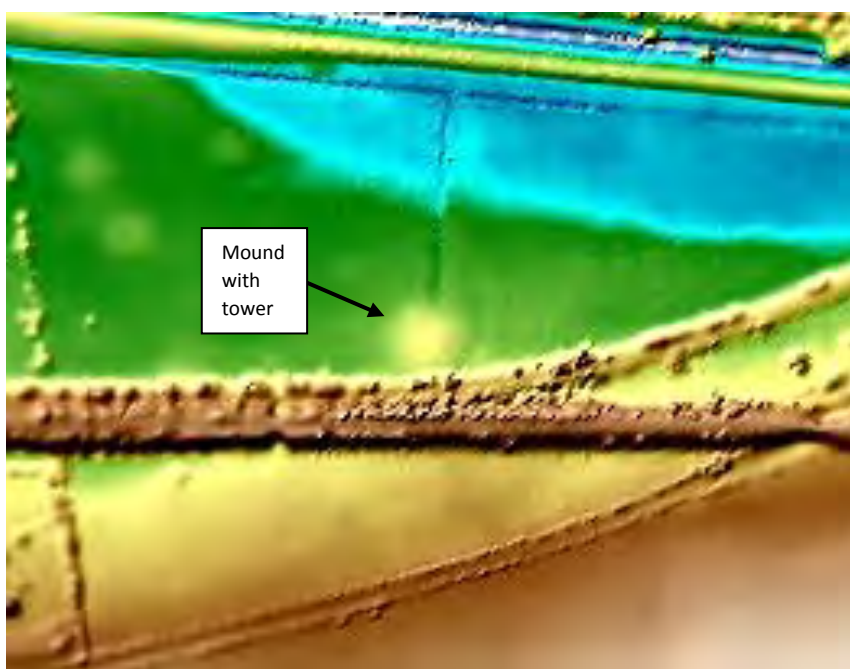


Plate 28: Lidar image (north at top): central yellow patch is mound immediately north of railway

Investigations of the part of the mound located between the river and the railway have revealed the substantial stone foundations of a small, rectangular building dated to the 12th century AD, which was surrounded by a stone enclosure wall and sat atop a raised natural sand bank (**Plates 29-32**). The thick walls of the building and its small size, indicate it may have been a tower, possibly a beacon to warn of threats approaching by river, or perhaps a defended tower for refuge in times of unrest. One might even go so far as to call it a ‘fort’, constructed to control movement along the river to and from Lincoln. This latter hypothesis would fit with the 12th century civil war known as The Anarchy, which included The Battle of Lincoln in 1141, and which was a time when military structures described as ‘forts’ are known to have been erected. Furthermore, the building would have been surrounded on three sides by peat bog, which would have minimised any risk of attack from the north, west or east. Interestingly, several dog burials have been found near the tower (**Plate 33**).



Plate 29: Oblique aerial (drone) view of tower and outer wall, looking north towards Witham



Plate 30: Vertical aerial (drone) image of ground plan of tower, looking east



Plate 31: Excavation of tower walls, looking towards Cherry Willingham



Plate 32: Investigation of tower, including DGPS survey; disused railway with trees in background



Plate 33: Foreground: pair of dog burials close to tower; background: recording a ditch

It is hoped that the conclusion of the excavation of the tower in 2017 will reveal evidence that might substantiate whether it had a defensive function. However, what does seem likely is that the tower represented the northern limit of the medieval grange complex. Other medieval grange buildings, including the remains of a bake house (**Plate 34**), have been found to the south of the railway, as well as a stone-lined well (**Plates 35-37**), but it is thought that remains of the majority of the medieval buildings are now buried beneath the railway embankment. Recovered artefacts include several coins, large quantities of roof tile and pottery, a bone implement - possibly an apple or bone marrow corer, and a carved piece of stone with a fleur-de-lys design (**Plates 38-42**).



Plate 34: Medieval bake house (floor of)



Plate 35: Medieval well: pre-excavation



Plate 36: Medieval well: part excavated



Plate 37: Medieval well: largely excavated



Plate 38: Medieval silver coin



Plate 39: Scatter of medieval (and post-medieval) roof tile



Plate 40: Medieval pottery (mostly 'greenglaze')



Plate 41: Medieval bone 'corer'



Plate 42: Medieval carved stone with 'fleur-de-lys' design

A surprising discovery has been an as yet undated cemetery, including at least eighteen human burials, situated close to the Washingborough Road (**Plates 43-44**). The burials were aligned east-west in the Christian fashion, and there were no grave goods, though several had pieces of preserved coffin timber. Analysis of these individuals will be very informative (**Plate 45**): for example, if all eighteen are male and adult, they probably belonged to the monastic order that worked in the grange, which would not be the case if women or children are present. It is of course possible that the burials are not medieval at all, but later (post-medieval) or even earlier (Saxon), so small samples of bone have been sent for radio-carbon dating.



Plate 43: Burial with coffin timbers preserved; looking south-west



Plate 44: Burial with coffin timbers preserved; looking west



Plate 45: Human burial being examined

Post-medieval farm (1540-1900 AD)

Following the Dissolution of the Monasteries in 1537, the grange was taken out of the ownership of Kirkstead Abbey. Evidence now shows that part of the area between Washingborough Road and the railway continued to be used as a farm until at least the

end of the 18th century, and documentary sources show that the post-medieval farm was still known as Sheepwash Grange. Excavated evidence has comprised the remains of several rectangular stone buildings including a large barn, and other structural remains such as drains, culverts (one with a lead pipe), and cobbled yard surfaces (**Plates 46-51**). Large scatters of roof tile are present, as well a large millstone for grinding grain (**Plate 52**). Several pieces of medieval dressed masonry, which would have originated from the earlier grange, had been re-used in the post-medieval buildings (**Plate 53**).



Plate 46: Oblique aerial (drone) view of foundations of post-medieval building



Plate 47: Vertical aerial (drone) view of foundations of post-medieval building



Plate 48: Cleaning foundations of post-medieval building (Washingborough Road in background)



Plate 49: DGPS survey of stone 'post-pad', to support timber upright within post-medieval barn



Plate 50: Investigating post-medieval cobbled yard surfaces (railway embankment at top)



Plate 51: Post-medieval culvert/drain



Plate 52: Investigation of a post-medieval millstone



Plate 53: Fragments of medieval architectural dressed stone

Records show that between 1787 and 1845, the post-medieval grange owner decided to move house to higher ground south of Washingborough Road. The 'new' house (also called Sheepwash Grange, and still inhabited today) is thought to have re-used stonework from the earlier farmstead. A rutted cart track found at the archaeological excavation, appears to align with a track shown on early 19th century maps to the south of Washingborough Road, which leads to the new house (**Plate 54**).

In summary, the evidence shows that Sheepwash Grange remained a focus of Lincolnshire sheep rearing for 800 years or more.



Plate 54: Post-medieval rutted cart track, looking north towards present day Sheepwash Grange

The coming of the railway, and stone quarrying (19th Century AD)

The Lincoln to Spalding railway was constructed in the late 19th century AD. A second line, immediately to the north, was constructed a few years later and is now disused. It is likely that the construction of the embankments for both of these lines would have involved the demolition of any remaining medieval grange and post-medieval farm buildings. A brick-built tunnel or 'cattle creep' (which will be replaced by a new rail bridge in advance of

construction of the Bypass) was constructed during establishment of the railway embankments so that fields to the north could continue in agricultural use (**Plate 55**).



Plate 55: 19th century railway underpass ('cattle creep') looking north

Curiously, when a section of the disused embankment was removed in September 2016 (to provide access for the archaeological investigations), several large pieces of Lincolnshire limestone were recovered from the bank material (**Plate 56**). This stone has since been donated to Lincoln Cathedral, whose existing quarry is running low, so that it can be used during Cathedral repairs.



Plate 56: Lincolnshire limestone boulders recovered from disused railway embankment

Archaeological works planned for 2017

The excavations between the River Witham and the Washingborough Road will be completed in early 2017, followed by investigation of the other sites along the road scheme during the remainder of the year. The processing and analysis of the artefacts and records will be ongoing throughout 2017 and beyond.

A programme of public outreach is being planned, to enable local communities to be involved and to be kept up-to-date with findings. The programme is likely to include: Lincolnshire County Council press releases, updates on the LEB webpage, updates on social media (e.g. Facebook, Twitter), and, where practicable, open days/site tours. The programme will also eventually include school and local society talks. Further details will be made available in the new year.

Acknowledgements

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Further details regarding the road scheme in general can be found on:

<https://www.lincolnshire.gov.uk/transport-and-roads/roadworks-and-improvement-schemes/lincoln-eastern-bypass/>

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