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**Digging for Lincolnshire: An Assessment of an Anglo-Saxon Cemetery
Rescue Excavation Methodology.**
(Assessment 1)

Archaeological Research Methods (HPAR7004)
(Humanities)
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Introduction

In 2019 a group of metal detectorists made an important discovery at Cammeringham, Lincolnshire¹. Their search yielded dress accessories, weapons, fragmented human bones and a possible cremation urn were also observed. The detectorists, recognising the importance of the site, turned to Dr. L. Brundle (Townend 2020, p. 3; Brundle 2021). The finds dating to the fifth-sixth century AD and the scattered fragments of bones on the ploughed field suggested that an unknown, Anglo-Saxon cemetery was threatened by modern agricultural farming methods, therefore a professional excavation and research was required² (Townend 2020, p. 1). The two phase excavation work involved trial trenching and excavation was carried out by Network Archaeology Ltd. as a part of an interactive archaeological project '*Searching for Saxons in Lincolnshire*' created by the Lincolnshire County Council between 1st and 11th September 2020 by the permission of the landowner (Townend 2020, p. 1; Townend 2022, p. 2). The rescue project was destined to be a community archaeological investigation, however still in the shadows of COVID-19, this form of excavation was not feasible. Instead, people were invited to become 'Armchair Archaeologists'³ and enjoy the excavation from their homes. To reach a wider audience a community page was created on Facebook (Searching for Saxons 2020) where the latest events of the excavation were published in the form of videos and photos throughout the dig (Townend 2022, p. 54).

The aim of the paper is to present and analyse the methodology used during the excavation which generated a large set of data and how this data was used to inform the public. The author of this work was involved in the evaluation and excavation phase of the cemetery as a supervisor, with roles including excavating features, human remains, lifting finds and recording the human remains and finds using photogrammetry.

The site information (WSI and reports) was made available by P. Townend post-excavation manager with the kind permission of Dr L. Brundle, Finds Liaison Officer of Portable Antiquity Scheme and C. Lingard Network Archaeology Ltd. director. Please note, the WSI was not available to submit as supplementary data because the project is still ongoing.

Aims and Objectives

¹ Due to the safety of the heritage site the exact site location will be retained.

² Thanks to Dr L. Brundle Finds Liaison Officer working with the Lincolnshire County Council, West Lindsey District Council, and the British Museum's Portable Antiquity Scheme and Historic England a rescue project was made and financed, so the importance of the site is recognised and can be monitored to avoid further damage (Brundle 2021).

³ The expressions Armchair Archaeology and Armchair Archaeologist were already mentioned in the 1950s, where Summers emphasised the importance of desk-based or 'armchair' research (Summers 1950). Nowadays enthusiasts and volunteers are invited to take part in virtual archaeology, contributing to the existing knowledge. It is now recognised that taking part in these projects such as as the Enriching the List (Bishop, Souza, Noor and Monckton 2022), now Missing Pieces launched by English Heritage (2024) or the Armchair Archaeology with CITiZAN (Band, Kolonko and Griffiths 2020) can have a positive impact on the participants' wellbeing.

The Written Scheme of Investigation (WSI) set out the aims of the field work in three points, which included: finding the limits of the burial ground, examine the preservation of the graves, artefacts and human remains and remove the excavated skeletal remains and cremations for analysis. There were additional notes ‘on wider research questions’ such as the history of Post-Roman Lincolnshire and the connections between the site and Lincoln (Townend 2020, p. 2). The excavation was planned accordingly to fulfil these points and produce archaeological data to enrich and maybe question the existing knowledge of the early Saxon Lincolnshire as the cemetery was unknown and its discovery was unexpected (Townend 2020, p. 2).⁴

How to search for the Saxons? Methodology and techniques of excavation

Prior to the excavation, in August 2020, a field walking survey yielded pottery sherds dated to the Early Medieval period (Townend 2022, p. 5). Later a geophysical survey⁵ was conducted, with results showing a large number of potential discrete features at the north-east corner of the area (Turner 2020, p. 2). The concentration of these features visible on the survey coincided with the metal detected surface finds, which could indicate grave cuts or cremations (Townend 2022, p. 6).

The WSI was made to comply with the CIfA Standards and Guidelines. The form and the paragraphs of the WSI were following the standards and outlined the works from the aims and objectives to the archiving⁶ (CIfA 2014). A service survey was conducted prior to the field work to avoid any below-ground services⁷, however there was no mention of any unexploded ordnance (UXO) survey carried out in the WSI text, which the site being next to a military airfield used in WorldWar II, could have been useful.⁸

In the first phase, test pits were opened to investigate the depth of the plough soil and see if any graves were close to the topsoil. This was followed by the opening of the evaluation trenches with a mechanical excavator equipped with a toothless bucket under the continuous supervision of a qualified archaeologist, complying with the Health and Safety legislation and the site specific Risk Assessment and Method Statement (RAMS) in place. The soil was removed to reach the level of

⁴ While the main ideas focus on the excavated physical remains, further questions from the East Midlands Research Framework Updated Research Agenda could complement the existing aims and objectives, such as the demographic aspect, ritual practices, settlements, roads and waterways in relation to the site location, industry and trade as well as the landscape (Knight, Vyner and Allen 2012, p. 82-93) or the evidence for curating earlier, historical artefacts (Brundle 2022, p. 1).

⁵ Magnetometer surveys are the best suited for archaeological sites as they are able to indicate irregularities, such as archaeological features in the ground (Turner 2020, p.2).

⁶ Updated, new versions on archaeological fieldwork guidelines (evaluation, excavation etc.) are now published (CIfA 2023a and 2023b) and available from the CIfA website.

⁷ A CAT scanner was also used by trained archaeologists, before any trenches were opened (Townend 2020, p.4).

⁸ At the moment there is no legislation or formal obligation for a UXO risk assessment to be carried out prior to any ground work (Baptie 2019). No metal finds related to the military past of the area (cartridges etc.) were found during metal detecting.

the highest archaeological features or geological layers (Townend 2020, p. 5). Five trenches were opened (Trench 1, 2, 5, 6 and 7)⁹, with the aim to try to find the limit of the burial ground (Trench 7) and to see the density of the cemetery (Trench 6). The location of the trenches were set out based on the surveys carried out prior to the excavation. Once the trenches were open, the stripped area was cleaned by hand tools to identify any archaeological features or grave cuts and a pre-ex plan was produced (Townend 2020, p. 5; Townend 2022, p. 6). After graves were found in Trench 6, it was extended into a large rectangular area and other further small extensions were also opened around the trench as part of the second phase.

Archaeological features such as ditches, pits¹⁰ were carefully dug, graves and cremations were fully excavated according to the guidance (see next chapter) (Townend 2020, p.5). The archaeological features from non-funerary context were recorded by drawings, taking digital photographs, and survey, while the graves and cremation pits were recorded by using photogrammetry and survey following the valid guidelines and Network Archaeology protocols. Written site records were also produced using 'pro-forma' Network Archaeology recording sheets. Samples were collected from features for further environmental analysis. Due to the threatened nature of the site, finds recovery was particularly important (Townend 2020, p. 6). Metal detecting continued by supervising the detectorists who made the discovery while the site was excavated. Spoil heaps were checked, the topsoil finds with attributed unique ID numbers were recorded by survey and then lifted. Metal finds within archaeological contexts were marked and these artefacts were only recovered when the feature itself was excavated¹¹ (Townend 2020, p. 5) .

Excavation of the graves and cremations

Prior to the excavation a burial licence was requested from the Ministry of Justice. The inhumations and cremations were excavated according to the guidelines set out in the WSI (Townend 2020). Additional, updated guidelines regarding the excavation, recording and treatment of human remains issued by BABAO, APABE and CIfA (Brickley and McKinley 2004; Mays 2017; Mitchell and Brickley 2017) could be used.¹²

The excavation revealed the possible limits of the cemetery and within fourteen skeletal remains in twelve graves and ten cremations were unearthed (Townend 2022, p. 7). The graves were fully excavated and recorded with great care and respect in accordance with the guidelines (see above). The grave fills were excavated by hand tools, with 0.05-0.10m spits, where applicable to ensure the

⁹ Initially eight trenches were planned to be opened (Townend 2022, p. 6).

¹⁰ As a guide, 20% of the exposed length of the ditches were excavated and cross-sectioned if necessary, pits and postholes were half sectioned, while 10% of the layers required investigation. In the case of an extensive layer further test pits were required (Townend 2020, p. 5).

¹¹ The flagged find spots within archaeological context were a big help, as the grave cuts were not always visible even after thorough cleaning, due to the diffuse sandy, limestone natural and the deep ploughing. Having marked finds spots helped the site team to anticipate graves where the edges of the features were blurred or not visible at all (pers. comment of the author).

¹² I find The Human Bone Manual (White and Folkens 2005) a great aid on site when excavating skeletal remains with an excellent guide on bone recovery and identification.

maximum artefact recovery and stratigraphical accuracy.¹³ Some of the graves were heavily disturbed and dug only 0.05m below the plough soil, while others were up to 0.60m deep (Townend 2022, p. 48). The skeletons were issued a unique skeleton ID number, photographed, surveyed then 'digitally drawn' by photogrammetry to create an accurate georeferenced 3D model. The standards of photogrammetric recording were outlined in a company guidance prepared by the responsible department manager, which were followed during the process.

The pits containing cremation urns were excavated and recorded before the pottery was removed. The content of the pottery left unexcavated, the vessels were ID-d (recorded find and cremation numbers were issued), photographed and also recorded by using photogrammetry before lifting. After recording they were securely bandaged and block lifted or taken as a sample depending on their exposed condition. Ten of the vessels were X-rayed prior to the excavation. All the pottery and their content were excavated off site in a controlled environment following the best practice possible (Gray 2021, p. 1-31; Townend 2020, p. 6).

The find recovery was supervised and advised by the finds department manager. The grave goods from stratigraphic contexts were labelled, ID numbered, in-situ photographed, surveyed and recorded by photogrammetry before lifting and packing. Some of the metal finds (brooches) with mineralised textile remains and other fragile finds were block lifted to preserve their condition for further analysis and conservation. Finds in better conditions were lifted without additional soil support and carefully packed in individual, numbered containers (Townend 2020, p. 6). Finds recovered from the cremation urns were also carefully recorded and packed (Gray 2021). Over one hundred and fifty grave goods were unearthed from nine inhumations and five cremations. The finds include brooches, girdle hangers, amber and glass beads, toilet sets, a bone comb, belt buckles, accessory pottery vessels, knives, shield bosses and spearheads dating to the fifth-sixth century AD (Brundle 2022, p.1-27; Townend 2022, p. 8-45). During the excavation of the human remains, samples were taken according to the company protocol for further analysis and for finds and bone recovery. Samples included soils taken from around the skull, abdomen, pelvis and the limbs (Townend 2020, p. 6). The processing of these samples yielded further finds (beads and small fragments of metal objects) (Townend 2022, p. 13), which shows the importance of the partial recovery of the grave fills.

When the skeletal remains were sampled and recorded the bones were carefully lifted, bagged and labelled according to the guidelines (Townend 2020, p. 6). The skull, the individual limbs,

¹³ The stratigraphic excavation method was used on this site as a 'basic' technique of grave excavation, however in an adapted form. In some cases the changes in the fills (colour, texture or inclusions) were observed and noted, however a complex and very detailed stratigraphical investigation could not be carried out due to time limitations (Townend 2022, p. 8). This technique can be very useful and can produce greater results regarding finds recovery and detailed observations during the excavation compared to the arbitrary level excavation method, which can result in reduced find recovery and less accurate examination during the process (Evis, Hanson and Cheetham 2016, p. 177-191).

vertebrate, left and right ribs and the pelvis were all bagged separately to help the work of the osteologists during their analysis. The emptied graves were then photographed and surveyed, but no profile drawings were made because of the lack of time.

Due to the short deadline (the excavation lasted nine days) not all the discovered graves were excavated. A minimum of twenty two unexcavated burials were surveyed in. It is also uncertain whether all the graves in Trench 6 were identified. Due to the difficult ground conditions (see footnote 10), it is possible that the graves containing small amounts of metal finds or none at all were not recorded within the main excavation area (Townend 2022, p. 54). If the time allowed, other techniques of excavation may have been necessary to find all the graves due to the diffuse natural and depth differences of the graves. Narrow sondage trenches could be opened, with approx. 0.50-1m distance between them, so any grave cut or human remains could be visible on a lower level in a temporary section. When the graves are located the traditional methods of excavating the burials could be continued and the temporary baulk could be removed.¹⁴

Community engagement

As mentioned in the Introduction the project would have involved the local community to take part in the excavation, which had to be re-designed due to the Pandemic. The best way to reach a wider audience is to use the Internet, as a form of public engagement, because it can help the people to understand and support their heritage (CIfA 2021). The *Searching For Saxons* project was a great example of how people got involved in the discovery (see Footnote3). A broadcasting form (Bonacchi 2017, p. 60) was chosen to inform the audience about the events on site with photos and videos uploaded frequently on the Facebook page. The followers could see how an archaeological excavation progressed on site from the shovel first pushed into the ground to the disappearance of the last spoil heap, when the area was backfilled. Considering the ethical aspect of the posts the public was made aware that there will be scenes involving actual human remains on display following the BABAO (2019a) guidance.¹⁵ Videos showing the level of damage made by the ploughing were good examples to draw attention of the public to the importance of the excavations and rescue projects on threatened archaeological sites and could help to dismiss some of the negative bias surrounding the archaeology (Searching for Saxons 2020b). The Facebook page had over 3000 active followers and over 34000 people visited the account (Townend 2022, p. 54). On the last day an interactive virtual open day took place with experts showing the finds, sharing their knowledge and answering the questions of the audience. With the site work finished the team kept

¹⁴ Similar temporary baulks and sections were used in Winchester during the Cathedral Cemetery excavations, where the density, stratigraphic relations of the graves and 'difficult soils' made the use of this technique reasonably practical (Kjolbye-Biddle 1975, p. 97).

¹⁵ Broadcasting images of human remains could also bring an ethical issue as showing images and photos of the deceased can be repugnant to some individuals or groups because of their religion or beliefs (BABAO 2019b), however in this case the importance of the site and the results which were worth sharing outweighed this issue. The site team was aware of the sensitivity of the subject, worked with respect and complied with all the guidance in place.

posting interesting information about the finds and skeletons as the research, conservation and data analysis progressed. Online lessons for schools, videos and blog entries were created, and open days in local village halls were also held (Townend 2022, p. 54-55).

Post-excavation processing and preliminary results

Large amounts of archaeological data, samples, finds and the human remains were subject of post-excavation research. Records were checked and a database was created. The small finds were listed and a report was made by Dr Lisa Brundle. The samples were processed in-house, the cremations were carefully excavated, the artefacts cleaned following the best practice then sent for conservation to the University of Lincoln. The recovered material was categorised (human bone, metal finds, post-roman pottery, environmental sample) and was sent to an 'experienced, appropriate specialist' for assessment (Townend 2020, p. 8). The research of the cemetery and the conservation of the finds are still ongoing. The investigation report and specialist assessment reports are unpublished. Future plans include the deposition of the archaeological material in the Collection in Lincoln, where it can be accessible for further research (Townend 2022, p. 53) as the material has a lot of potential.

The osteological assessment revealed a mixed aged community of males and females with pathological evidence for malnutrition and injuries but no sign of traumas from battles were observed (Keefe and Holst 2021, p. 37). The brooches, beads, girdle hangers and wrist clasps were associated with the female burials, while pottery and knives were found in both female and male graves. Iron weaponry including spearheads, shield bosses were recovered from male burials (Brundle 2022; Townend 2022, p. 48). An interesting pattern was observed regarding the correlation between the age and grave goods, as the biggest amount of the finds came from burials of older individuals, while the deceased of younger age had less objects placed in the grave (Townend 2022, p. 50). Two double graves were excavated on site, however inter-cutting graves were observed only in one case, at the very edge of the cemetery, where a male burial slightly truncated a female grave. The place of the second grave could have been chosen deliberately and the male was laid next to an individual with an unknown relation (Townend 2022, p. 50). The vessels found on site originated from local and non-local pottery production sites (Townend 2022, p. 52).

Summary

The well-planned excavation and carefully excavated archaeological remains brought new knowledge about a forgotten population living in Lincolnshire in the fifth-sixth century AD. The members of this community were laid in graves or cremated with great care and equipped for the afterlife. The graves and cremations were furnished with a range of finds, dress accessories, pottery and iron weapons were amongst the unearthed grave goods. The carefully followed guidelines helped to recover a small proportion of this Early-Medieval cemetery with great potential and put it

on the map to be recognised as a site with potential national importance (Townend 2022, p. 1). The project was constrained by the available timescale and resources and only offered an opportunity to sample the cemetery. The standard of the excavation and the experience of the site team can account for the available results which can enrich the knowledge about the life of people in historic Lindsey. The story of this historic community was revealed by another, living in the twenty-first century; the community of metal detectorists, archaeologists, find officers, specialists and the public who were all brought together by their common interest in archaeology.

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