

## **ARCHAEOLOGICAL INVESTIGATION REPORT:**

**July 2022 - July 2024**

**ENF152464 – July 2022**

**ENF153259 – July 2023**

**ENF153263 – July 2023**

**ENF153264 - July 2023**

**ENF155898 – July 2024**

**North East Bastion, King's Lynn**

**TF 62382 20900**

**Elevation 3.34m ODN**



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May 2025

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Last, but by no means least, a massive thank you to the members of the King's Lynn Under Siege team: Nick Coneybear, James Davis, Sophie Ereira, Andrew Flindall, Alex Flinham, Andrew Gowan, Peter Jackson, Chris Jones, Iain Jones, Nick Palmer, Johanna Sonnex, Iain Sutherland, Matthew Sutton, Stephen Thompson, Charlie Waters, David Williams, and Paul Woodhouse. Without their commitment, endeavours, skills, enthusiasm, hard work, and companionship, none of what you are about to read would have happened.

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## EXECUTIVE SUMMARY

Formed in 2018, the King's Lynn Under Siege (KLUS) Community Archaeology Project is investigating the town during the 'English' Civil Wars of the 1640s and 1650s. To date, the project has examined two locations: the site of the southwest bastion (ENF145214 and ENF145264), and the site of the North East bastion. The latter has been the project's principle focus since 2020, and has undertaken three digs on the site (the first, ENF151929, was part of the *Great British Dig* television programme).

This report presents the findings of the project's activity since 2022. It covers the digs in 2022 and 2024, as well as the fieldwork undertaken in 2023. These findings include evidence for a method of construction of Civil War earthwork fortifications, together with evidence for brickmaking on the site towards the end of the 18<sup>th</sup> century.

## 1. INTRODUCTION

- 1.1. King's Lynn Under Siege is a community archaeology project investigating the lived experience of the town and its citizens during the 'English' Civil Wars<sup>1</sup> of the mid-seventeenth century.
- 1.2. The project was formed by Neil Falkner and David Flintham in January 2018.
- 1.3. For further information about the project see <https://www.vauban.co.uk/kings-lynn-under-siege>.
- 1.4. This report covers three 'seasons' on the site – 2022, 2023, and 2024.
- 1.5. As will be observed, skills and techniques, especially in the recording, have evolved during this period.

## 2. SITE LOCATION

- 2.1. known until 1537 as Bishop's Lynn, King's Lynn is situated about 158 km (98 miles) north of London, 71 km (44 miles) west of Norwich, 58 km (36 miles) east of Peterborough, and 71 km (44 miles) north-east of Cambridge. It is the northernmost settlement on the River Great Ouse and is about 8 km (5 miles) south of the Wash.



Figure 1 - Location of King's Lynn

- 2.2. The site itself is situated to the north of the town centre (930m NE of Tuesday Market Place), and is north of Edma Street.

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<sup>1</sup> More properly the Wars of the Three Kingdoms, or the British Civil Wars. However, as the term English Civil War remains the most recognizable (if not the most accurate), and the events described in this report occurred during the fighting in England, the report will continue to refer to it by this common title, abbreviated to ECW.

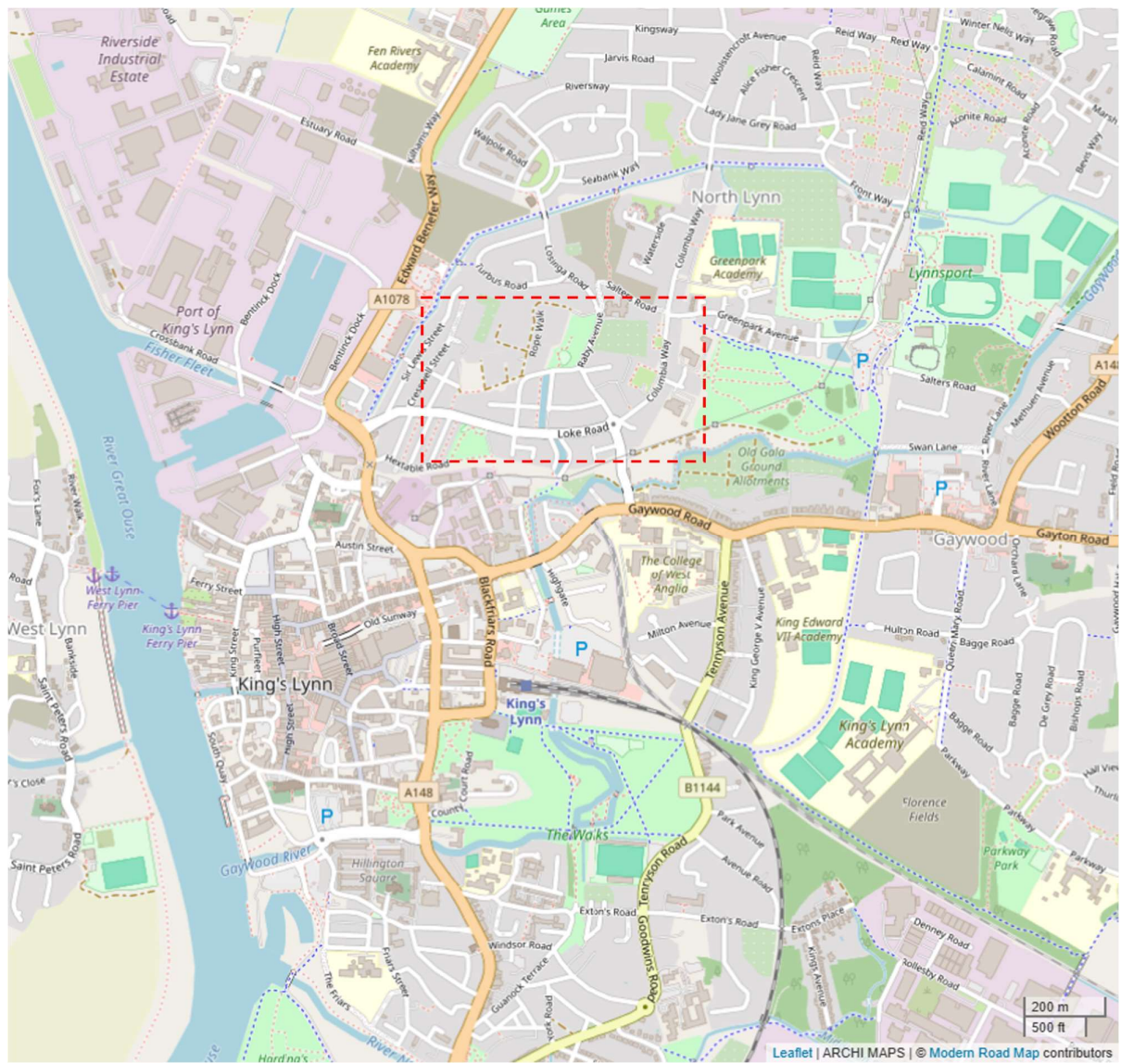


Figure 2 - Street map of King's Lynn.

The location of the North East bastion site is highlighted. Figure 3 is an enlarged view of this area.

Image from ARCHI UK Website (<https://www.archiuk.com>) (ARCHI Information Systems Ltd)





Figure 3 - A Street map of the North East bastion site

The site is located top centre of the map

Image from ARCHI UK Website (<https://www.archiuk.com>) (ARCHI Information Systems Ltd)



Figure 4 - An aerial photograph of the North East bastion (top) site

Image from ARCHI UK Website (<https://www.archiuk.com>) (ARCHI Information Systems Ltd)

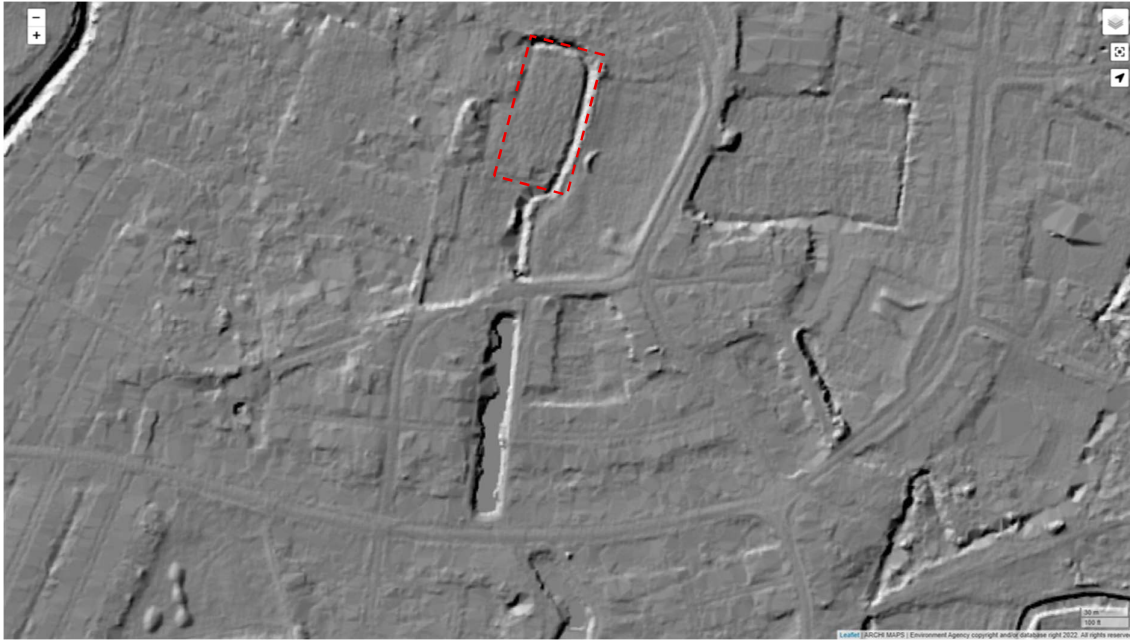


Figure 5 - A LiDAR map of the North East bastion site

Modern maps clearly show the line of the fortifications at the North East bastion site. The modern ditch/drain follows the line of the moat, defining much of the northern face of the bastion, as well as its eastern face, the south-eastern flank, and part the curtain as it runs southwards.

Image from ARCHI UK Website (<https://www.archiuk.com>) (ARCHI Information Systems Ltd)

### 2.3. The area of the investigation forms part of a small holding (Fairlawn House).

The ground was roughly ploughed, with some depth to the furrows at the time of the investigations. The site is bordered to the north and east by a distinctive water channel that is a remnant part of the ditch system of the historic fortifications of the town. To the east of this channel is part of a recreational park owned by the local Council.

The bedrock geology consists of the Kimmeridge Clay Formation, a sedimentary bedrock formed approximately 152 to 157 million years ago in the Jurassic Period when the local environment was dominated by shallow seas. The superficial, or 'drift' deposits are from 'tidal flat deposits' i.e., Clays and silts formed up to 2 million years ago in the Quaternary Period<sup>2</sup>.

## 3. HISTORICAL CONTEXT

3.1. King's Lynn was never one of England's great walled medieval towns and wasn't surrounded by a circuit of masonry fortifications (despite the illusion created by OS maps). Instead, the town's defences evolved organically: with the River Great Ouse protecting its western side, the rivers that flowed through the town were diverted to provide protection to the east and south. Where there were gaps, earth banks topped with wooden palisades were erected, and finally, to control passage in and out of the town, and also to

<sup>2</sup> British Geological Survey (<https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/> - accessed 16/01/2025)

collect dues and taxes, gateways were erected, most notably on the London and Norwich roads. During the latter years of the Middle Ages, these gates were rebuilt in brick and stone (the South Gate remains a local landmark), and a short stretch of masonry wall was constructed either side of the East Gate (demolished in 1800).

- 3.2. Despite its maritime importance (although it had declined since its Hansiatic League heyday), King's Lynn was not included in Henry VIII's coastal defence programme, although new fortifications were constructed during the 1580s and 1620s. At the outbreak of the English Civil War (ECW) in 1642, like so many other towns up and down the country, the town's defences were repaired and improved, although even these proved insufficient to withstand the siege, and in September 1643, the town fell to Parliament
- 3.3. Whilst no longer one of England's chief ports, it was still important to river and coastal shipping: nine counties could be reached by boats from King's Lynn, whilst its coastal craft sailed up and down the East coast of England, and could even reach the continent, particularly the Netherlands.
- 3.4. Logistics are the sinews of war, and Parliament soon realised the importance of King's Lynn as a logistical hub. Raw materials (including Peak District lead and local linseed) were brought into the town then shipped to London, whilst weapons and munitions were imported from abroad. All manner of supplies were brought into the town and then shipped onto Parliament's Army of the Eastern Association as it advanced through Lincolnshire and Yorkshire during late 1643 until mid-1644, and even the invasion of Scotland in 1650 was supplied through King's Lynn.
- 3.5. But if King's Lynn was vital to the Parliamentary war-effort, it would have to be protected. With the town's existing fortifications deemed inadequate, steps were taken to completely re-fortify the town. Richard Clampe<sup>3</sup>, a local physician and mathematician was given the job of designing the new fortifications, and his solution was for an enceinte to completely enclose the town on its north, east, and southern sides. This would be based on the latest continental methods, utilising the principle of defence in depth, employing multiple layers of ramparts, ditches, and moats<sup>4</sup>, transforming the town into not just the strongest fortress in East Anglia, but probably the most sophisticated fortified place in England<sup>5</sup>.
- 3.6. Wenceslas Hollar's well-known *The Groundplat of Kings Lyn* (c.1660) demonstrates the consistency of the layout of the fortifications, although it

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<sup>3</sup> David Flinham, 'Richard Clampe' Fortress Engineer, c1617-1696', *Fort*, (Fortress Study Group, 2018), Volume 46, pp. 3-14

<sup>4</sup> The typical and most common form of fortification during the English Civil Wars was a simple earthen rampart fronted by a defensive ditch.

<sup>5</sup> Of the 162 towns in England thought to have been fortified during the English Civil Wars only Oxford and the designs for Newport Pagnell come close to the level of sophistication found at King's Lynn (source: David Flinham, *Civil War Fortifications Register*, ([https://vauban.co.uk/civil-war-fortifications-register-\(cwfr\)](https://vauban.co.uk/civil-war-fortifications-register-(cwfr))))



doesn't do as much justice to the actual complexity of their design. Hollar's plan would be the basis for the maps and plans that followed.

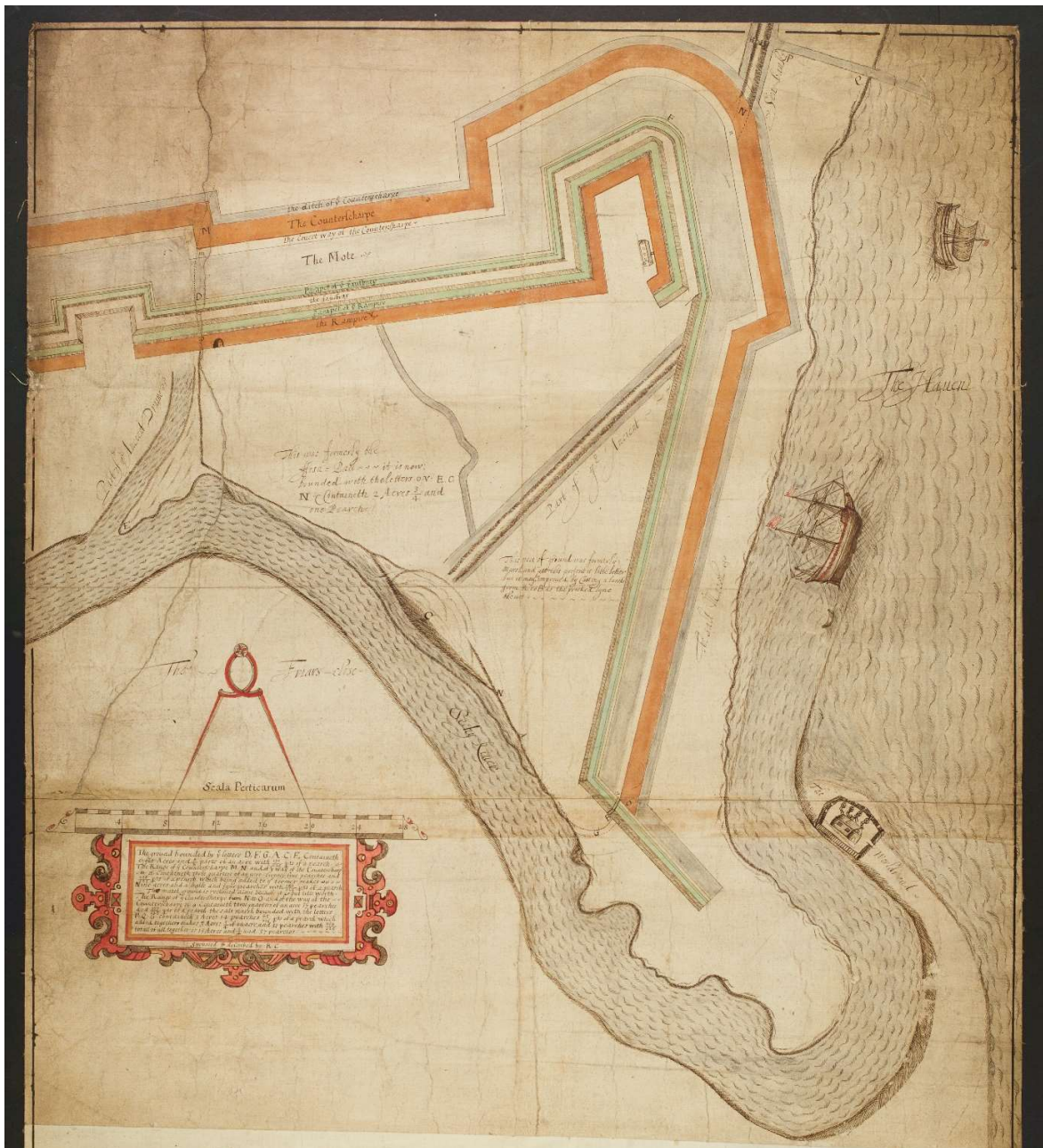
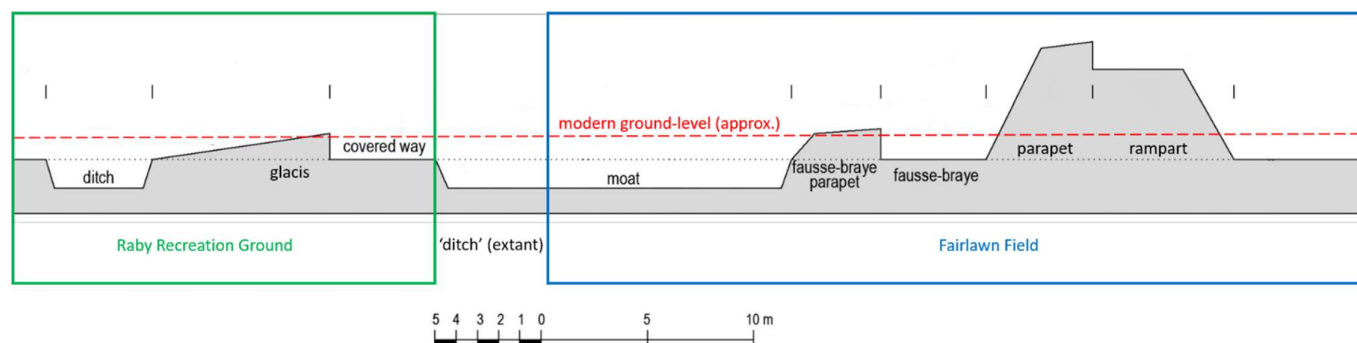


Figure 6 – Richard Clampe's Plan of the fortifications near the Boal, South Lynn (NRO- King's Lynn Borough Archives, KL/C 48/16 (originally BC 21)) (With thanks to the Lynn Museum and King's Lynn Borough Archives)

3.7. Held in the town's archive is Richard Clampe's scaled plan for the south-western bastion (located in the area now occupied by Harding's Pits). This plan is superbly detailed, using colour to set out the various components of

the defences, as well as providing width measurements (in perches). This information, combined with the typical height dimensions of ECW fortifications<sup>6</sup>, enabled a scale profile of the fortifications to be devised (*Figure 7*)<sup>7</sup>. The existence of Clampe's plan caused the project's to be focused on the south-west bastion but the resulting magnetometry survey in May 2019 (ENF145214 and ENF145264) was inconclusive.



Component	Width (metres)	Notes
<i>Outer Ditch</i>	5.029	Clampe refers to this as the “Ditch of counterscarp”
<i>Glacis</i>	8.381	Clampe refers to this as the “Counterscarp”
<i>Covered Way</i>	5.029	
<i>Moat</i>	20	Revised as a result of following September 2021 excavation
<i>Parapet of Fausse-Braye</i>	4.19	Added together, the fausse-braye would have a total overall width of 9.219m
<i>Fausse-braye</i>	5.029	
<i>Parapet</i>	5.029	Added together, the rampart would have a total overall width of 11.734m
<i>Rampart</i>	6.705	
<i>Total width</i>	59.392	

*Figure 7 –The profile of the defences based on Clampe's Plan (With thanks to Charles Blackwood, Fortress Study Group). A glossary of fortification terms appears at Appendix 26.*

<sup>6</sup> Lieutenant-Colonel W. G. Ross, R.E., 'Military Engineering during the Great Civil War, 1642-9', in *Professional Papers of the Corps of Royal Engineers*, (Chatham: Corps of Royal Engineers, 1887), Volume XIII, plate I

<sup>7</sup> The author is grateful to the artistic skills of Charles Blackwood of the Fortress Study Group for his help in developing this profile.



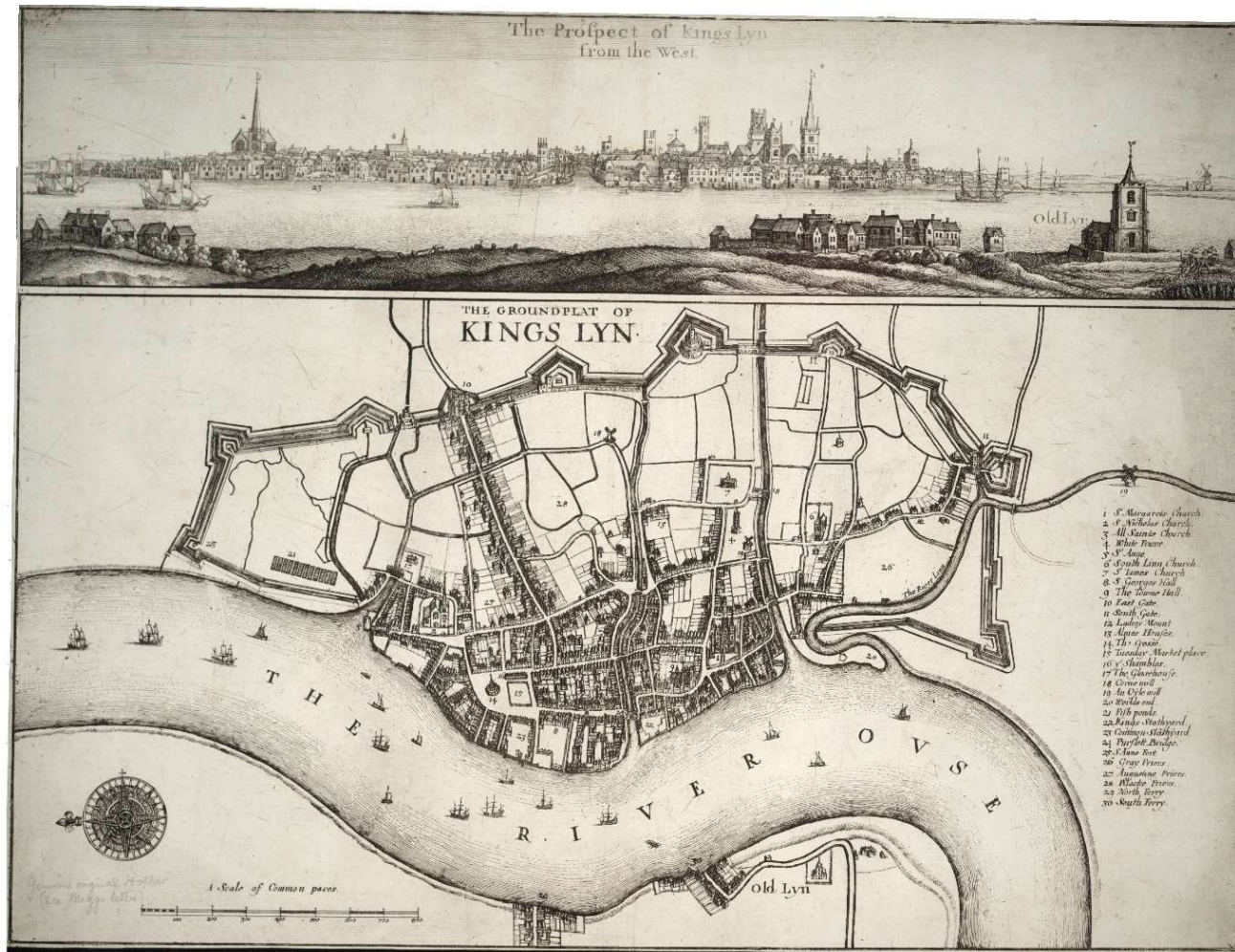


Figure 8 –Hollar's plan of King's Lynn, c.1660 (P987)

Richard Clampe's bastioned enceinte is clearly visible. Closer inspection reveals the original northern defences constructed prior to the Civil War, as well as the masonry Medieval wall which ran either side of the East Gate. (With thanks to The Thomas Fisher Rare Book Library, University of Toronto)



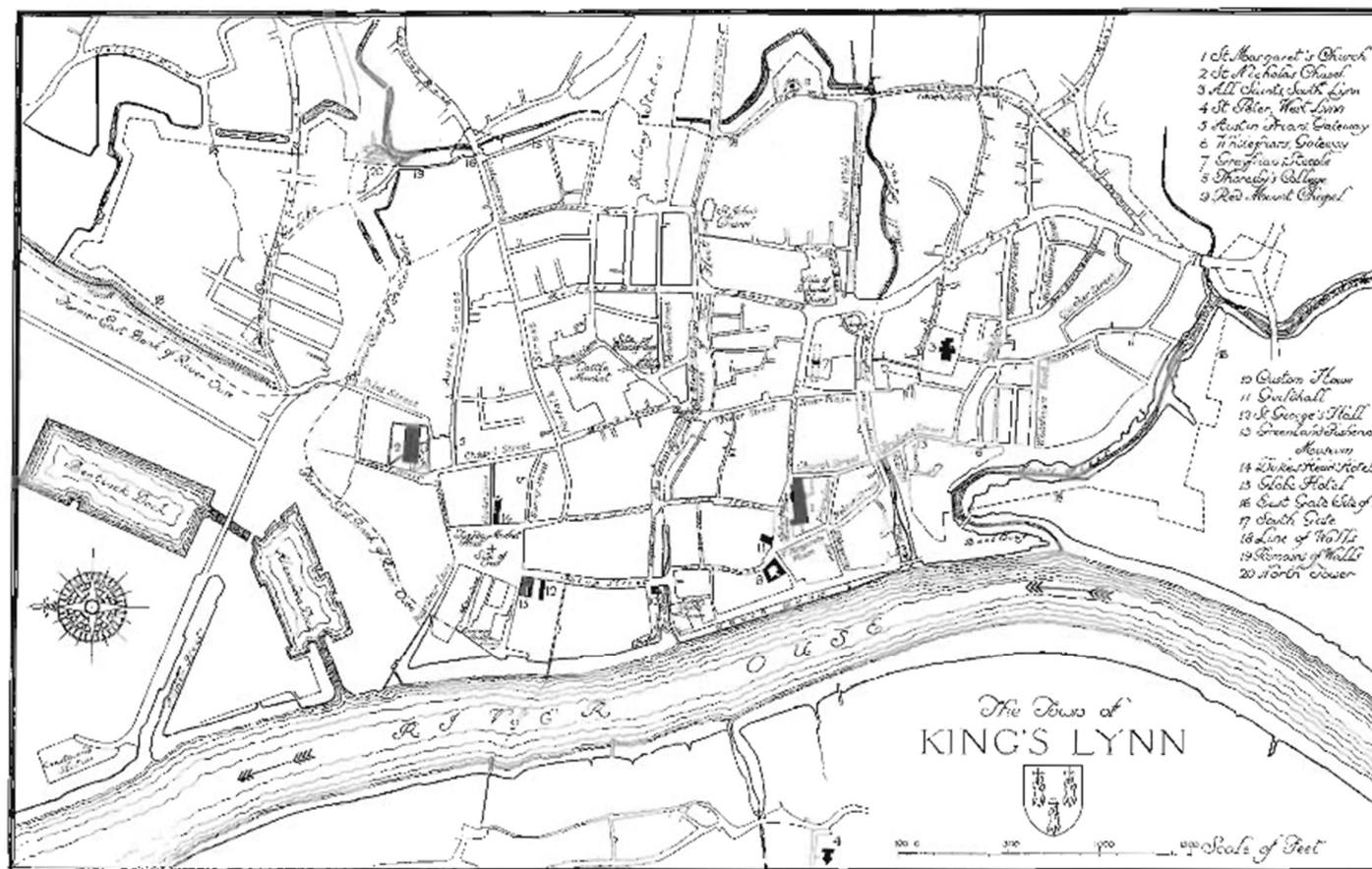


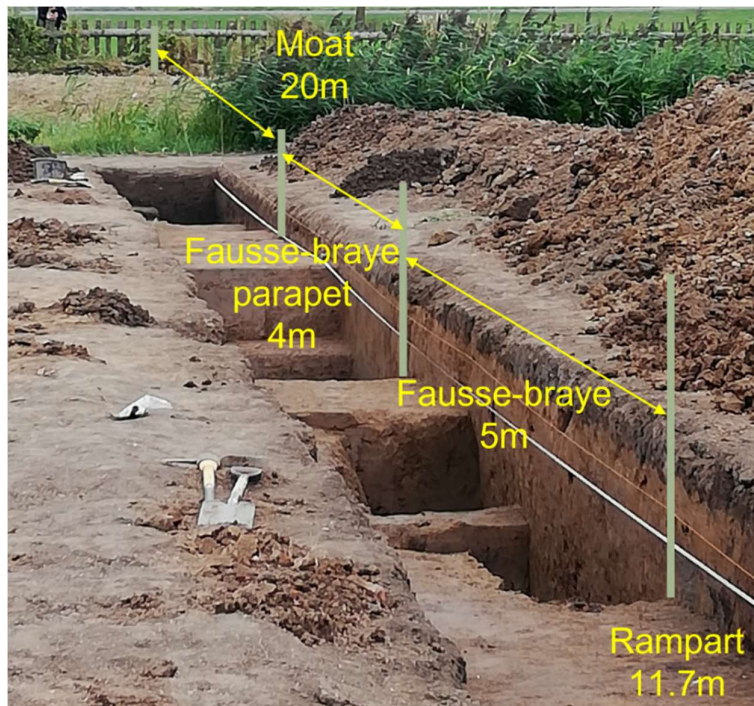
Figure 9 - The map of King's Lynn from the 1933 *Archaeological Journal*

The summer 1932 meetings of the Royal Archaeological Institute were held in King's Lynn (11 to 19 July 1932). The proceedings were published in the 1933 volume of the *Archaeological Journal*, and were accompanied by a prefatory note on the history of the town which included a map based on Henry Bell's c.1670 plan, superimposed on a map of 1930's King's Lynn. In addition to showing the line of the 1643-4 fortifications, this plan also provides an indication of the former east bank of the River Great Ouse. (The *Archaeological Journal*, Volume 89 (1932). Royal Archaeological Institute (2013) *The Archaeological Journal*. York: Archaeology Data Service

<https://doi.org/10.5284/1018054>)

#### 4. ARCHAEOLOGICAL BACKGROUND

- 4.1. The 'discovery' of traces of the north-eastern bastion in January 2020 caused the project's attention to be focused here. Substantial desk-top research took place throughout 2020 and in early 2021 plans were drawn up to undertake this non-intrusive investigation of the site.
- 4.2. Not long afterwards, the project was contacted by Solstice Heritage, the archaeological consultants for Channel 4's *The Great British Dig* programme. During the spring and summer of 2021, KLUS worked closely with the programme, culminating in a five-day 'dig' in September 2021 (ENF151929).
- 4.3. During the dig, a trench measuring 30m x 1.8m and running approximately east to west was opened up in the field at the rear of Fairlawn House. Whilst the report detailing the results of this excavation is yet to be published, there are three important findings to highlight: firstly, the moat in this part of the fortifications was wider than that illustrated in Clampe's plan for the south-western bastion (20m compared with 16m<sup>8</sup>); the 'cuts' for the fausse-braye and main rampart matched almost exactly Clampe's plan; and finally, the discovery of a wooden post and cross-piece at the (outer) base of the rampart suggests that the rampart was constructed around some sort of wooden framework. These are important findings, not just for King's Lynn, but in a wider, national context.



<sup>8</sup> In comparison, an investigation of Cambridge Castle (November 2005 to March 2006) estimated that the ditch cut as part of its Civil War fortifications in 1643 measured 4.0m deep and at least 13.0m wide - Craig Cessford, 'Excavation of the Civil War bastion ditch of Cambridge Castle', *Proceedings of the Cambridge Antiquarian Society for 2008*, (Cambridge: Cambridge Antiquarian Society, 2008), Volume XCVII, p. 140



Figure 10 –The trench excavated during the 2021 dig

The cuts revealed in this trench demonstrated the accuracy of Clampe's plan

4.4. The project is not aware of any previous archaeological investigations of the site prior to 2021.



Figure 11 – Location of 2021 excavations (photograph taken 22<sup>nd</sup> July 2022)

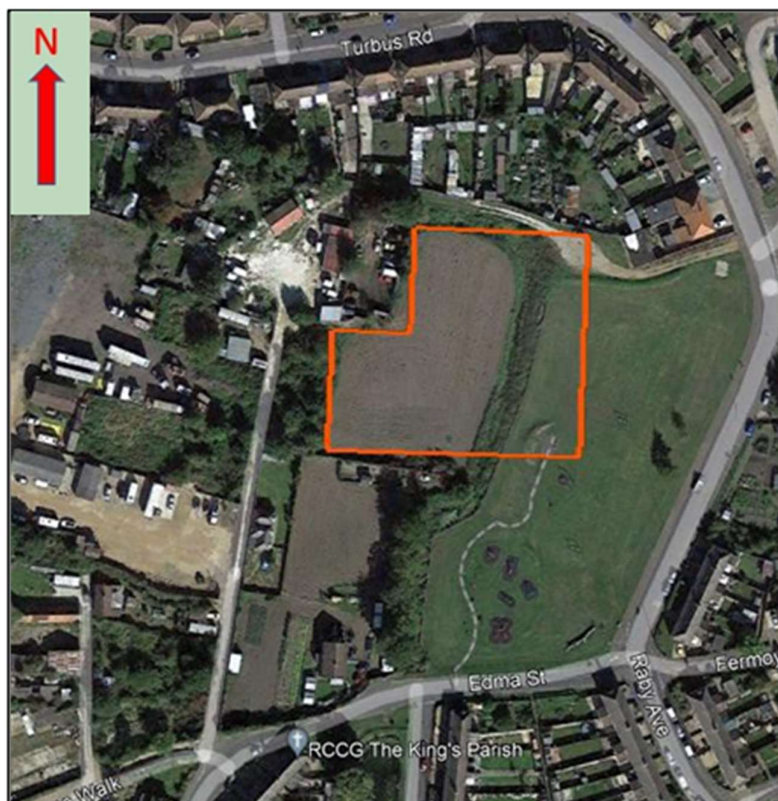


Figure 12 – Area of Investigation (March 2022)

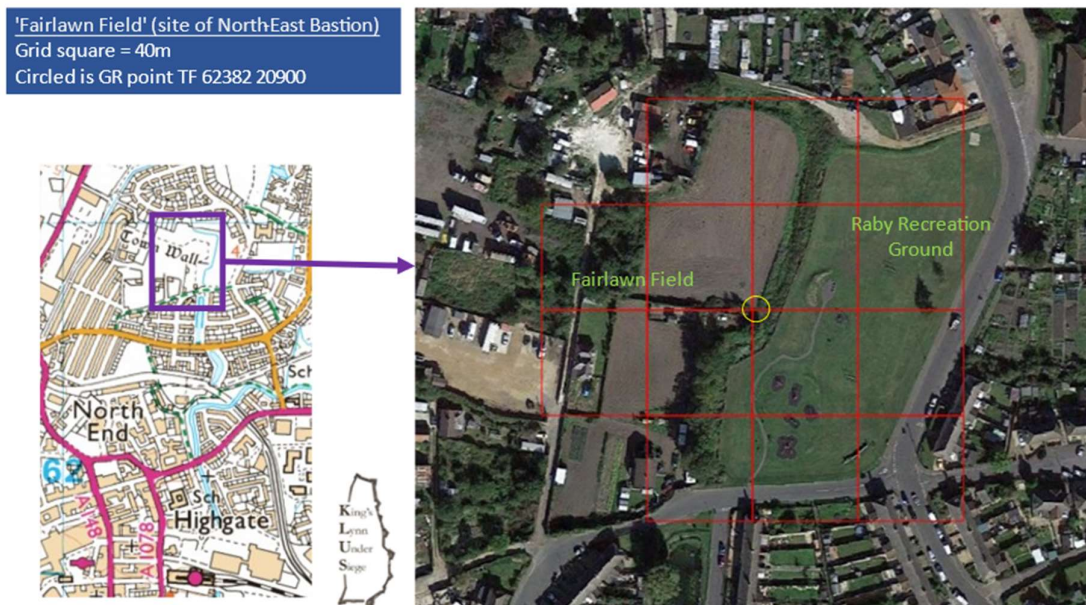


Figure 13 - Location of site (as submitted to HER)

## 5. MAGNETOMETRY SURVEYS

- 5.1. The project is not aware of any previous magnetometry (nor resistivity / GPR) having been undertaken on this site prior to 2022.
- 5.2. The Fluxgate Gradiometer Survey took place on 24<sup>th</sup> and 25<sup>th</sup> March 2022 (see ENF151503<sup>9</sup>).
- 5.3. The survey made the following recommendations:
  - 5.3.1. It may be worthwhile re-visiting the location and positioning of the various maps of the defensive structure based on the accurate location of the magnetometry picture now available.
  - 5.3.2. Invasive excavation should follow. The accurate positioning of the grids in this report should assist the location of the trench / trenches proposed

<sup>9</sup> Sedgeford Historical and Archaeological Research Project, Archaeological Evaluation Report, March 2022, *Fluxgate Gradiometer Survey*, ENF151503 – North East Bastion, King's Lynn





*Figure 14 - Results of the March 2022 Magnetometry on Qgis  
This survey informed the project's investigations between 2022 and 2024. The location of the 2021 Trench marked in yellow*

## 6. JULY 2022 - OBJECTIVES

6.1. It was decided to undertake a programme of invasive excavation with the following objectives:

- 6.1.1. Prove Clampe's plan: after all, "it's easy enough to draw an enormous earthwork from the comfort of your nice little town house, but how do we know that the people on the ground did not cut corners."<sup>10</sup>
- 6.1.2. Understand the purpose, composition, and construction of King's Lynn's earthwork fortifications.

<sup>10</sup> Dr. Chole Duckworth, *The Great British Dig: History in Your Back Garden*, (London, Conway, 2022), p. 211.

- 6.1.3. What does the design and layout of the fortifications tell us about King's Lynn's topography as mapped by Wenceslas Hollar and subsequent maps.
- 6.1.4. What happened to the fortifications? How were they de-commissioned and removed?
- 6.1.5. How do the lessons from King's Lynn translate nationally?
- 6.2. The initial excavations would take place over a two-week period in July 2022.

## 7. JULY 2022 - APPROACH

- 7.1. The excavations were planned to take place from 17<sup>th</sup> to 29<sup>th</sup> July 2022 and would be run as a sub-project of Sedgeford Historical and Archaeological Research Project's (SHARP)<sup>11</sup> programme for 2022
- 7.2. The July 2022 investigation is referenced ENF152464.
- 7.3. The original plan was to open four trenches: Trench A (8x4m), Trench B (4x2m), Trench C (4x2m), and Trench D (4x2m):

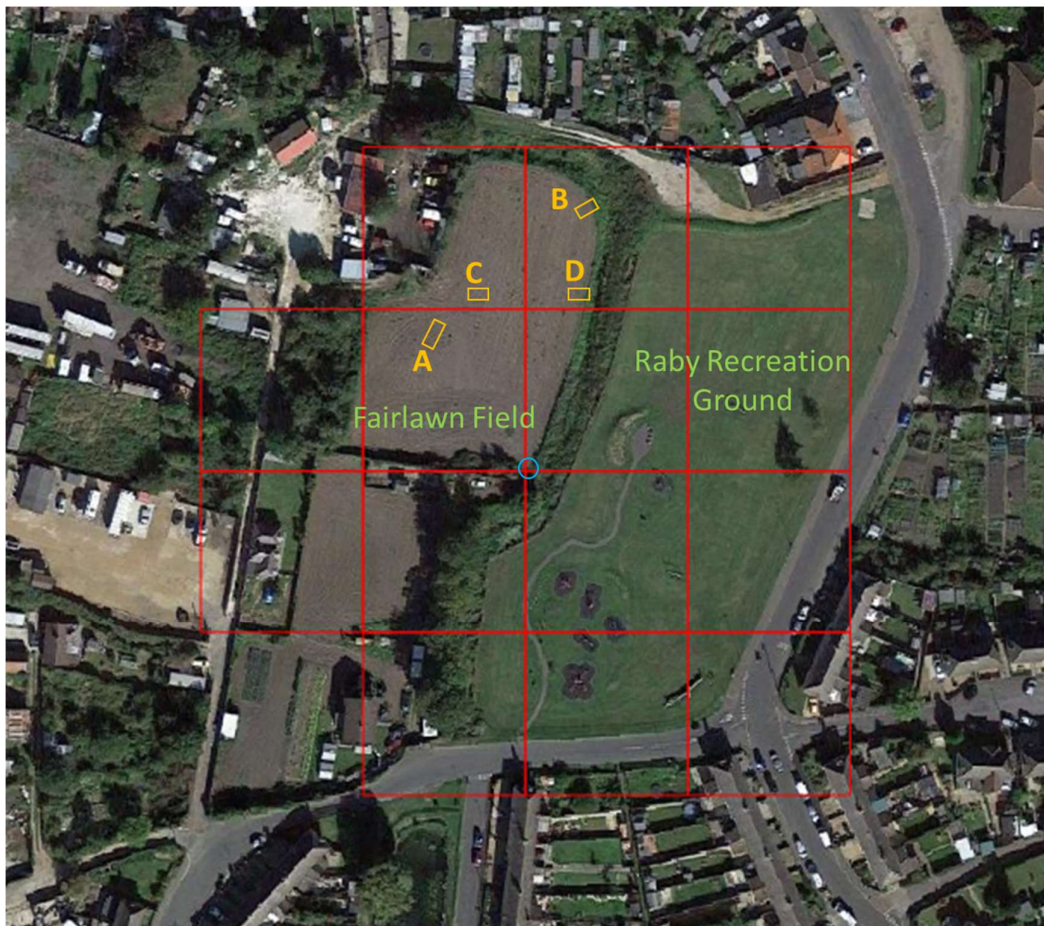


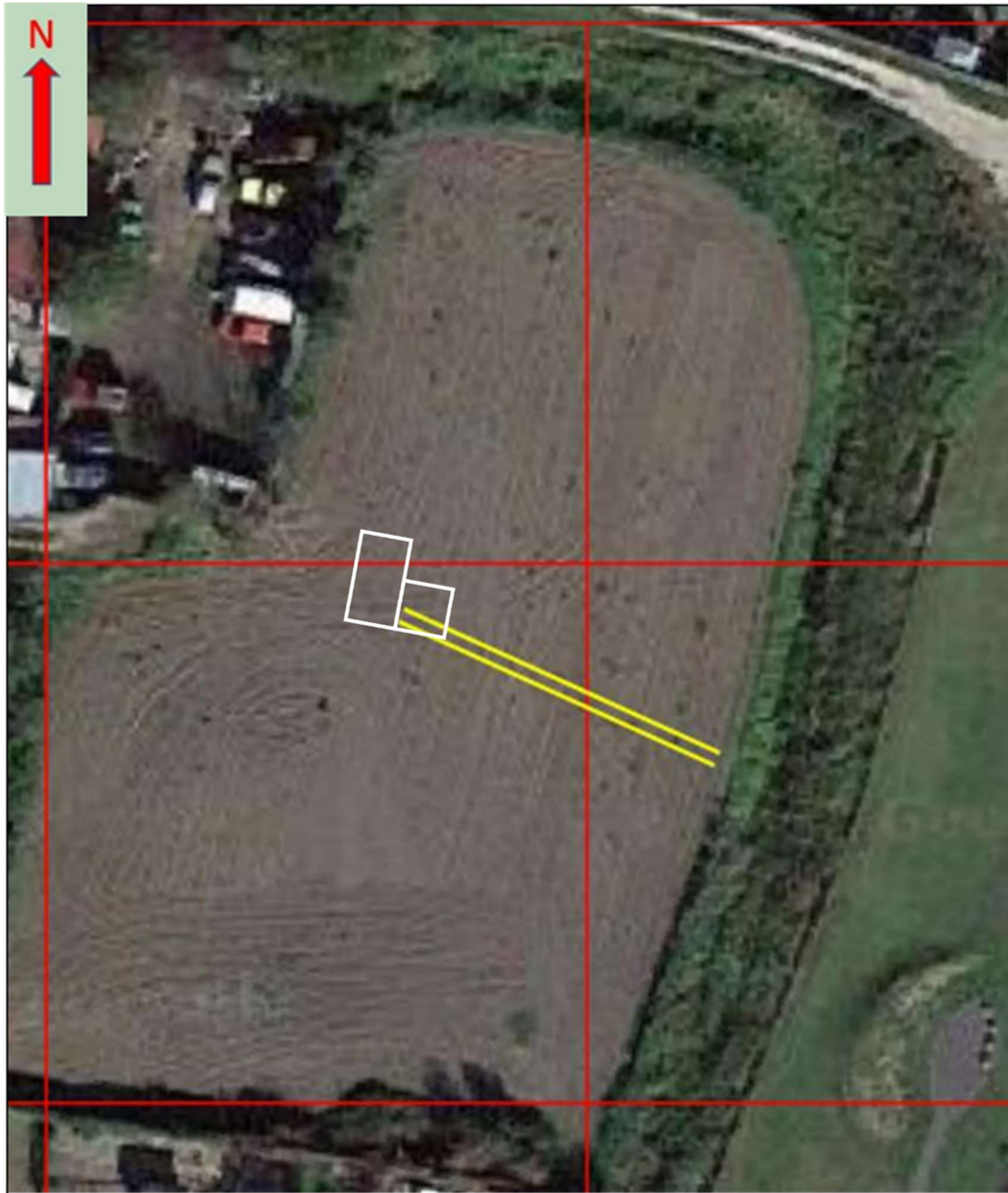
Figure 15 – 2022 Trench locations as originally intended

<sup>11</sup> <https://www.sharp.org.uk/>



7.4. However, due to the unprecedented hot weather conditions, it was decided to open a single trench (Trench A), but would make this bigger than the original plan.

7.5. As a result, Trench A became 'L'-shaped, occupying an area of 6.9m (N-S) x 7.52m (E-W).

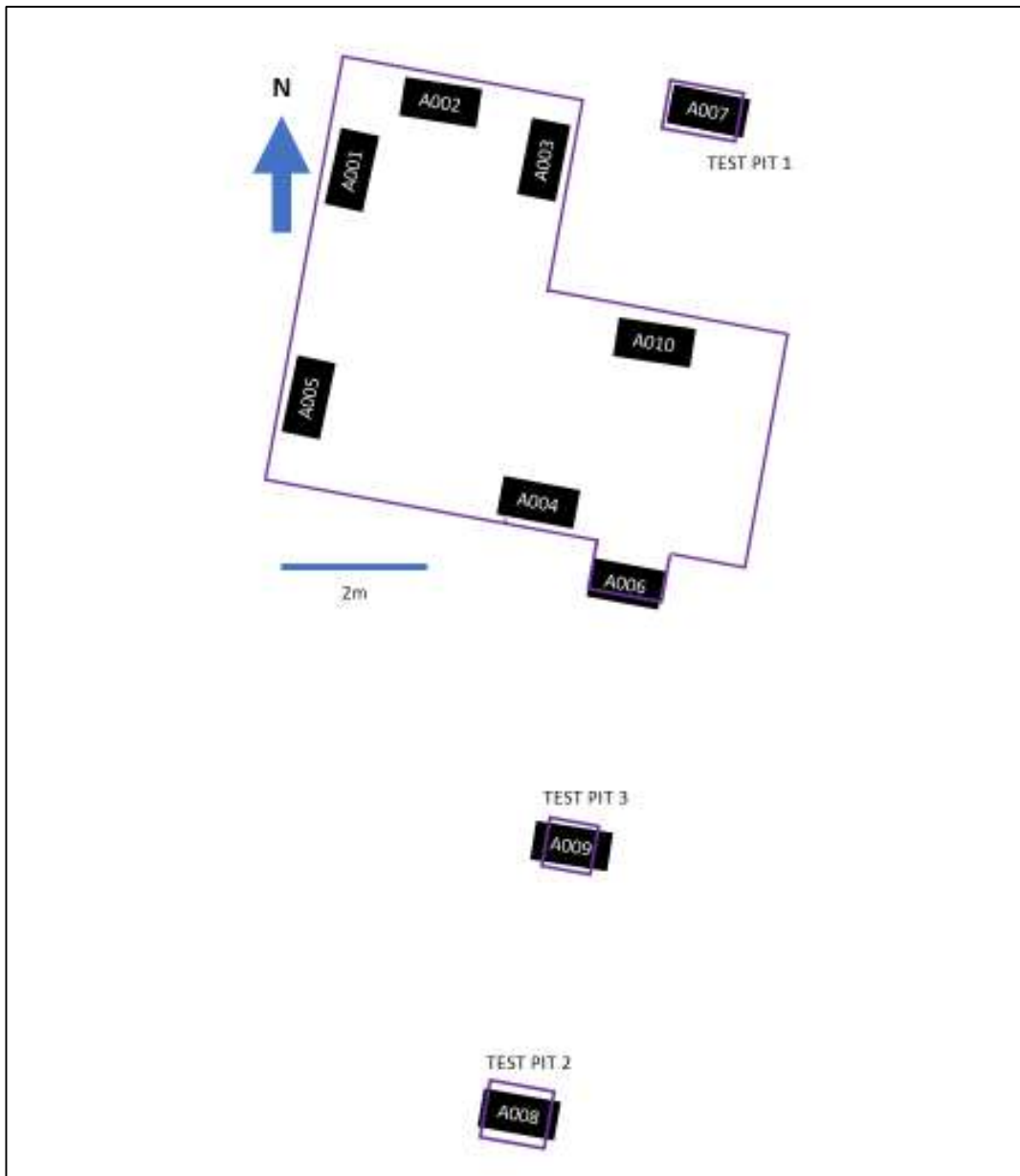


*Figure 16 – Revised 2022 Trench location*  
(shown alongside the site of the 2021 trench in yellow)

7.6. During week 2, three test pits would be opened, two to the south of the main trench, and one to the north.

7.7. For the purposes of the investigation, the dig site was devised into ten areas: areas one to six, and area ten (identified as A001, A002, etc.) where on the

main trench, whilst areas seven to nine were the test pits. See *Appendix 3 - Area definitions (July 2022)*.



*Figure 17 – Summary of area locations*  
(scale is approximate)

7.8. A mini digger was used to open the main trench on Monday, 18th July. The mini-digger returned to site on Friday, 29th July to back-fill the trench.

7.9. In addition to the main excavation, field-walking, dowsing, and augering also took place on the site.

## 8. JULY 2022 – SUMMARY OF FINDINGS

- 8.1. For the purposes of the investigation, the finds are approximately grouped as follows:
  - 8.1.1. Pre-Civil War (i.e., before 1642)
  - 8.1.2. ECW/Military occupation of site (1642-60)
  - 8.1.3. Post Civil War (1660-1750)
  - 8.1.4. 'Industrial' (brickmaking) period (1750-1900)
  - 8.1.5. Post-industrial/return to agriculture (1900 to present day)
  - 8.1.6. Miscellaneous/unidentified/undated
- 8.2. It was noted that the post discovered during the 2021 dig was not adequately protected when the trench was backfilled at the end of the investigation. As a result, some deterioration of the post had occurred. Both this post and the post discovered in July 2022 were protected when the trench was backfilled.
- 8.3. The post discovered in 2022 is in alignment with the 2021 post, and when plotted against the profile [Figure 7] are in line with the foot of the rampart (outer edge). This provides important clues as to how earthwork ramparts were constructed during the English Civil Wars. This is explored further at Appendix Eighteen – Earthwork Rampart Construction.
- 8.4. Test-pitting in alignment with, and to the north of the main trench failed to find further posts. This could be an indication that the excavation had actually encountered the point when the line of the ramparts turned to form the bastion's northern face.
- 8.5. No items that might be associated with the construction of the fortifications were uncovered – it was hoped that broken tools or other ironwork would be uncovered, but the project was disappointed. It is possible that during the construction of the fortifications, provision was made to repair tools on site, although no evidence of iron working was found.
- 8.6. The investigation revealed a number of other material finds. These are listed at Appendix 8.
- 8.7. The discovery of the glass onion bottle (find: F009-39) links the site with the King's Lynn wine trade of the later 17<sup>th</sup> and 18<sup>th</sup> centuries.
- 8.8. The site's later role in brickmaking is demonstrated by a number of finds including bricks and mis-fired bricks, other pieces of ceramic building material, pieces of charcoal, and other pieces of burnt material. Higher concentrations of bricks, etc. were encountered at the western edge of the trench suggesting that this was the edge of the brick kiln area.
- 8.9. Demolition rubble from the Fairlawn Nurseries was found in Test Pit 2
- 8.10. Fieldwalking the site produced a number of finds, including pieces of cockle shell, oyster shells, clay pipe stems and ceramic pieces.

## 9. JULY 2023 – BACKGROUND AND OBJECTIVES

- 9.1. Up to and including the 2022 season, the investigation had found evidence for the fortifications along the east-face of the north-eastern bastion. As the aerial photographs demonstrate, to the north of both the 2021 and 2022 trenches, the bastion ‘turned’ by 90°, with the second face looking in a northern direction. Given the breadth of the fortifications (60m), this turn would have occupied a substantial amount of land, and might have restricted the space available within the bastion to mount artillery. In addition, whilst evidence for brickmaking on the site has been substantial, the c.1797 brick kiln itself has not yet been located.
- 9.2. Therefore, the future objectives for the project on the north-east bastion site are:
- 9.2.1. Locate the point of ‘turn’ of the bastion, and trace this from the outer point of the bastion feature inwards
  - 9.2.2. The existing ditch was once part of the 20m-wide defensive moat. Excavations on the eastern-face of bastion have confirmed that here the ditch represents the outer-edge of the moat. Given the nature of the ‘turn’ of the bastion, does the ditch similarly represent the outer edge of the moat along the northern face?
  - 9.2.3. What was the space within the bastion?
  - 9.2.4. To locate the site of the brick kiln
  - 9.2.5. During wet weather, there is an area of the site that gets particularly ‘boggy’. The 1887 Ordnance Survey map shows a pond-like feature. Is this connected with the moat? Or perhaps it is connected with the later aviary that occupied a corner of the site during the early 20th century
  - 9.2.6. Further evidence for human activity of the site, especially in connection with the construction of the fortifications and their subsequent occupation
- 9.3. It was decided to progress these objectives in July 2023 through an earthwork survey, fieldwalking and some test pitting. This would inform future investigations.

## 10. JULY 2023 – APPROACH

- 10.1. The July 2023 investigation is referenced as follows:
- ENF153259 – Two 1m by 1m test pits (Test Pit A and Test Pit B).
  - ENF153263 – Fieldwalking and metal-detecting survey.

- ENF153264 - Earthwork survey.



Figure 18 – Proposed locations of the July 2023 test pits  
(ENF153259 - scale is approximate)

- 10.2. A full earthwork survey with a 2m auger of the site was to be undertaken. This would focus on the northern part of the site, and so would ignore the area previously occupied by the nurseries.
- 10.3. Samples would be taken at regular spaced intervals, working away from a central point.
- 10.4. All plots measured from this central point which was located 53m north of the GR datum point.
- 10.5. In all, 34 samples would be taken. The results of these are set out in Appendix 14.
- 10.6. Test pitting would also be undertaken
- 10.7. Whilst some field walking would be undertaken, no metal detecting took place.

## 11. JULY 2023 – SUMMARY OF FINDINGS

- 11.1. Organic matter was encountered in a number of locations. This can be associated with both the low-laying nature of the site, and importantly, can be associated with the course of the moat constructed as part of the fortifications.
- 11.2. Augering across the southern portion of the site demonstrated the extent of the demolition rubble from the Fairlawn Nurseries greenhouses.
- 11.3. Brick deposits were encountered during the augering of the western edge of the site.



- 11.4. Two test pits at the western edge of the site confirmed the presence of bricks, including misfired bricks.
- 11.5. Further fieldwalking the site observed a variety of material including pieces of cockle and oyster shells, and pieces of ceramic including brick.

## 12. JULY 2024 – BACKGROUND AND OBJECTIVES

- 12.1. The 2024 'season' intended to consolidate the work of previous years, and in particular find more evidence for the fortifications themselves, as well as providing an opportunity to look for the brick kiln.
- 12.2. It has the following overall objectives:
  - 12.2.1. To locate the northern face of the bastion, and to identify and investigate its components (rampart, fausse-bray, moat). To form a bastion, the line of the fortifications would have to turn by 90° (e.g., from running north-south to running east-west), so the investigation is looking for evidence of this turn, as well as confirming that the design of the north-facing face of the bastion matched the east-facing face.
  - 12.2.2. To find further evidence for the construction of the rampart (including further rampart posts and cross-pieces), so doing help prove the theorised method of rampart construction set out following the 2021 and 2022 digs, and suggested by Nicholas Stone in his *Enchiridion of Fortification* of 1645. This is set out at Appendix 27 – Earthwork Rampart Construction.
  - 12.2.3. To uncover evidence of contemporary human activity on the site, particularly during the construction and usage of the fortifications.
  - 12.2.4. To investigate the site's role in 18<sup>th</sup> century brickmaking. Whilst Faden's 1797 map indicates the location of a brick kiln, it is likely that the actual site of this lies beneath the neighbouring property. Therefore, the investigation would focus on associated activity including the transportation of bricks from the kiln, and the disposal of mis-fired bricks.

## 13. JULY 2024 – APPROACH

- 13.1. The July 2024 investigation is referenced as follows:
  - ENF155898 – Two trenches (Trench A and Trench B).
- 13.2. Trench A would measure 7m by 3m and would be located as close as possible to the western edge of the site.
- 13.3. Trench B would be the main trench and would measure 15m long by 1.9m wide. It would be located in the angle of the bastion itself.
- 13.4. The opening of both trenches would be by a mini digger ahead of the actual dig itself.
- 13.5. Subsequent excavations would be hand-dug.
- 13.6. During the dig, Trench A was extended and would ultimately occupy an overall area of 8.64m by 3.84m





Figure 19 – 2022 aerial view showing the approximate locations of the 2024 trenches  
(In white): Trench A (lower-centre) and Trench B (upper-left)

## 14. JULY 2024 – SUMMARY OF FINDINGS

- 14.1. Due to weather conditions, excavations around Trench B were severely restricted. However, a cut in this trench possibly matched with the *Fausse-Braye* feature (*Context 003*). Unfortunately, conditions prevented a full examination of this feature.
- 14.2. Although it is not possible to excavate the site of the brick kiln itself, it is felt that the kiln could be of the 'Suffolk' type, a type that was common across East Anglia during the later 18th, 19th and early 20th centuries<sup>12</sup>.
- 14.3. It is likely that the remains of the brick-kiln lie under the neighbouring property to the west of the site. However, given the location of the brick finds, it is thought probable that the excavated site was where bricks were removed from the kiln and loaded onto carts for transportation (the 1797 map shows a track cutting diagonally across the site). Any misfired bricks were probably cast aside at this point too.
- 14.4. In addition to the manufacture of bricks for construction purposes, 'honeycomb' bricks were also found [Finds: 003, 004, 021, 022]. This type of brick was used in the construction of kilns to dry hops, a key component in the brewing of beer. This provides a link between the site and the town's brewing industry<sup>13</sup>.
- 14.5. Some bricks were found to have glazing on faces [Find: 002] which was the result of the silica content melting and then solidifying once cooled. As the silica crystal structure starts to break down at about 575 degrees Celsius, construction bricks cannot be fired at any higher temperature. It is unlikely that this caused by firing in the brick kiln. As far higher temperatures are used in iron working, this, together with other finds [Finds: 005, 034, 036, 039] suggest that iron working took place on the site. There is no documentary evidence to support this, but it is possible that such activity did take place during the construction of the fortifications, for instance, allowing tools to be repaired on site.

## 15. CONCLUSIONS

- 15.1. Up to the outbreak of the Civil War in England in 1642 the site was open countryside, boarded to the west and northwest by the River Great Ouse and associated wetlands. From the evidence of later maps<sup>14</sup>, it is likely that the area was pasture, used for the grazing of animals. Unsurprisingly, there has been no archaeological evidence associated with this period.

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<sup>12</sup> For more information on this type of brick kiln see <https://www.ebsoc.org.uk/local-story/brick-kiln/> (accessed 22/11/2024)

<sup>13</sup> In 1845 for example, the town had six small and nine big breweries, supplying the town's 145 public houses – Paul Richards. *King's Lynn*, (Stroud: Phillimore & Co. Limited, 2017), p. 38).

<sup>14</sup> William Rastrick, *Ichnographia Burgis perantigum Lennae*, (1725)

15.2. At the outbreak of the Civil War in the summer of 1642, like many other towns across the country, King's Lynn took steps to improve its defences. This is likely to have taken the form of repairs to gates and drawbridges, cleaning and re-cutting defensive ditches, and the removal of any property deemed to have encroached up the defences<sup>15</sup>. However, the town had grown in size since these defences had been originally built, including expansion to the north. Therefore, in January 1643, the town was permitted to retain £400 from its contribution to Parliament to improve its defences. It is likely that part of this was used to construct a line of bastioned defences running westwards from the Gaywood River to the Ouse<sup>16</sup>. According to Wenceslas Hollar's c1660 plan, this line comprised of two bastions joined by ramparts<sup>17</sup>. This line was situated 270m to the south of the site, running approximately parallel to modern Loke Road. Such schemes should only be seen as interim measures, however, and in July 1643, Parliament authorised the re-fortification of the town<sup>18</sup>. However, any plans were interrupted by the Royalist coup and subsequent siege of the town. During the siege (19 August to 16 September 1643) according to a contemporary account, "To the north of the town, Manchester established a battery on "a hill of firme ground", although with limited effect as the inhabitants were "making up as fast as we should have beaten downe"<sup>19</sup>. To date, the location of this battery is unknown, although in 1967 the location of what was thought to have been a siege battery was located to the south of Marsh Lane, Gaywood (TF 63450 21350)<sup>20</sup>; if this were a siege battery then its distance from the town's northern defences (roughly following the line of modern Loke Road) were 1.4km away, so potentially just within range. The northeast bastion was part of the fortifications constructed following the siege when the northern defences were advanced further north than those which existed at the time of the siege itself, so it is not surprising that and there has been no archaeological evidence that can be associated with the siege found on the site.

15.3. With the town back in Parliamentary hands, and under the governorship of the Earl of Manchester, and subsequently Colonel Valentine Walton, the scheme authorised in July could begin to be implemented. The task of designing the fortifications was given to Richard Clampe, a local mathematician and physician. Clampe had little previous military experience,

<sup>15</sup> Alfred Kingston, *East Anglia and the Great Civil War*, (London: Elliot Stock, 1902), pp. 51, 61-2.

<sup>16</sup> NRO BL/4/14/17, TNA SP28/222 ff.386, 447r, 529r, 584r

<sup>17</sup> Wenceslas Hollar, *The Groundplat of Kings Lyn*, (c.1660)

<sup>18</sup> *House of Lords Journal*, Volume 6: 10 July 1643 (<https://www.british-history.ac.uk/lords-jrnl/vol6/pp125-127> - accessed 30/08/2022)

<sup>19</sup> *A briefe and true Relation of the Siege and Surrendering of Kings Lyn To the Earle of Manchester*, in Susan Yaxley (editor), *The Siege of King's Lynn, 1643* (Dereham: Larks Press, 1993), p. 2

<sup>20</sup> D. G. Hurst, 'Post-Medieval Britain in 1967', *Post-Medieval Archaeology*, (Society for Post-Medieval Archaeology, 1968), Volume 2, p. 177



but it is his skill as a mathematician which was vital, and he was not the first civilian mathematician to become a renowned military engineer<sup>21</sup>.

15.4. It can be easy to lose sight of just why places were fortified during the Civil Wars. In King's Lynn's case, it was its role as a logistical hub which was vital. It had trade links across the North Sea (particularly the Netherlands) which allowed arms and munitions to be imported, and was at the centre of coastal and inland shipping routes enabling supplies to be brought in and then transported onwards whether this to be to London or to the advancing Parliamentary armies.

15.5. New fortifications constructed during the Civil Wars were earthworks. These were simple, quick, and cheap to construct, and would require a relatively unskilled workforce to build. They were also more robust against artillery fire than the masonry equivalents. The Dutch method of fortification, applied by example or experience was very influential. The norm for Civil War fortifications was (in simple terms) to dig a defensive ditch and use the excavated material to build the supporting rampart behind the ditch. Clampe's design, as exemplified by his plan for the southwestern bastion<sup>22</sup> was for something different and more complex. So instead of the ditch-fronted rampart approach, Clampe adopted a multi-layered system of a rampart and a *Fausse-Braye* (a smaller rampart) fronted by a moat, which was in turn fronted by a covered way, a glacis, and an outer ditch. According to accounts held in the National Archives, work was underway in November 1643 and was completed by May 1644<sup>23</sup>, although another document indicates that the bastions were actually being armed as early as January 1644<sup>24</sup>. This might indicate that following the initial laying out of the design on the ground, the bastions and forts (such as the fort in front of the town's South Gate) were constructed first, with the interconnecting lines being constructed second. The job of constructing the defences was given to an engineer, reporting to whom were three overseers of fortifications, each looking after different sections. Who actually built the defences isn't known, although it is likely to be a combination of the town's garrison, townsfolk, and labourers from the surrounding countryside, particularly from the estates of those who had participated in the Royalist coup.

15.6. Traces of the fortifications can be viewed to the south of the site, with the feature known as 'The Long Pond' either side of Loke Road being the moat part of Clampe's design. However, north of this, the traces are less discernible, particularly at ground level. The 2021 investigation of the site (ENF151929) demonstrated that Clampe's plan for the southwest bastion was implemented elsewhere, and the cuts identified matched the dimensions

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<sup>21</sup> Flinham, 'Richard Clampe', pp. 3-14

<sup>22</sup> Richard Clampe, *Plan of the fortifications near the Boal, South Lynn, between Sechy River and the Haven*, (NRO- King's Lynn Borough Archives, KL/C 48/16 (originally BC 21)) (With thanks to the Lynn Museum and King's Lynn Borough Archives)

<sup>23</sup> TNA SP28/223 Part 5 unfol

<sup>24</sup> TNA, SP28/238 f.2r

of Clampe's fausse-braye, as well as identifying the inner edge of the moat and the outer edge of the foot of the rampart. Also discovered in 2021 was a post at the base of the rampart together with traces of wood at right-angles to the post.



Figure 20 - The eastern fortifications

The line of the town's eastern fortifications can be traced using modern LiDAR. Here, the LiDAR image is compared with an extract from Hollar's c1660 plan

The Thomas Fisher Rare Book Library, University of Toronto / ARCHI UK Website (<https://www.archiuk.com>) (ARCHI Information Systems Ltd)

- 15.7. The discovery of a second post on the same alignment during the 2022 investigation (ENF152464 ) suggests a method of rampart construction that has either been overlooked or taken for granted by other histories. Simply piling up the spoil for the excavation of the defensive ditch would not result in a rampart that would be strong enough or robust enough. So, there must have been a more sophisticated method of construction, a method that was not regularly recorded at the time, and has been lost since. According to Nicholas Stone (who was Master Mason to both James VI/I and Charles I), the initial foundations of the rampart were secured by using a "saucidge"

(‘sausage’) which was a wooden stake of between 30.48-60.96cm (one and two feet) in height, tied together with “brush wood”. Such foundations needed to be specifically secured near the ditch (moat)<sup>25</sup>. Stone’s account together with the archaeological evidence from 2021 and 2022 has allowed a likely method of rampart construction to be devised. This method is set out at Appendix 27.

- 15.8. Why the 1643-44 fortifications should be pushed as far north as they were, extending beyond the existing northern limit of the town (as indicated by the line of the Loke defences) by some 300m is another question. As indicated above, the area enclosed by the line of the fortifications which included the north-east bastion was land where cattle, oxen, and horses might be grazed. The importance of horses in 17<sup>th</sup> century military terms goes without saying, although for a town like King’s Lynn, their importance was far greater than being simple cavalry mounts. Where arms, supplies, and cannon couldn’t be transported by water, they would be taken overland, and this required a great number of horses and oxen, which would have to be kept fed and watered. In addition, a failure to protect a town’s livestock could have far-reaching consequences; for example, the loss of heavy draught animals following the siege of Faringdon Castle in late April 1645 was a blow to the Royalists and meant that their artillery train for the siege of Leicester was reduced to just 14 pieces of artillery<sup>26</sup>.
- 15.9. In addition to investigating the various elements which comprised the fortifications on the site, and how the ramparts were constructed, the actual design, size, and geometry of the north-east bastion itself has been investigated. The north east bastion was a full bastion, and its ‘arrowhead’ shape comprised of two faces and two flanks (a demi-bastion did away with the flanks). Each bastion was connected by the ‘curtain’ (the line of ramparts which connected each bastion). The bastion’s faces would meet at a narrow salient angle which varied from 60° to 90°. Bastion flanks could be angled to fire across the face of the neighbouring bastion, or positioned at right-angles so they could provide enfilading fire long the face of the curtain. The distance between the junction of the flank of the bastion with the curtain, known as the ‘line of defence’, was dictated by the range of musketry, and according to Ross’ analysis of Robert Ward (1639), and Henry Hexham (1637), the lines of defence should not be greater than 219.45m (240 yards) for musketry defences<sup>27</sup>.
- 15.10. In Clampe’s plan of the south-west bastion, he has the face of the bastion at 90° to the curtain, and both Hollar [Figure 8] and Bell also depict the flanks of the north-east at right-angles to the curtain. This was typical of the ‘Dutch’ method of fortification. Whilst Rastrick also depicts the west-facing

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<sup>25</sup> Nicholas Stone, *Enchiridion of Fortification*, (London: Richard Royston, 1645), p. 34

<sup>26</sup> Ian Roy (editor), *The Royalist Ordnance Papers, Part 1*, (Oxford: Oxfordshire Record Society, 1964), p. 146, pp. 427-9

<sup>27</sup> Ross, p. 94.



flank at 90° to the curtain, the south-facing flank appears to be angled to face outwards, so could provide enfilading fire across the face of Kettlemills Bastion (the next bastion to the south). Whilst this might be a slip of the 'pen' (his other bastion flanks are all at right-angles), modern aerial imagery shows the southern flank nearer to an angle of 45° to the curtain. This is closer to the 'French' method of fortification<sup>28</sup>.

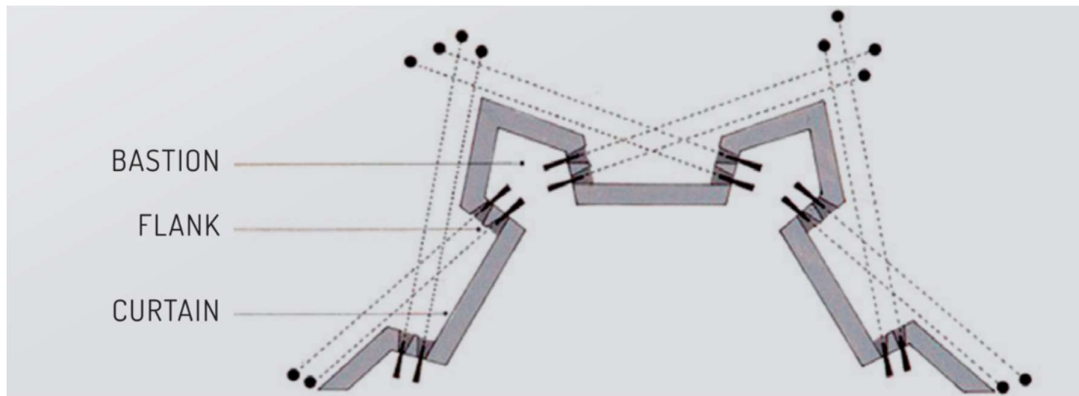


Figure 21 - A plan of a typical bastion of the 'French' school

An illustration showing how the flank of a bastion might be angled to provide fire across the face of its neighbour.

Taken from Réseau Vauban (<https://sites-vauban.org/>)

15.11. The flank of Kettlemills Bastion (whilst now covered by Loke Road, it is possible to align the two parts of the 'Long Pond'), is at 90° to the curtain. Looking at the dimensions of the north-east bastion itself, the length of its southern bastion flank is approximately 20m, with the eastern face being about 65m. Whilst the western flank and probably half of the northern face have been lost to subsequent development, according to Hollar and Bell, the western flank was likely to have been the same length as the southern one, whilst the northern face was probably 15% longer than the eastern face. But again, here Rastrick is different, and according to his plan, the eastern face is approximately 20% longer than the northern face, whilst the western flank is approximately 30% longer than the southern one. Given that Rastrick's is the only contemporary map to depict the alignment of the southern bastion flank correctly, with the use of this map it is possible to determine the approximate size of the North East Bastion as follows:

- South flank: 20m
- East face: 65m
- North face: 52m
- West flank: 27m

<sup>28</sup> For a comparison between the Dutch and French methods of fortification, see Mike Osborne, *Sieges and Fortifications of the Civil Wars in Britain*, (Leigh-on-Sea: Partizan Press, 2004), pp. 7-9

By way of comparison, the Bulwark at Earith, at the southern end of the Old Bedford River (1630), had bastions measuring around 30m by 24m<sup>29</sup>.

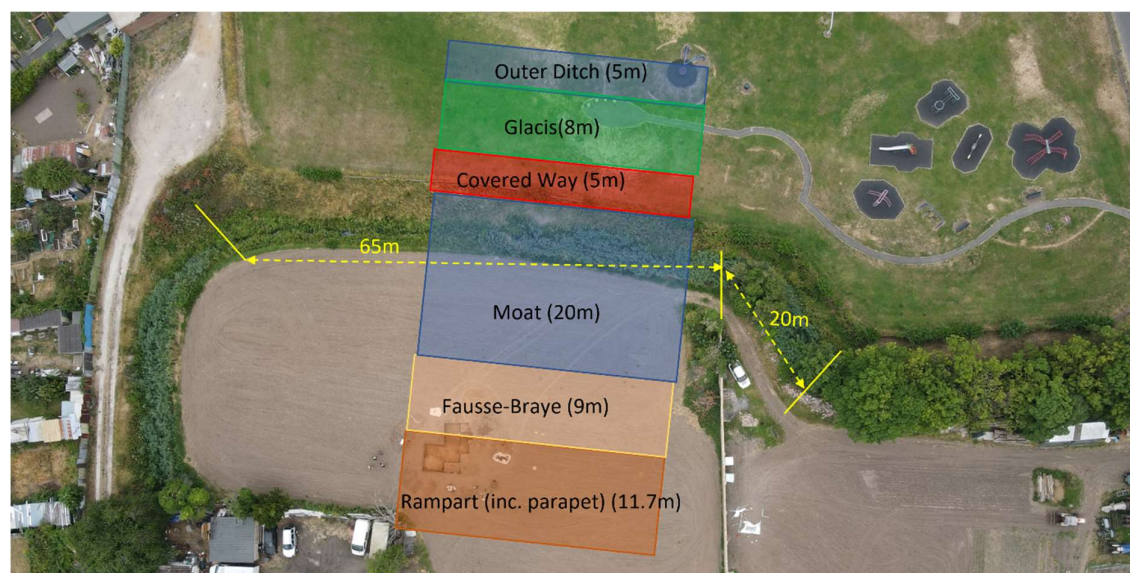


Figure 22 - Plan of the fortifications overlaid on an aerial view of site  
Based on an aerial view of the 2022 dig site, here is how the plan of the fortifications would shape across the NE bastion site. The lengths of the east face and south flank are shown.

- 15.12. The next bastion to the south of the north-east bastion is the Kettlemills (or “Kettl mills”) Bastion. This is included in *An account of w[h]at pay is due to the cannoneers At Lyn from the 10th Jan to the 12th March 1643* [1644]<sup>30</sup>. According to contemporary maps, this bastion was more regular in shape than the North East Bastion, with flanks in the region of 25m, and faces approximately 65m. The state of preservation of the Kettlemills Bastion is better than that for the North East Bastion: the moat is preserved as ‘The Long Pond’, whilst modern Harecroft Parade follows the alignment of the bastion faces.
- 15.13. The North East Bastion is approximately 320m to the north of the Kettlemills Bastion (Clampe’s plan of this bastion also survives<sup>31</sup>, although it is not as detailed as his plan of the South West Bastion). The line of defence (e.g. the distance between bastion flanks) between the two is approximately 215m, so inside that specified by contemporary military manuals.
- 15.14. At the end of the Civil Wars, there was no systematic destruction of King’s Lynn’s fortifications. Their construction had largely avoided the destruction of property, nor had they cut off suburbs from the centre of the town which had been the case elsewhere. As the town was Parliamentary, during the 1650s, there was no need to make the town indefensible, or to remove the fortifications as punishment as happened to Royalist towns (such

<sup>29</sup> Cessford, p. 148

<sup>30</sup> TNA, SP28/238 f.2r

<sup>31</sup> King’s Lynn Borough Archives KL/C 58/25/1

as Colchester). It was also an important coastal asset, so needed protection from potential overseas threat. At the Restoration, the town didn't view the fortifications as a sign of its Parliamentary past, so didn't need to remove them as some sort of political 'amnesia'.

- 15.15. Whilst there is no record of a military presence on the site during the second half of the 17<sup>th</sup> century, the site wasn't totally abandoned, as evidenced by the discovery of a late-17<sup>th</sup> century onion bottle during the 2022 dig. This is also a link with the town's role as a major wine importer – wine would arrive at King's Lynn in barrels, and would then be decanted into bottles such as the one discovered in 2022 for onward sale. Maps of 1680/1692 and 1725<sup>32</sup> show the fortifications relatively intact, and when Daniel Defoe visited King's Lynn in the 1720s, he found the Civil War fortifications to be "very fair to this day".<sup>33</sup>
- 15.16. So, whilst it is likely that anything of value from the fortifications (wooden planking, etc.) would have been removed from the fortifications, the earthworks themselves were probably subject to little more destruction than that from the weather. Therefore, over time, the ramparts would have been weathered down, and the ditches and moats filled with debris. By the end of the 18<sup>th</sup> century, some 150 years after the Civil Wars, probably little more than the ramparts and the moat remained; these are the features shown on the William Faden's plan of 1797<sup>34</sup>.
- 15.17. With little natural stone in the vicinity, King's Lynn was built largely from brick. As the town expanded during the 18<sup>th</sup> and 19<sup>th</sup> centuries, the need for bricks grew, and with it, local brick production increased. Brick making requires massive quantities of clay, and given that mature/weathered clay makes better bricks than newly dug clay, the brickmakers 'harvested' clay from the still-standing ramparts. Kilns were established close to the ramparts, and Faden's 1797 map clearly shows the locations of two kilns, one within the confines of the North East bastion, the second at the neighbouring northern bastion.
- 15.18. It is likely that the brick kiln was still in use, or at least in existence by the time of the Ordnance Survey 1 inch to 1 mile First Series of 1805-1845. The sheet covering King's Lynn shows a structure within the confines of the bastion, but the scale is too small to show exactly what this is. Whilst the 1797 map also showed a brick kiln in the neighbouring northern bastion, this was not shown on the Ordnance Survey First Series map.
- 15.19. It is also likely that the brick-kiln was of the Suffolk type, a type common across East Anglia, and had been developed directly from Roman and Medieval models. In such kilns, there would be two or three arched fire

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<sup>32</sup> Henry Bell, *The Groundplat of Kings Lyn*, (1680/1692); William Rastrick, *Ichnographia Burgis perantigum Lennae*, (1725)

<sup>33</sup> Daniel Defoe, P. N. Furbank and W. R. Owens (editors), *A Tour Through the Whole Island of Great Britain*, (Newhaven and London: Yale University Press, 1991), p. 31

<sup>34</sup> William Faden, *Plan of the Town of Lynn from Norfolk in six sheets* (1797)

tunnels below the floor of the kiln, the bricks were set on the level floor of the open-topped firing chamber, the top of which was then sealed with old bricks. Flames would reach the chamber through slots in the fire tunnel arches. The wood for fuel went straight into the tunnels. Working in shifts, two burners would remain at the kiln for the whole three-day firing period<sup>35</sup>.

15.20. The absence of structural evidence for the kiln in all likelihood confirms the initial supposition that the brick-kiln itself lies outside the confines of the site, probably beneath the adjoining land immediately to the west. Faden's map also shows a trackway running south-eastwards from the kiln, so it is likely that the investigation has located an area where, following firing, the bricks were removed from the kiln and sorted; the good bricks were then loaded onto carts, and the mis-fired bricks discarded and dumped.

15.21. Small finds (oyster shells, clay pipe stems, etc.) may be associated with either the period when the fortifications were occupied, or during the later brickmaking.

15.22. Due to weather and ground conditions in July 2024, it was not possible to investigate the northern face of the North East bastion as planned. During the limited time when it was possible to access to the trench, possible traces of the Fausse-braye rampart were discovered, although this is inconclusive. Therefore, this is an outstanding area of investigation for the project.

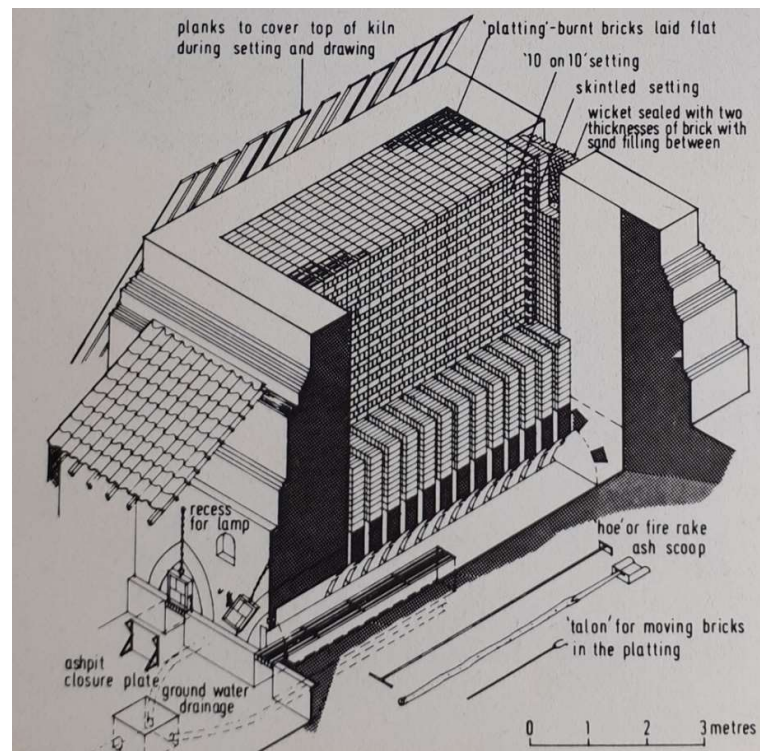


Figure 23 – A drawing of a Suffolk brick kiln

This type of brick kiln might have occupied the North East bastion site.

(Wikimedia Commons)

<sup>35</sup> Martin Hammond, *Bricks and Brickmaking*, (Oxford: Shire Publications Limited, 2012), pp. 22-3



## APPENDICES

A note about the registers: For the 2022 and 2023 investigations, the registers are based on the templates provided by the Sedgeford Historical and Archaeological Research Project. For the 2024 project, the registers are based on the templates supplied by Past Horizons<sup>36</sup>.

### Appendix 1 – ENF Reference Numbers (2019 – 2023)

Reference Number	Date	Site	Description	Notes
ENF145214	May 2019	SW Bastion	Fluxgate Gradiometer Survey - South of Nar Bridge	<i>Sedgeford Historical and Archaeological Research Project, Archaeological Evaluation Report, May 2019, Fluxgate Gradiometer Survey, ENF145214 – South of Nar Bridge (Hardings Way), ENF145264 - North of Hardings Pits (Area A), North of Nar Bridge near Boal Quay (Area B)</i>
ENF145264	May 2019	SW Bastion	Fluxgate Gradiometer Survey - North of Nar Bridge near Boal Quay	
ENF151929	September 2021	NE Bastion		Submitted by Solstice Heritage (for Great British Dig)
ENF151503	March 2022	NE Bastion	Fluxgate Gradiometer Survey	<i>Sedgeford Historical and Archaeological Research Project, Archaeological Evaluation Report, March 2022, Fluxgate Gradiometer Survey, ENF151503 – North East Bastion, King's Lynn to ENF151503</i>
ENF152464	July 2022	NE Bastion	Excavation trenches	
ENF153259	July 2023	NE Bastion	Two 1m by 1m test pits	
ENF153263	July 2023	NE Bastion	Fieldwalking and metal-detecting survey	
ENF153264	July 2023	NE Bastion	Earthwork survey	
ENF155898	March 2024	NE Bastion	Excavation trenches	

<sup>36</sup> <https://pasthorizons.com/>

## Appendix 2 – Metadata (July 2022)

<b>Site Name</b>	KLUS
<b>NHER</b>	ENF 152464
<b>Start date</b>	17/07/2022
<b>Finish date</b>	29/07/2022
<b>Grid Reference</b>	TF 62382 20900
<b>Datum Point</b>	52° 45' 41" N 0° 24' 19" E 3.34m Above Sea Level

The height above sea level originally recorded for the site's datum point (September 2021) was 4m. This has been subsequently checked, and whilst the nearest Ordnance Survey bench mark (BM) is 4m (the bench mark is located at TF 62484 20942), the datum point for the site (TF 62382 20900) has been found to be 0.66m lower, at 3.34m.

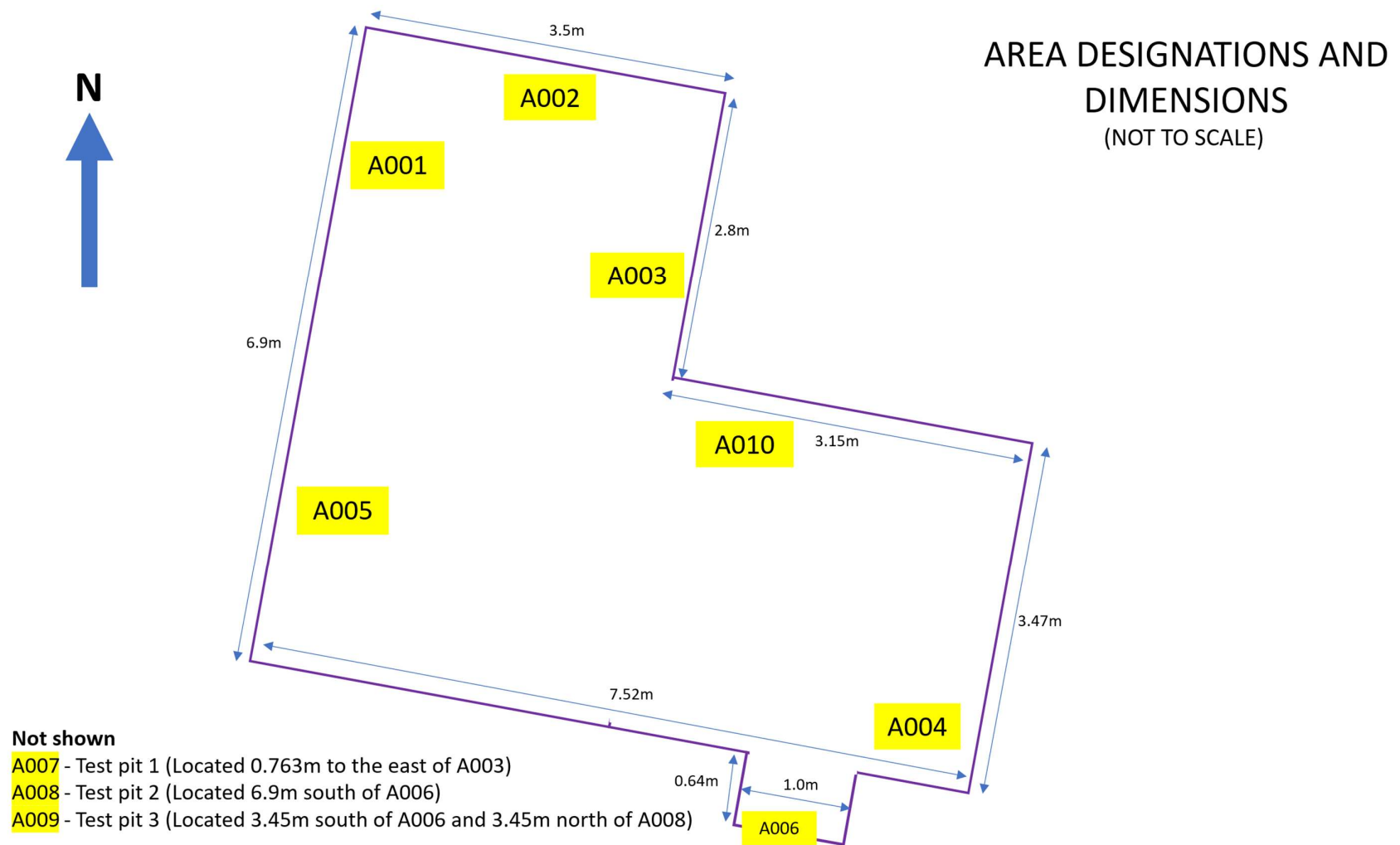
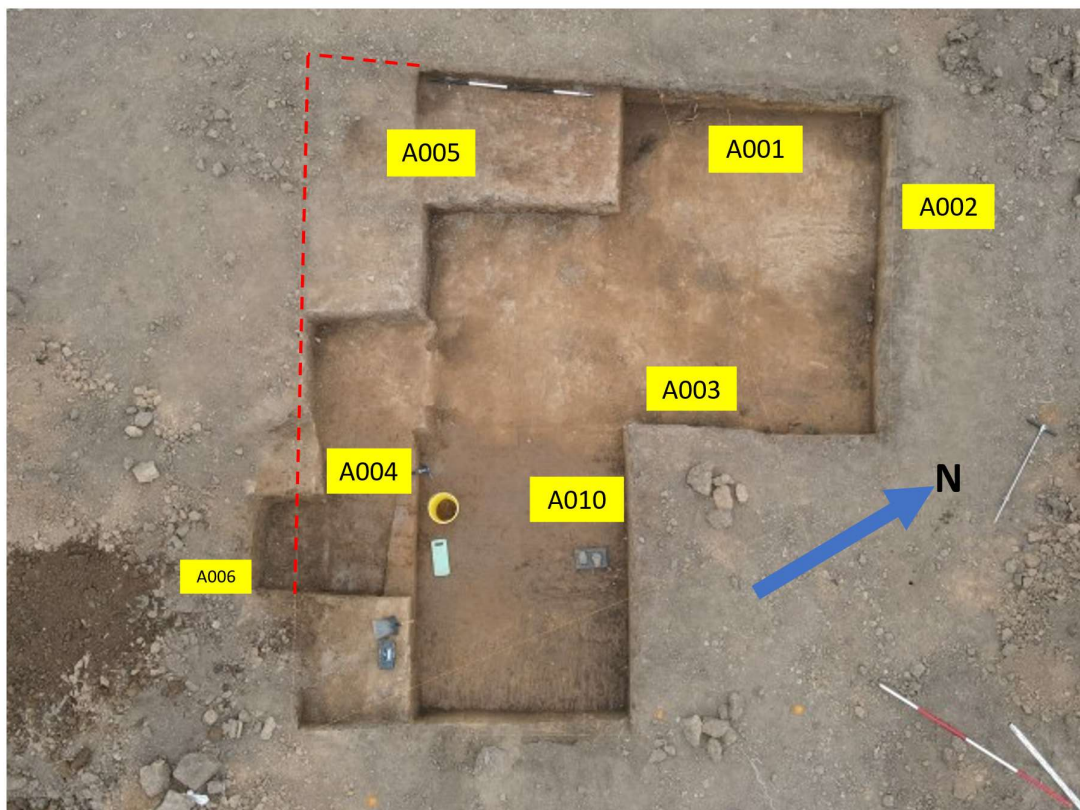


Figure 24 – 2022 Area locations/definitions

### Appendix 3 - Definitions (July 2022)

Area Reference	Location / Description	Associated DWG number(s)
A001	Western side of trench, extending south from NW corner	H0001, H0003, H0015
A002	Northern face of trench, running W-E	H0001, H0003, H0004
A003	Eastern edge (face) of trench, reduced to 2.8 following extension of trench to east	H0004, H0005
A004	Southern edge of trench (following extension), mostly site of GBD (September 2021) trench. Includes A006 insert.	H0002, H0007, H0009, H0010, H0011, H0012, H0021
A005	Western part of trench, extending from SW corner.	H0013, H0014, H0015, H0024
A006	Insert cut through A004. Includes site of post discovered during GBD (September 2021)	H0010, H0011, H0012, H0021
A007	Test pit 1. Located 0.763m to the east of A003	H0023
A008	Test pit 2. Located 6.9m south of A006	H0022
A009	Test pit 3. Located 3.45m south of A006 and 3.45m north of A008	
A010	Northern face of trench (following extension). Includes location of 2022 post feature	H0005, H0006, H0008





*Figure 25 – 2022 Area locations as plotted on the aerial photograph*

Note: this is as of 22<sup>nd</sup> July. The trench would subsequently be enlarged (as per dotted red line)

#### Appendix 4 - Context Register (July 2022)

Context No.	Type	Outline	Trench Area	Description	Under	Over	Same as
TS		Top Soil		Under spoil at A009			
[001]	Cut	Ditch or Pit Cut	A005	Cut edge of a ditch covered by (005). Clay and Brick fill. Cut contains (002) Fill			
(002)	Fill	Fill in [001]	A005	Fill of ditch or pit defined by cut [001]. Dark brown blackish clay with small brick pieces and carbon inclusions	(010)		
[003]	Cut	Possible Excavation of Clay	A005	Possibly the cut line from harvesting the bastion clay for use in brick kiln			
(004)	Fill	Bastion construction clay	A005	Bastion construction clay below cut of [003] and extending around extent of trench			
(005)	Fill	Clay/Brick backfill	A005	Clay/brick backfill. Possibly bad-fired brick waste or from deconstruction of kiln. Signs of carbon inclusions on brown/blackish clay	TS	(004) (013)	
[006]	Cut	GBD trench backfill	A004	Trench edge from Great British Dig trench (September 2021)			
(007)	Fill	GBD trench edge	A004	Backfill of Great British Dig (September 2021) trench. Complete mix at lower level capped by top soil			
[008]	Cut	Cut into (005). Brick in clay backfill	A005	Cut into (005) with something 'white' mixed in. Associated with brick kiln. Brick and clay backfill			
(009)	Fill	Blackish fill just under topsoil		Backfill immediately under topsoil. Blackish in colour	TS	(011)	
(010)	Fill	Claggy clay mix under (005)	A005	Mixture of claggy clays under (005)	(005) [008]		
(011)	Fill	Non-clay substance	A005	Non-clay(?) substance, deposited later	SPOIL		
(T3 001)	Fill	Test pit clay below topsoil	A009	Test pit (T3) clay - upper level, immediately below topsoil.	TS	(T3 002)	(T1 001)
(T3 002)	Fill	Test pit clay with charcoal burn	A009	Test pit (T3) clay - charcoal/burn material (onion bottle at this level about 30cm down)	(T3 001)	(T3 003)	

Context No.	Type	Outline	Trench Area	Description	Under	Over	Same as
(T3 003)	Fill	Test pit lower clay	A009	Test pit (T3) clay - lower level	(T3 002)		
(T1 001)	Fill	Burnt (?) layer beneath top soil	A023	Test pit (T1) - Burnt (?) layer beneath top soil	TS	(T1 002)	
(T1 002)	Fill	Test pit clay - upper	A023	Test pit (T1) upper-level clay	(T1 001)	(T1 003)	(T3 001)
(T1 003)	Fill	Test pit lower clay	A023	Test pit (T1) clay - lower level	(T1 002)		(T3 003)
(012)	Fill	Mid-level clay	A005	Mid-level clay in west-face			
(013)	Fill	Unidentified clay	A005	Lower level (unidentified) clay in west-face.	(005)	(012)	
SPOIL		Spoil from trench (A009)		Spoil from trench (area A009) to south of A004/A006, and south west of A005			
(T2 001)	Fill	Red brick layer	A008	Layer of red brick about 15cm below surface likely from demolition of nursery greenhouses (c. 1970)	TS		

Appendix 5 - Levels Register (July 2022)

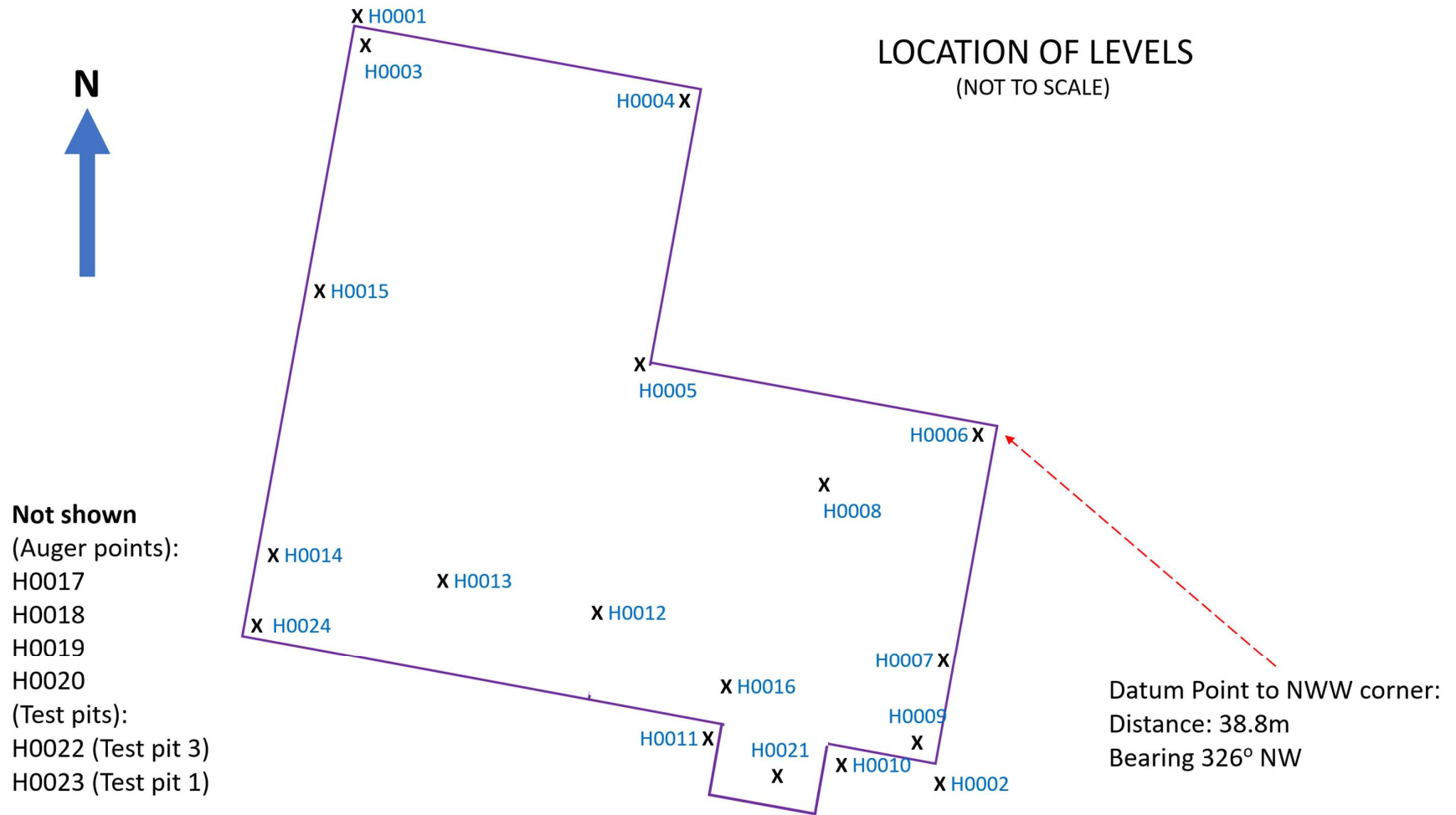


Figure 26 – Location of Levels (2022)



TBM	Back Sight (BS)	Height of Instrument (Hol)	Fore Sight (FS)	Reduced Level (RL)	DWG number	DWG description	Northerly (m)	Westerly (m)	Trench Area
3.34	1.06	4.4	-1.72	2.68	Datum Peg	Datum Peg 52° 45' 41" N 0° 24' 19" E (TBM was originally 4.00m (OSN), but was corrected to 3.34m)			
			-1.515	2.885	H0001	Ground Level NW Trench	42.96	21.23	A001, A002
			-1.735	2.665	H0002	Ground Level SE Trench	34.3	17.04	A002
			-2.075	2.325	H0003	Trench NW Corner	42.58	21.56	A001, A002
			-2.095	2.305	H0004	Trench	41.18	18.05	A002, A003
			-1.985	2.415	H0005	Trench	38.34	18.89	A003, A005
			-2.135	2.265	H0006	Trench	38.63	15.95	A005
			-2.245	2.155	H0007	Trench SE @ Deep cut	35.31	16.09	A002
			-2.205	2.195	H0008	Post Feature	37.78	17.68	A005
			-1.915	2.485	H0009	Trench	34.27	17.46	A002
			-2.025	2.375	H0010	Trench	35.18	20.13	A002, A006
			-1.967	2.433	H0011	Trench inside GBD cut	35.43	21.05	A002, A006
			-2.135	2.265	H0012	Trench	36.77	20.88	A002, A006
			-2.085	2.315	H0013	Trench near step	37.81	21.97	A005
			-1.765	2.635	H0014	Trench	37.37	28.35	A005
			-2.138	2.262	H0015	Trench	39.69	22.55	A001, A005

TBM	Back Sight (BS)	Height of Instrument (Hol)	Fore Sight (FS)	Reduced Level (RL)	DWG number	DWG description	Northerly (m)	Westerly (m)	Trench Area
			-2.015	2.385	H0016	Post anomaly - wood in green clay	35.33	19.67	
3.34	1.28	4.62	-1.275	3.345	H0017	Auger Point - Ground Level	26.44	21.6	
			-0.78	3.84		Top of Auger at first pass			
			-1.35	3.27	H0018	Auger Point N of trench	26.44	21.6	
			-1.15	3.47		Top of Auger @ H0018			
			-1.97	2.65	H0019	Auger Point S of Trench	40.89	16.39	
			-1.78	2.84		Top of Auger @ H0019			
			-1.97	2.65	H0020	Auger point inside of trench	37.05	17.86	
			-2.11	2.51	H0021	GBD post feature	34.51	18.58	A002, A006
3.34	1.06	4.4	-0.65	3.75	H0022	Test pit 3 - NE corner			A008
			-0.895	3.505	H0023	Test pit 1 - SW corner			A007
			-1.71	2.69	H0024	Corner of A005 following additional excavation			A005

#### Appendix 6 - Drawing Register (July 2022)

Drawing No.	Sheet No.	Plan / Section	Area	Description	Scale	Date
01	01	Plan		Plan of entire site	2cm:1m	20/07/2022 28/07/2022
02	01	Section	A005	Section (north face) of A005	2cm : 10cm	25/07/2022
03	01	Plan	A005	Plan of A005 (prior to excavation)	1cm : 10cm	25/07/2022
04	01	Section	A005	Section (east face) of A005	1cm : 10cm	25/07/2022
05	01	Plan	A010	Plan drawing of (2022) wooden stake at foot of rampart	1cm : 1cm	25/07/2022
06	01	Plan	A005	Plan of A005 (following excavation)	1cm : 20cm	26/07/2022
07	01	Section	A007	Section drawing of north-face of Test Pit 01	1cm : 10cm	26/07/2022
08	01	Plan	A003	Plan of part of area A003 (location of tile finds)	1cm : 2cm	27/07/2022
09	01	Section	A009	Section drawing of north-face of Test Pit 03	1cm : 10cm	27/07/2022
10	01	Section	A009	Section drawing of south and east faces of Test Pit 03	1cm : 10cm	28/07/2022
11	01	Section	A009	Section drawing of north-face of Test Pit 03	1cm : 10cm	28/07/2022
12	01	Section	A005	Section drawing of west section of A005	1cm : 20cm	28/07/2022

Please note: The drawings themselves have not been included in this report

## Appendix 7 - Auger Chart (July 2022)

Date	DWG number	Northerly (m)	Westerly (m)	Level at ground surface	Depth of core	Description of A	Depth of A (upper)	Depth of A (lower)	Description of B	Depth of B (upper)	Depth of B (lower)	Description of C	Depth of C (upper)	Depth of C (lower)	Augering carried out by	Photographs
22/07/2022	H0018	26.44	21.6	3.27m	1.80m	Top Soil	0	0.71	Loose clay with mid-brown friable	0.71	1.01	Dark brown coherent clay with very few inclusions	1.01	1.305	Andrew Gowan	0340 0341 0342
22/07/2022	H0019	40.89	16.39	2.65m	1.80m	Empty	0	0.6	Very little top soil	0.6	0.9	Dark brown greyish damp clay	0.9	1.6	Andrew Gowan	
22/07/2022	H0020	37.05	17.86	2.65m	1.80m	Clay shavings only: reason unknown	0	0.9	Dark brown greyish damp clay consistent with that found in earthworks build	0.9	1.61				Andrew Gowan	0343 0344



### Appendix 8 - Finds Register (July 2022)

Trench location (Area)	Context	Description	Find No.	Category	Count	Weight (g)	Dated	Period (see Section 8)	Photographs	Notes
A005	(010)	China handle	F005-01	Pottery	9	101				Includes F005-01; F005-02; F005-03
A005	(010)	Glazed pottery	F005-02	Pottery						Includes F005-01; F005-02; F005-03
A005	(010)	Glazed pottery	F005-03	Pottery						Includes F005-01; F005-02; F005-03
A005	(010)	Glass	F005-04	Vessel Glass	1	27				
A005	(009)	Nail	F005-05	Iron (Fe)	1	22				
A005	(005)	Clay pipe stem	F005-06	Clay Tobacco Pipe (CTP)	3	8		Industrial (brickmaking) period (1750-1900)		Includes F005-33
A005	(010)	Burnt sulphur	F005-07	Other Building Material	2	6				
A005	(009)	Glass	F005-08	Vessel Glass	1	22				
A005	(005)	Bone	F005-09	Animal Bone	1	8				

Trench location (Area)	Context	Description	Find No.	Category	Count	Weight (g)	Dated	Period (see Section 8)	Photographs	Notes
A005	Unknown	Quarter of brick	F005-10	Ceramic Building Material (CBM)	1			Industrial (brickmaking) period (1750-1900)		
A005	Unknown	Yellow tile	F005-11	Ceramic Building Material (CBM)	5	1380		Industrial (brickmaking) period (1750-1900)		Combined: 2 pieces (902g); 5 pieces (1380g); 2 pieces (2951g)
A005	Unknown	Misshapen brick	F005-12	Ceramic Building Material (CBM)	2	2951		Industrial (brickmaking) period (1750-1900)	2022-10-20 005 F005-12	Combined: 2 pieces (902g); 5 pieces (1380g); 2 pieces (2951g)
A005	Unknown	Yellow rock	F005-13	Ceramic Building Material (CBM)	2	902			2022-10-23 005 F005-13	Combined: 2 pieces (902g); 5 pieces (1380g); 2 pieces (2951g)

Trench location (Area)	Context	Description	Find No.	Category	Count	Weight (g)	Dated	Period (see Section 8)	Photographs	Notes
A005	Unknown	Burnt matter	F005-14	Slag & Clinker	1	178		Industrial (brickmaking) period (1750-1900)	2022-10-23 007 F005-14	Identified as slag and clinker (industrial residue)
A002	Unknown	Charcoal (?)	F002-15	Coal & Coke	4	21		Industrial (brickmaking) period (1750-1900)		
A002	Unknown	Pottery	F002-16	Ceramic Building Material (CBM)	1	16				
A002	Unknown	China, various	F002-17	Pottery	11	38				
A002	Unknown	Clay pipe stems	F002-18	Clay Tobacco Pipe (CTP)	2	4		Industrial (brickmaking) period (1750-1900)		
A002	Unknown	Glass (various)	F002-19	Glass	4	35			2022-10-23 010 F002-19 2022-10-23 011 F002-19 2022-10-23 012 F002-19 2022-10-23 013 F002-19	Comprises 3 x Vessel Glass (21g) and 1 x Other Glass (14g). Photographs are of 'Other glass (14g)'
A002	Unknown	Iron (unidentified)	F002-20	Iron (Fe)	1	43				

Trench location (Area)	Context	Description	Find No.	Category	Count	Weight (g)	Dated	Period (see Section 8)	Photographs	Notes
A002	Unknown	Large quarter brick	F002-21	Ceramic Building Material (CBM)	1			Industrial (brickmaking) period (1750-1900)		
A002	Unknown	cream-coloured tile	F002-22	Ceramic Building Material (CBM)	1			Industrial (brickmaking) period (1750-1900)		
A002	Unknown	Medium-sized tile, triangular, red	F002-23	Ceramic Building Material (CBM)	1			Industrial (brickmaking) period (1750-1900)		
A002	Unknown	Small tile, red	F002-24	Ceramic Building Material (CBM)	1			Industrial (brickmaking) period (1750-1900)		
A002	Unknown	Misshapen brick	F002-25	Ceramic Building Material (CBM)	1			Industrial (brickmaking) period (1750-1900)		
A001	Unknown	Burnt matter - unidentified	F001-26	Slag & Clinker	1				2022-10-23 000 F001-26	
A003	Unknown	Glazed pottery	F003-27	Pottery	1					
A003	Unknown	Burnt matter - unidentified	F003-28	Miscellaneous (Misc.)	1					
A005	Unknown	Glazed pottery	F005-29	Pottery	1					



Trench location (Area)	Context	Description	Find No.	Category	Count	Weight (g)	Dated	Period (see Section 8)	Photographs	Notes
A005	Unknown	Burnt matter - unidentified	F005-30	Coal & Coke	4	386			2022-10-23 001 F005-30	Identified as coal and coke
A004	Unknown	Piece of twig	F004-31	Wood	1					
A004	Unknown	Iron hook	F004-32	Iron (Fe)	1					
A005	Unknown	Clay pipe stems	F005-33	Clay Tobacco Pipe (CTP)	3	8		Industrial (brickmaking) period (1750-1900)	2022-10-23 006 F005-33	Includes F005-06
A003	Unknown	Glass - unidentified	F003-24	Other Glass	1					
A004	Unknown	Shale?	F004-35	Miscellaneous (Misc.)	1					
A004	Unknown	Wood	F004-36	Wood	1					
A004	Unknown	Clay?	F004-37	Miscellaneous (Misc.)	1					
A005	(010)	Roof tile	F005-38	Ceramic Building Material (CBM)	5	1380			2022-10-23 002 F005-38 2022-10-23 003 F005-38	

Trench location (Area)	Context	Description	Find No.	Category	Count	Weight (g)	Dated	Period (see Section 8)	Photographs	Notes
A009	(T3 002)	Green glass bottle neck and piece	F009-39	Vessel Glass	2		c1700?	Post Civil War (1660-1750)	2022-07-31 000 F009-39 2022-07-31 001 F009-39 2022-07-31 002 F009-39 2022-07-31 003 F009-39 IMG_20220727_152522 IMG_20220727_152532 IMG_20220727_152821	Late 17th/early 18th century Onion (port) bottle (approx. 30cm below surface)
A005	(010)	Burnt wood	F005-40	Charcoal	1				2022-10-23 004 F005-40	
A009	(T3 002)	Big red brick + heated clay	F009-41	Ceramic Building Material (CBM)	2					
A009	(T3 002)	Oyster shell	F009-42	Shell	1	34			2022-10-23 009 F009-42	
A009	(T3 002)	Clay pipe stem with part of bowl still attached	F009-43	Clay Tobacco Pipe (CTP)	2	7				
A009	(T3 002)	Pottery/tile	F009-44	Ceramic Building Material (CBM)	1					

Trench location (Area)	Context	Description	Find No.	Category	Count	Weight (g)	Dated	Period (see Section 8)	Photographs	Notes
A009	(T3 002)	Pottery with rim	F009-45	Pottery	1					
A009	(T3 002)	Fragment of shell	F009-46	Shell	1					
A009	(T3 002)	Triangular shaped tile	F009-47	Ceramic Building Material (CBM)	1					
A009	(T3 002)	Small piece of rectangular-shaped clay	F009-48	Ceramic Building Material (CBM)	1					
A009	(T3 002)	Red parallelogram of tile (clay?)	F009-49	Ceramic Building Material (CBM)	1					
A009	(T3 002)	Small square-shaped piece of tile	F009-50	Ceramic Building Material (CBM)	1					
A009	(T3 002)	Small red tile/clay?	F009-51	Ceramic Building Material (CBM)	1					
A009	(T3 002)	Irregularly shaped piece of clay?	F009-52	Ceramic Building Material (CBM)	1					

Trench location (Area)	Context	Description	Find No.	Category	Count	Weight (g)	Dated	Period (see Section 8)	Photographs	Notes
A009	(T3 002)	Unidentified black matter	F009-53	Coal & Coke	1	12			2022-10-23 008 F009-53	
A009	(T3 002)	Medium piece of red of tile	F009-54	Ceramic Building Material (CBM)	1					
A007	Unknown	Large red piece of rimmed pottery	F007-55	Pottery	1					
FW-B1	TS	Bottom and top of bottle (marked "Lynn")	FW-B1-56	Vessel Glass	1					
FW-B4	TS	Assortment of red pottery	FW-B4-57	Pottery						
FW-B1	TS	Black curved unidentified object	FW-B1-58	Miscellaneous (Misc.)	1			Miscellaneous/unidentified/undated		
FW-A4	TS	Bottle stopper and upper part of bottle (marked "east")	FW-A4-59	Vessel Glass	1					
FW-B2	TS	Pottery	FW-B2-60	Pottery	1					



Trench location (Area)	Context	Description	Find No.	Category	Count	Weight (g)	Dated	Period (see Section 8)	Photographs	Notes
FW-?	TS	Blue glass	FW-?-61	Vessel Glass	1					
FW-B1	TS	Blue china with floral design (willow pattern?)	FW-B1-62	Pottery	1					
FW-A3	TS	Blue china with half a visible flower	FW-A3-63	Pottery	1					
FW-B1	TS	Blue china with white stripe down centre	FW-B1-64	Pottery	1					
FW-?	TS	Blue china with plant growing out of flower	FW-?-65	Pottery	1					
FW-B2	TS	Piece of white ridged pot	FW-B2-66	Pottery	1					
FW-?	TS	Two pieces of clay pipe stem	FW-?-67	Clay Tobacco Pipe (CTP)	2					
FW-B4	TS	Piece of grey ridged pottery	FW-B4-68	Pottery	1					

Trench location (Area)	Context	Description	Find No.	Category	Count	Weight (g)	Dated	Period (see Section 8)	Photographs	Notes
FW-A3	TS	Red glazed pottery	FW-A3-69	Pottery	1					
FW-B3	TS	Square-designed blue pottery	FW-B3-70	Pottery	1					
FW-?	TS	Unidentified black and brown object	FW-?-71	Miscellaneous (Misc.)	1			Miscellaneous/unidentified/undated		

The trench locations are identified in Appendix 3 (trenches) and Appendix 11 (field-walking)

### Appendix 9 - Photographic Register (July 2022)

Image Number	Description	Trench Area	Direction	Scales	Initials	Date
0304	Trench from south looking north		N	N/A	DNF	18/07/2022
0305	Trench from south looking north		N	N/A	DNF	18/07/2022
0306	Trench from SE looking NW		NW	N/A	DNF	18/07/2022
0307	Trench from NE looking SW		SW	N/A	DNF	18/07/2022
0308	Trench from north looking south		S	N/A	DNF	18/07/2022
0309	Trench from NE looking SW		SW	N/A	DNF	18/07/2022
0310	Wooden post (2022) feature	A010		8cm scale	DNF	18/07/2022
0311	Wooden post (2022) feature	A010		8cm scale	DNF	18/07/2022
0312	Trench from NW looking SE		SE	N/A	DNF	19/07/2022
0313	Trench from west looking east (on compass bearing)		E	N/A	DNF	19/07/2022
0314	Trench from south looking north (on compass bearing)		N	N/A	DNF	19/07/2022
0315	Trench from east looking west (on compass bearing)		W	N/A	DNF	19/07/2022
0316	Trench from north looking south (on compass bearing)		S	N/A	DNF	19/07/2022
0317	Trench from SW looking NE		NE	N/A	DNF	20/07/2022
0318	Trench from SW looking NE		NE	2m ranging pole	DNF	20/07/2022
0319	Clay feature		E	8cm scale	DNF	20/07/2022
0320	Clay feature		E	8cm scale	DNF	20/07/2022
0321	Clay feature		S	8cm scale	DNF	20/07/2022
0322	From SW along the line of posts / foot of rampart (outer)		NE	2m ranging pole	DNF	21/07/2022
0323	From SW showing post location		NE	2m ranging pole	DNF	21/07/2022
0324	Trench from west looking east		E	2m ranging pole	DNF	21/07/2022
0325	Trench from west (location of 2021 trench)		E	2m ranging pole	DNF	21/07/2022
0326	Trench viewed from N along N-S line		S	2m ranging pole	DNF	21/07/2022
0327	Trench viewed from E along W-E line		W	2m ranging pole	DNF	21/07/2022
0328	View of line of GBD (September 2021) trench	A004	NE	8cm scale	DNF	21/07/2022

Image Number	Description	Trench Area	Direction	Scales	Initials	Date
0329	Backfill from 2021 trench	A004	E	8cm scale	DNF	21/07/2022
0330	Clay nodule (2021 backfill)	A004	S	8cm scale	DNF	21/07/2022
0331	Clay nodule (2021 backfill)	A004	S	8cm scale	DNF	21/07/2022
0332	Clay nodule (2021 backfill)	A004	S	8cm scale	DNF	21/07/2022
0333	Clay nodule (2021 backfill)	A004	E	8cm scale	DNF	21/07/2022
0334	Clay nodule (2021 backfill) viewed along post line	A004	E	8cm scale	DNF	21/07/2022
0335	Post-line clay nodule (2021 backfill)	A004	SE	8cm scale	DNF	21/07/2022
0336	Clay nodule (2021 backfill)	A004	SE	8cm scale	DNF	21/07/2022
0337	Clay nodule (2021 backfill)	A004	SE	8cm scale	DNF	21/07/2022
0338	Clay nodule (2021 backfill)	A004	NW	8cm scale	DNF	21/07/2022
0339	Augering (H0018) looking north		N	N/A	DNF	22/07/2022
0340	Augering (H0018) results looking east		E	N/A	DNF	22/07/2022
0341	Augering (H0018) results		NE	Telescopic ranging pole	DNF	22/07/2022
0342	Augering (H0018) results		E	Telescopic ranging pole	DNF	22/07/2022
0343	Augering (H0020) results		W	Tape measure	DNF	22/07/2022
0344	Augering (H0020) results		N	Tape measure	DNF	22/07/2022
0345	September 2021 backfill looking south-east	A004	SE	8cm scale	DNF	22/07/2022
0346	September 2021 backfill looking south-east	A004	SE	8cm scale	DNF	22/07/2022
0347	September 2021 post overview	A006	SE	8cm scale	DNF	22/07/2022
0348	September 2021 post detail	A006	SE	8cm scale	DNF	22/07/2022
0349	Wooden posts (2021 & 2022)	A0006	NE	8cm scale	DNF	22/07/2022
0350	Trench looking west (along E-W line)		W	N/A	DNF	24/07/2022
0351	Trench wall (A001) looking west - note contexts	A001	W	N/A	DNF	24/07/2022
0352	Trench wall (A001) looking west. Note contexts	A001	W	N/A	DNF	24/07/2022
0353	Area A005 (east facing section) Looking north prior to removal of brick/tile	A005	N	8cm scale	DNF	25/07/2022



Image Number	Description	Trench Area	Direction	Scales	Initials	Date
0354	Area A005 (east facing section) Looking north-west	A005	NW	8cm scale	DNF	25/07/2022
0355	Area A005 (east and north facing sections)	A005	W	8cm scale	DNF	25/07/2022
0356	Area A005 (north facing section) prior to removal	A005	S	8cm scale	DNF	25/07/2022
0357	Area A005 contexts (009) (005)	A005	N	2m ranging pole	DNF	25/07/2022
0358	Area A005 plan view (009) removed	A005	NW	2m ranging pole	DNF	25/07/2022
0359	2022 Rampart support stake/post. Plan view	A010	N	8cm scale	DNF	25/07/2022
0360	2022 Rampart support stake/post. Plan and profile	A010	NE	8cm scale	DNF	25/07/2022
0361	2022 Rampart support stake/post. Plan view	A010	SE	8cm scale	DNF	25/07/2022
0362	Test pit 1. Pottery find in situ	A007	SE	8cm scale	DNF	26/07/2022
0363	Test pit 1. Pottery find close up	A007	SE	8cm scale	DNF	26/07/2022
0364	Test pit 1. Top of wooden stake? Looking south	A007	S	8cm scale	DNF	26/07/2022
0365	Test pit 1. Top of wooden stake? (Later identified as charcoal smear) Close up	A007	NW	8cm scale	DNF	26/07/2022
0366	Test pit 1 showing top of possible wooden stake (Later identified as charcoal smear)	A007	NW	8cm scale	DNF	26/07/2022
095906	Late 17th/early 18th century Onion (port) bottle (find F009-39) in situ. Taken on mobile 'phone camera	A009	NW	6" nail	DNF	27/07/2022
095934	Late 17th/early 18th century Onion (port) bottle (find F009-39) in situ. Taken on mobile 'phone camera	A009	NW	6" nail & trowel	DNF	27/07/2022
100126	Late 17th/early 18th century Onion (port) bottle (find F009-39) in finds tray. Taken on mobile 'phone camera	A009	NW	Trowel	DNF	27/07/2022
152515	Late 17th/early 18th century Onion (port) bottle (find F009-39) in finds tray. Taken on mobile 'phone camera			30cm photoscale ruler	DNF	27/07/2022
152522	Late 17th/early 18th century Onion (port) bottle (find F009-39) in finds tray. Taken on mobile 'phone camera			30cm photoscale ruler	DNF	27/07/2022
152532	Late 17th/early 18th century Onion (port) bottle (find F009-39) in finds tray. Taken on mobile 'phone camera			30cm photoscale ruler	DNF	27/07/2022

Image Number	Description	Trench Area	Direction	Scales	Initials	Date
152821	Late 17th/early 18th century Onion (port) bottle (find F009-39) in finds tray. Taken on mobile 'phone camera			30cm photoscale ruler	DNF	27/07/2022
145637	A005 section east face	A005	W	2m ranging pole	DNF	28/07/2022
145703	A005 section north face	A005	S	2m ranging pole	DNF	28/07/2022
101951	Back filling of trench - line of posts at the foot of rampart	A010	NW	N/A	DNF	29/07/2022

## Appendix 10 – 2022 Site and Finds photographs

Refer to Appendix 9 - Photographic Register (July 2022) for information



*Figure 27 - Close up of 2021 trench post (2022 view) (Image number: 0348)*



*Figure 28 - Close up of 2022 trench post as revealed (Image number: 0310)*





Figure 29 - Close up of 2022 trench post - cleaned (Image number: 0359)



Figure 30 - View of trench posts in alignment (Image number: 0349)  
The dotted line indicates the alignment of the two posts





Figure 31 - Late 17th century 'Onion' bottle as discovered (Image number: 2821)  
The discovery of two pieces of a late 17<sup>th</sup> century onion bottle was the star find of the 2022 dig



Figure 32 - Late 17th century 'Onion' bottle after cleaning (Find number: F009-39)  
This is a picture of the neck of the onion bottle following cleaning and processing by SHARP



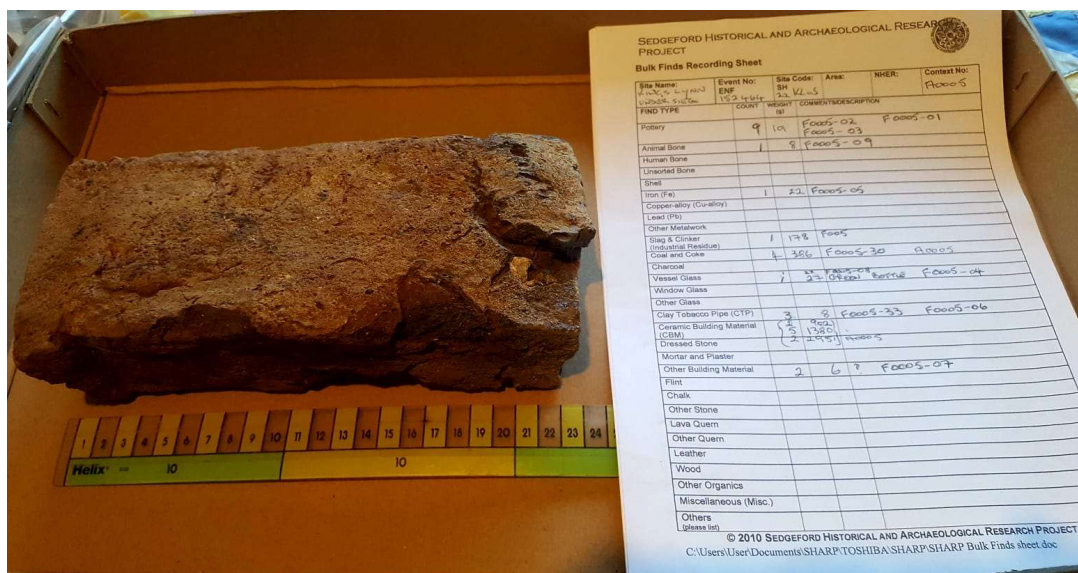


Figure 33 – Mis-shaped brick (Find number: F005-12)

This mis-shaped brick is an example of debris from the brick-making process

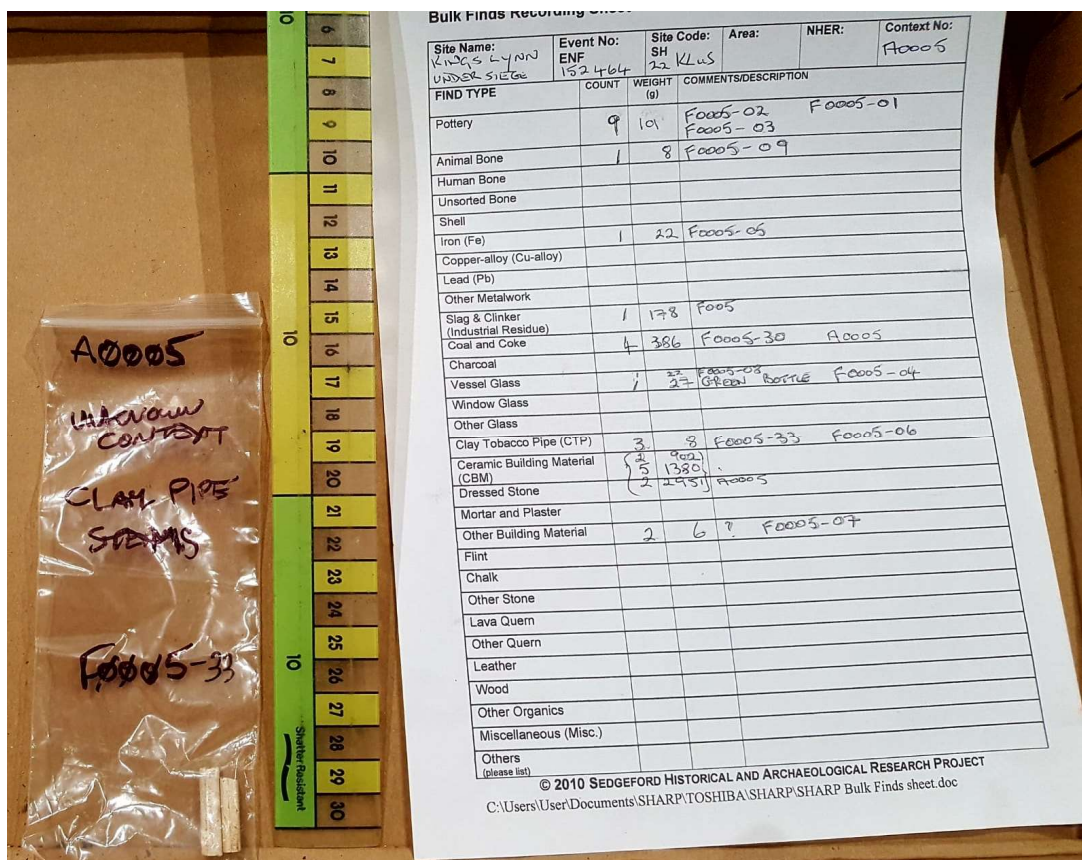


Figure 34 – two pieces of clay-pipe stem (Finds number: F005-33)

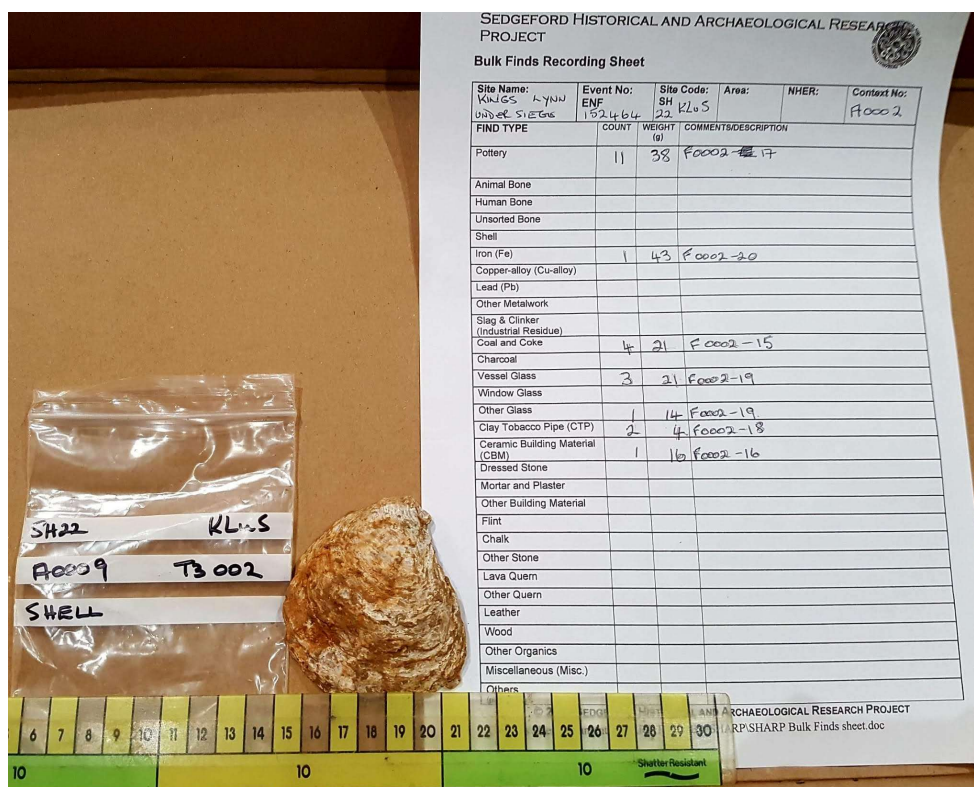


Figure 35 - Oyster shell (2022)

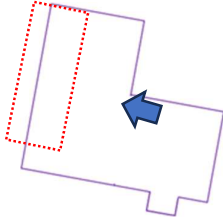
Oyster shell (find number: F009-41) discovered in the trench fill in the western corner of the July 2022 trench.



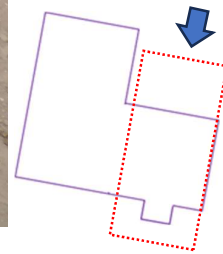
Figure 36 - Mis-shaped glass (2022)

A piece of Mis-shaped glass found in the northern part of the July 2022 trench. The photograph was taken following cleaning and processing by SHARP.





*Figure 37 - View of the western side of trench A (image number: 0352)*  
Trench wall (A001) looking west. Parts of A002 (right) and A005 (left) are also shown



*Figure 38 - Test pit 1 (image number: 0364)*

View of Test Pit 1 looking south. A large piece of clay tile is in the process of being excavated. In the background is A004, and also A006 which contains (beneath the up-turned finds tray) the rampart post originally discovered in 2021

## Appendix 11 - Field Walking (18 July 2022)

		WEST					NORTH
		5m	10m	15m	20m	25m	
(Datum)	40m						
	30m	B1	B2	B3	B4	B5	
	20m						
	10m	A1	A2	A3	A4	A5	
	0m						

For field-walking purposes the site was divided into 20m x 5m grids. The identifiers set out above (A1, B1, A2, B2, etc.) are used to locate/identify finds. The finds (listed under Appendix 8) are suffixed with 'FW' to denote fieldwalking ('?' indicates where the grid was not recorded). Each find is individually numbered, so, for example, Find number FW-B4-68 would be find number 68, collected during the fieldwalking in grid B4.



## Appendix 12 - Metadata (July 2023)

<b>Site Name</b>	KLUS
<b>NHER</b>	ENF153259 ENF153264
<b>Start date</b>	01/07/2023
<b>Finish date</b>	02/07/2023
<b>Grid Reference</b>	TF 62382 20900
<b>Datum Point</b>	52° 45' 41" N 0° 24' 19" E 3.34m Above Sea Level

Appendix 13 - Area definitions (July 2023)

Area Reference	Description	Location	What 3 Words
A011	Test pit 4. 1m x 1m. 0.5m depth		
A012	Test pit 5. 0.6m x 0.3m. 0.5m depth	50m from DATUM point on 320°	heap.always.casino

Appendix 14 - Auger Chart (July 2023)

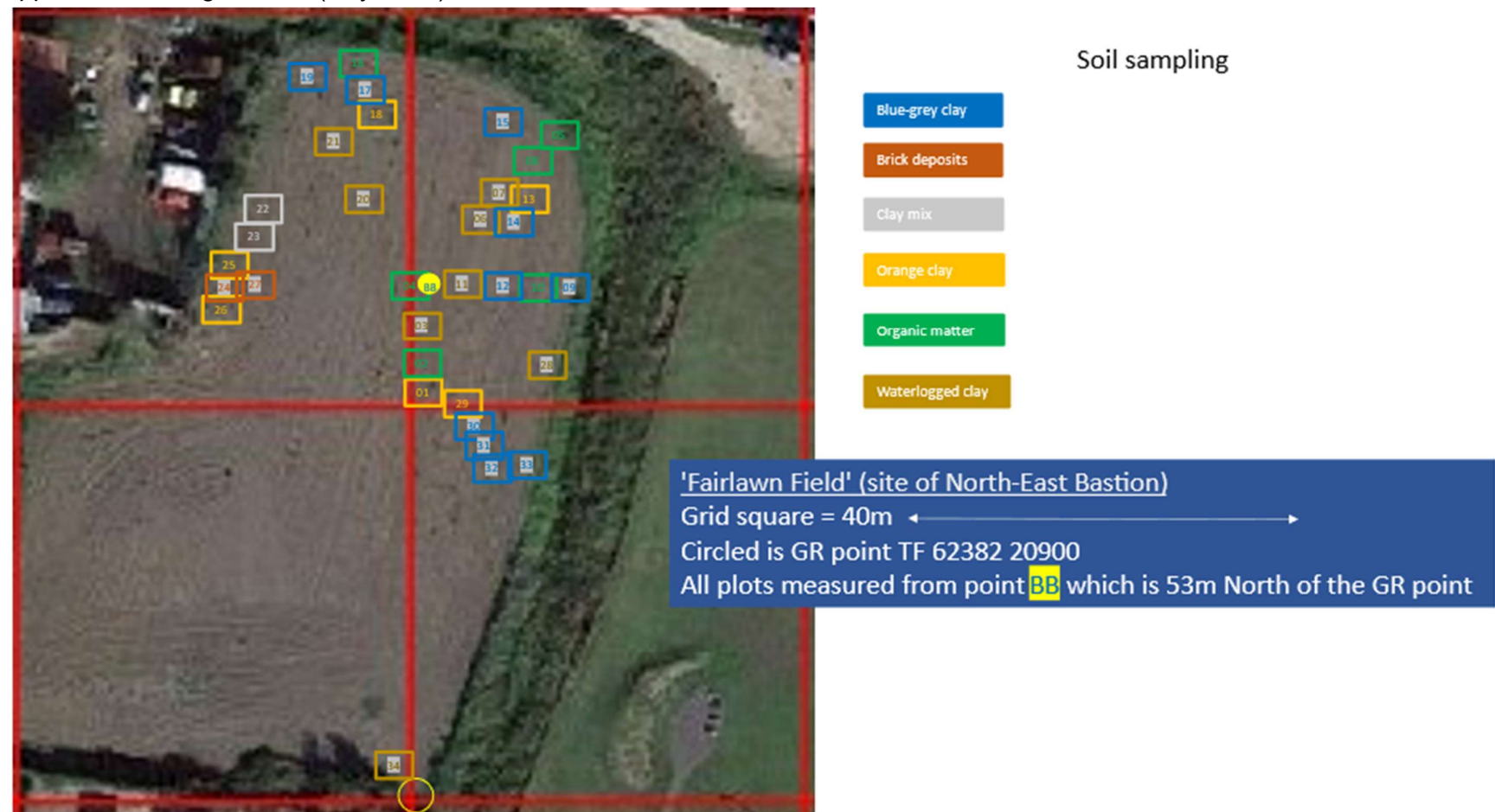


Figure 39 - 2023 Soil sampling  
This figure and the two that follow it show the auger samples plotted on an aerial image taken from the March 2022 magnetometry survey report. The table following these figures record each sample taken

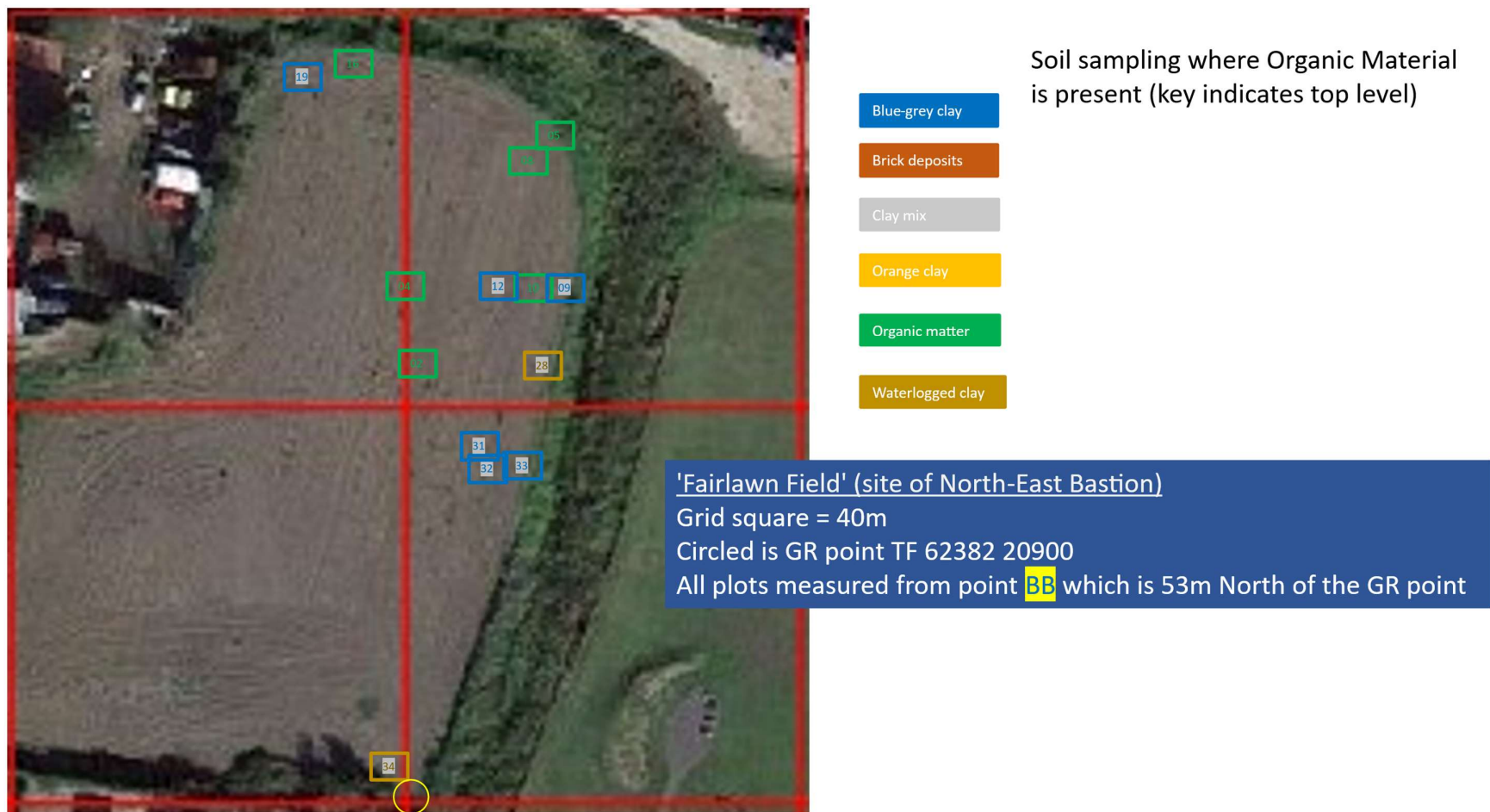


Figure 40 - 2023 Soil sampling (Organic material)

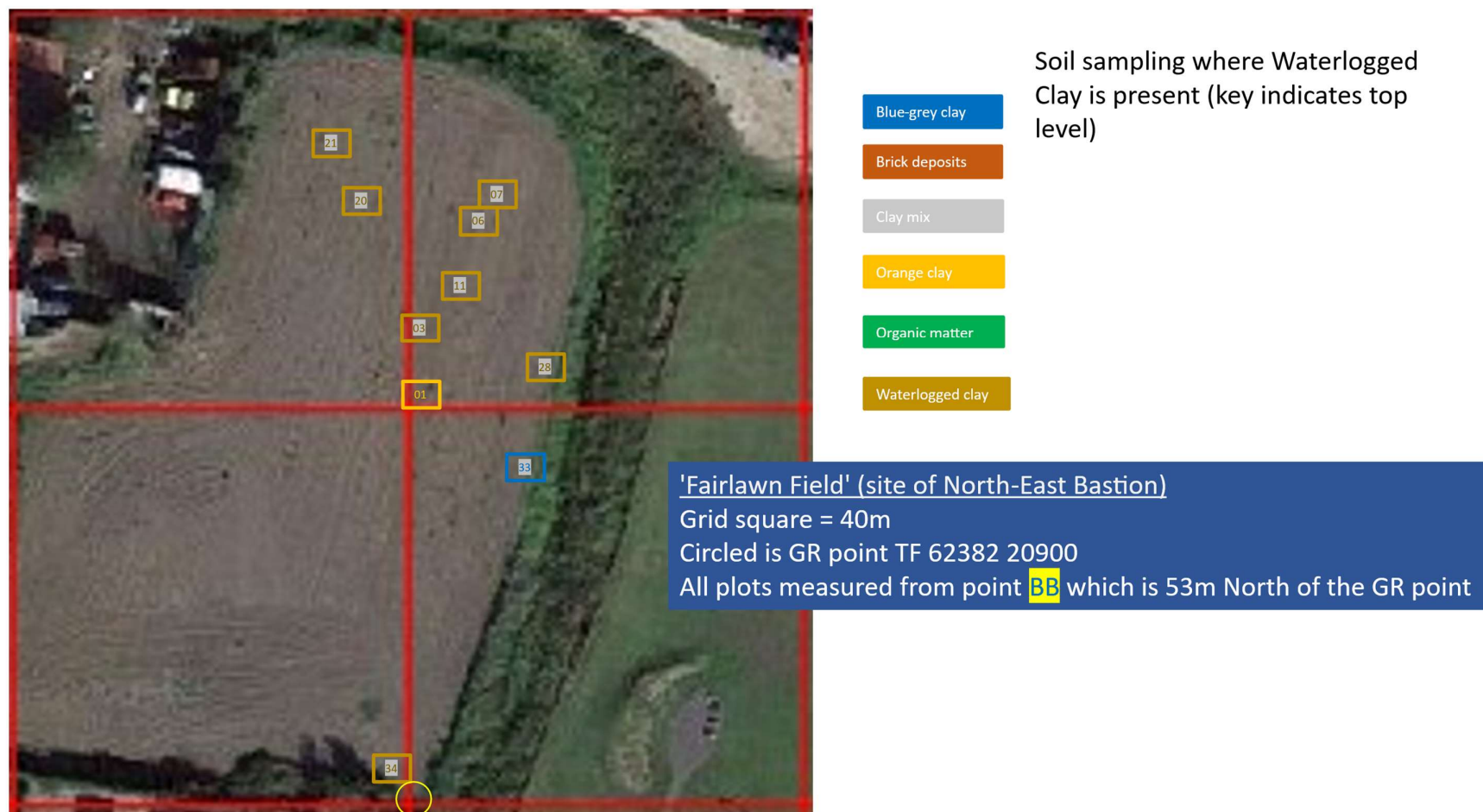


Figure 41 - 2023 Soil sampling (Waterlogged clay)



Date	Auger Sequence	Angle from point BB	Distance from point BB (metres)	Note	Depth of core	Description of A	Depth of A (upper)	Depth of A (lower)	Description of B	Depth of B (upper)	Depth of B (lower)	Description of C	Depth of C (upper)	Depth of C (lower)
01/07/2023	01	180°	10.00		2m	Orange clay		1m	Waterlogged clay	1m	2m			
01/07/2023	02	180°	05.00		2m	Organic matter	1.65m	2m						
01/07/2023	03	180°	02.50		2m	Waterlogged clay	1.3m	2m						
01/07/2023	04	180°	00.00	Point BB is 20m from point AA at 360°	2m	Organic matter	1.75m	2m						
01/07/2023	05	48°	16.70	Test pit 4	2m	Organic matter	1.4m	2m						
01/07/2023	06	48°	08.00		2m	Waterlogged clay	1.9m	2m						

Date	Auger Sequence	Angle from point BB	Distance from point BB (metres)	Note	Depth of core	Description of A	Depth of A (upper)	Depth of A (lower)	Description of B	Depth of B (upper)	Depth of B (lower)	Description of C	Depth of C (upper)	Depth of C (lower)
01/07/2023	07	48°	11.00		2m	Waterlogged clay	1.9m	2m						
01/07/2023	08	48°	15.00		2m	Organic matter	1.9m	2m						
01/07/2023	09	90°	14.50		2m	Blue-grey clay	1.3m	1.63m	Organic matter	1.63m	2m			
01/07/2023	10	90°	12.50		2m	Organic matter	1.35m	2m						
01/07/2023	11	90°	10.50		2m	Waterlogged clay	1.54m	2m						
01/07/2023	12	90°	11.50		2m	Blue-grey clay	1.3m	1.92m	Organic matter	1.92m	2m			

Date	Auger Sequence	Angle from point BB	Distance from point BB (metres)	Note	Depth of core	Description of A	Depth of A (upper)	Depth of A (lower)	Description of B	Depth of B (upper)	Depth of B (lower)	Description of C	Depth of C (upper)	Depth of C (lower)
01/07/2023	13	54°	14.00		2m	Orange clay	1m	2m						
01/07/2023	14	54°	15.00		2m	Blue-grey clay	1.85m	2m						
01/07/2023	15	29°	17.00		2m	Blue-grey clay	1.45m	2m						
01/07/2023	16	355°	18.56		2m	Organic matter	1.30m	2m						
01/07/2023	17	355°	17.50		2m	Blue-grey clay	1.5m	2m						
01/07/2023	18	355°	16.50		2m	Orange clay	1m	2m						

Date	Auger Sequence	Angle from point BB	Distance from point BB (metres)	Note	Depth of core	Description of A	Depth of A (upper)	Depth of A (lower)	Description of B	Depth of B (upper)	Depth of B (lower)	Description of C	Depth of C (upper)	Depth of C (lower)
01/07/2023	19	320°	22.50		2m	Blue-grey clay	1.5m	1.95	Organic matter	1.95m	2m			
01/07/2023	20	320°	07.00		2m	Waterlogged clay	1.6m	2m						
01/07/2023	21	320°	13.00		2m	Waterlogged clay	1.6m	2m						
01/07/2023	22	310°	21.00		2m	Clay mix	1.6m	2m						
01/07/2023	23	290°	21.00		2m	Clay mix	1.6m	2m						
02/07/2023	24	248°	26.00	0.7m was maximum depth achieved Test pit 5	2m	Brick deposits	0.5m	0.7m						

Date	Auger Sequence	Angle from point BB	Distance from point BB (metres)	Note	Depth of core	Description of A	Depth of A (upper)	Depth of A (lower)	Description of B	Depth of B (upper)	Depth of B (lower)	Description of C	Depth of C (upper)	Depth of C (lower)
02/07/2023	25	256°	24.00		2m	Orange clay	0.7m	2m						
02/07/2023	26	246°	28.00		2m	Orange clay	0.7m	2m						
02/07/2023	27	248°	25.00		2m	Brick deposits	1.3m	1.5m						
02/07/2023	28	125°	16.00		2m	Waterlogged clay	1.35m	1.9m	Organic matter	1.9m	2m			
02/07/2023	29	174°	13.00		2m	Orange clay	0.7m	2m						
02/07/2023	30	174°	17.00		2m	Blue-grey clay	1.8m	2m						
02/07/2023	31	174°	20.00	Sample was mixture of orange and blue-grey clay, signs of infill from Great British Dig (2021) Trench	2m	Blue-grey clay	1.5m	1.8m	Orange clay	1.8m	1.95m	Organic matter	1.95m	2m



Date	Auger Sequence	Angle from point BB	Distance from point BB (metres)	Note	Depth of core	Description of A	Depth of A (upper)	Depth of A (lower)	Description of B	Depth of B (upper)	Depth of B (lower)	Description of C	Depth of C (upper)	Depth of C (lower)
02/07/2023	32	174°	23.00	Sample was mixture of orange and blue-grey clay, signs of infill from Great British Dig (2021) Trench	2m	Blue-grey clay	1.6m	1.7m	Orange clay	1.7m	1.95m	Organic matter	1.95m	2m
02/07/2023	33	152°	26.00		2m	Blue-grey clay	1.4m	1.65m	Waterlogged clay	1.65m	1.9m	Organic matter	1.9m	2m
02/07/2023	34	188°	50.85		2m	Waterlogged clay	1.4m	1.85m	Organic matter	1.85m	2m			

# Appendix 15 - Photographic Register (July 2023)

Image Number	Description	Trench Area	Direction	Scales	Initials	Date
DSCN0717	Auger 01		West	5cm	DNF	01/07/2023
DSCN0718	Auger 02		West	5cm	DNF	01/07/2023
DSCN0719	Auger 03		West	5cm	DNF	01/07/2023
DSCN0720	Auger 04		West	5cm	DNF	01/07/2023
DSCN0721	Auger 05		Southwest	5cm	DNF	01/07/2023
DSCN0722	Auger 09		North	5cm	DNF	01/07/2023
DSCN0723	Auger 09		North	5cm	DNF	01/07/2023
DSCN0724	Auger 12		Northeast	5cm	DNF	01/07/2023
DSCN0725	Auger 16		Northwest	5cm	DNF	01/07/2023
DSCN0726	View from bastion flank looking south towards the Long Pond		South		DNF	01/07/2023
DSCN0727	Test pit 5 (Area 012) showing brick from 1797 brick kiln	A012	Northeast	5cm	DNF	02/07/2023
DSCN0728	Test pit 5 (Area 012) showing brick from 1797 brick kiln	A012	Northeast	5cm	DNF	02/07/2023
DSCN0729	Auger 33		Northwest	5cm	DNF	02/07/2023

## Appendix 16 – 2023 Site photographs

Refer to Appendix 15 - Photographic Register (July 2023) for information



*Figure 42 - Auger sample – sequence Auger 09 (image number: DSCN0722)  
In this sample, there was blue-grey clay to 1.3m, followed by organic matter*



*Figure 43 - View of test pit (image number: DSCN0728)  
A test pit was excavated at the western edge of the site, close to the likely site of the brick-kiln. Brick pieces were found in the layer beneath the topsoil*

## Appendix 17 - Context (July 2024)

### Deposit/Fill

Context No.	Date	Recorded by	Trench / Area	Feature Type	Deposit/Fill					
					Compaction	Colour	Composition	Inclusions	Thickness & Extent	Any other details
001	15/07/2024	DNF	A & B	Deposit	Loose	Mid-dark	Clay	Cockle shell fragments throughout	40cm approx.	
002	15/07/2024	DNF	B	Deposit	Hard	Reddish brown	Clay		10cm	Likely to be same as context 004
003	15/07/2024	DNF	B	Cut		Dark				
004	15/07/2024	DNF	B	Deposit	Hard	Reddish brown	Clay		40cm-50cm approx. to bottom of trench	Likely to be same as context 002
005	15/07/2024	DNF	A	Deposit	Hard	Darkish brown	Clay	None	Various: between 8cm and 19cm below topsoil (001). Thickness between 10cm and 19cm	
006	15/07/2024	DNF	B	Deposit	Wet (but probably hard if dry)	Light reddish-brown	Clay and sand mix	None	29cm	12cm below 005

## Cut

Context No.	Date	Recorded by	Trench / Area	Feature Type	Cut						
					Shape (plan)	Dimensions & Depth	Break of Slope	Slope	Base	Fills	Any other details
001	15/07/2024	DNF	A & B	Deposit							
002	15/07/2024	DNF	B	Deposit							
003	15/07/2024	DNF	B	Cut	Linear (horizontal)	Approximate 1.15m in length, 0.05m depth	Sharp	Horizontal	N/A	N/A	Cut (although possible structural). Possible upper-level cut from Fausse-braye feature of fortifications
004	15/07/2024	DNF	B	Deposit							
005	15/07/2024	DNF	A	Deposit							
006	15/07/2024	DNF	B	Deposit							



## Contexts and Contents

Context No.	Date	Recorded by	Trench / Area	Feature Type	Contexts		Contains							Drawings	Photographs
					Above	Below	Bone	Ceramic	CBM	Fe	Glass	Other	Wood		
001	15/07/2024	DNF	A & B	Deposit	None	002			3			2			016, 017, 018, 026, 027, 028, 029, 030
002	15/07/2024	DNF	B	Deposit	001	003			4	3		1		001	016, 017, 018, 026, 027, 028, 029, 030
003	15/07/2024	DNF	B	Cut	002	004								001	016, 017, 018, 026, 027, 028, 029, 030, 057
004	15/07/2024	DNF	B	Deposit	003	None								001	016, 017, 018, 026, 027, 028, 029, 030
005	15/07/2024	DNF	A	Deposit	001	006	2	9	39	2	1	7	6		023-025, 032-036, 038-043, 047-50, 052-056
006	15/07/2024	DNF	B	Deposit	005	None									023, 024, 025

Appendix 18 – Levels Register (July 2024)

TBM	Back Sight (BS)	Height of Instrument (Hol)	Fore Sight (FS)	Reduced Level (RL)	DWG number	DWG description	Trench
3.34	1.06	4.4	-1.72	2.68	Datum Peg	Datum Peg 52° 45' 41" N 0° 24' 19" E (TBM was originally 4.00m (OSN), but was corrected to 3.34m)	
			-0.92	3.48	HA1	Ground Level Trench A SW corner 49.84m at 333° from Datum Peg	A
			-0.78	3.62	HA2	Ground Level Trench A NW corner	A
			-0.79	3.61	HA3	Ground Level Trench A NE corner	A
			-0.79	3.61	HB1	Ground Level Trench B SW corner of west outer extension to trench	B

## Trench A – Location and heights

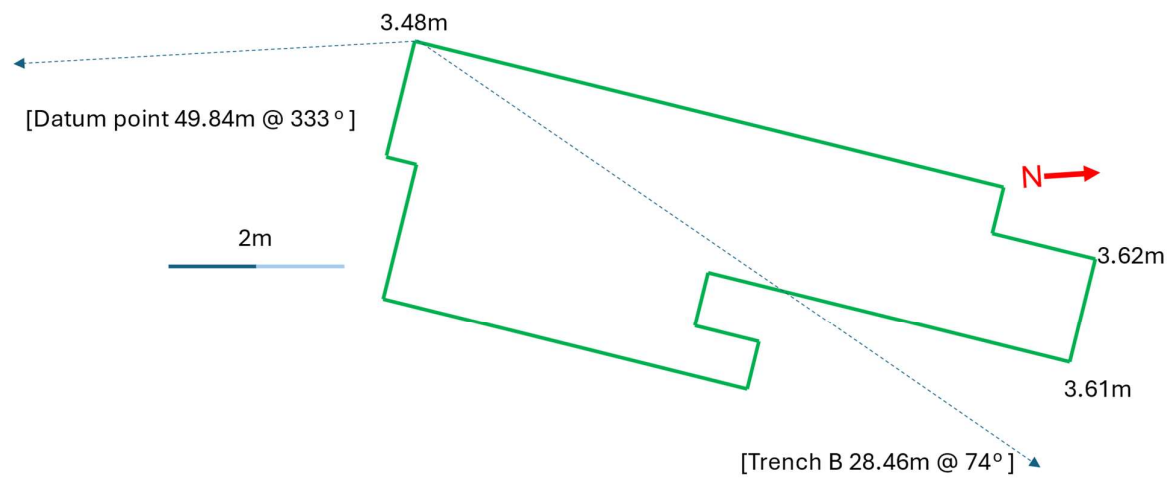


Figure 44 - 2024 Trench A (location & heights)

Trench A – Dimensions

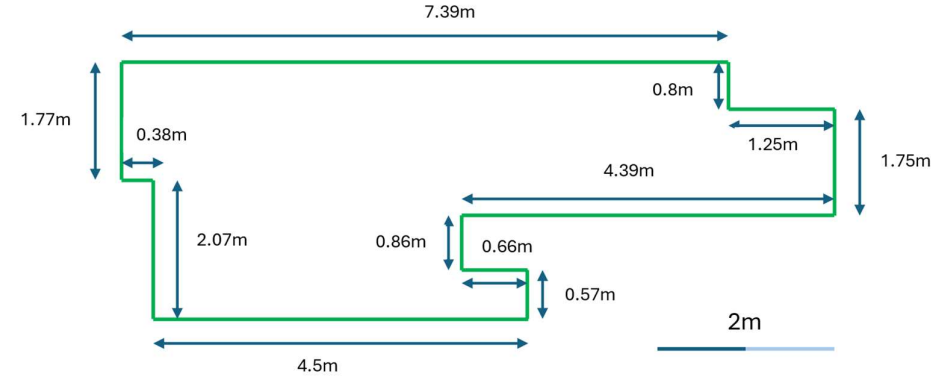


Figure 45 - 2024 Trench A (dimensions)

Trench A – Insert dimensions

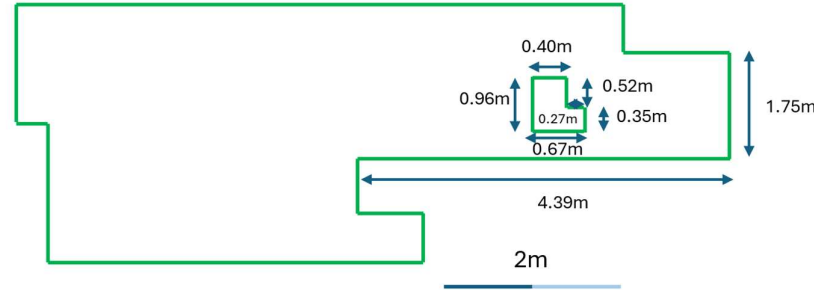


Figure 46 - 2024 Trench A (insert dimensions)

Trench B – Dimensions

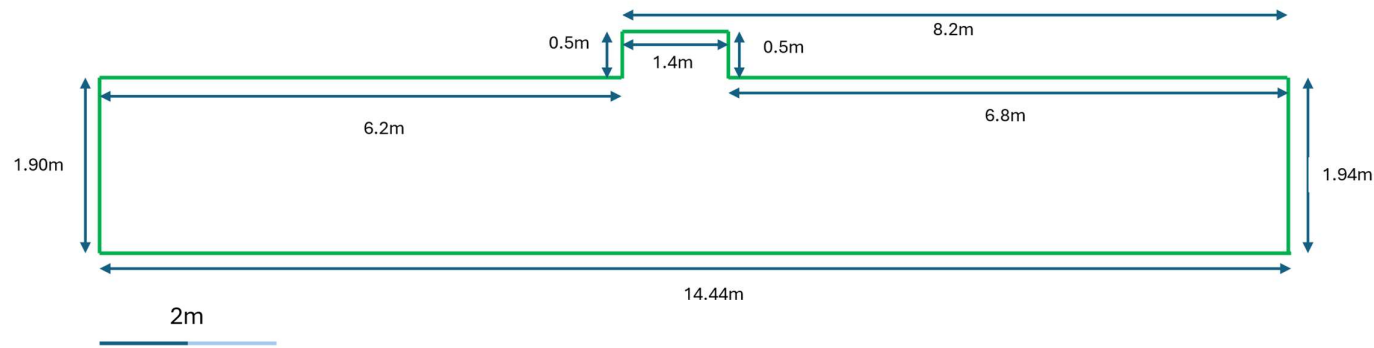


Figure 47 - 2024 Trench B (dimensions)



## Appendix 19 – Finds List (July 2024)

### Trench A – Finds areas

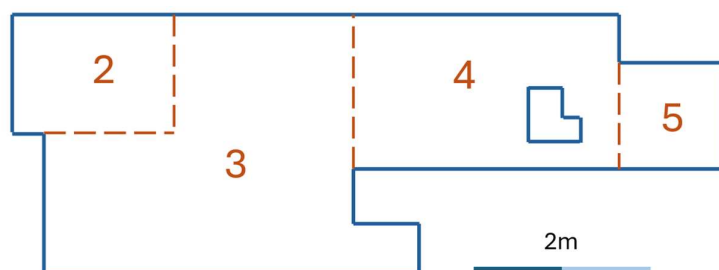


Figure 48 - 2024 Trench A (Finds areas)

Note: Trench B is finds area 1

Finds Trays are identified by location: Trench (A or B), and then by Area (1 (Trench B), 2, 3, 4, 5 (Trench A))

Finds Tray	Find Number	Context	Artefact / Material Type	Sub-type	Date	Initials	Description
A5	001	005	Other		15/07/2024	AF	Knife (manufacturer: Sonigename and Rostfreion, c.1950s). Length of blade: 10.6cm; length of hilt: 09.9cm
A5	002	005	Ceramic building material	Brick	17/07/2024	AF	Brick: possibly kiln lining, or possibly from other industrial activity. Thumb-shaped hole on glazed side. Glazing caused by exposure to high temperatures (1,200 degrees+). 11.5cm long, 8cm wide, 6.8cm deep
A5	003	005	Ceramic building material	Brick	17/07/2024	AF	Spacer (sagger) brick with 2 full diamond holes and 5 partial. All with holes (groups of five) through brick. 10cm long, 8.5cm wide, 3.2cm deep
A5	004	005	Ceramic building material	Brick	17/07/2024	AF	Spacer (sagger) brick with 2 full diamond holes and 3 partial. Holes (groups of five) in bricks in three diamonds. 9cm long, 7cm wide, 3.5cm deep
A5	005	005	Wood	Charcoal	17/07/2024	AF	Piece of charcoal. 1.7cm long, 1.3cm wide, 0.9cm deep
A5	006	005	Other		17/07/2024	AF	Slag? 7.5cm long, 3.7cm wide, 3.9cm deep
A5	007	005	Ceramic building material	Tile	17/07/2024	AF	Tile, red (brick red) colour. Piece of possible metal fused to corner. 3.9cm long, 3.4cm wide, 2.4cm deep
B1	008	002	Fe		17/07/2024	AF	Nut and bolt (fused together through corrosion). 8.2cm long, 1.8cm in diameter
B1	009	002	Ceramic building material	Tile	17/07/2024	AF	Tile, marked 'RY'. Brick red in colour. 6.9cm long, 6.1cm wide, 1.1cm deep
B1	010	002	Fe		17/07/2024	AF	Nail? 18.7cm long, 0.7cm to 1cm in diameter
B1	011	002	Fe		17/07/2024	AF	Wire? 6.3cm long, 0.7cm diameter
B1	012	002	Ceramic building material	Tile	17/07/2024	AF	Tile, brick red in colour. Forms right-angle. 4.8cm long, 4.3cm wide, 2.9cm, deep
B1	013	002	Ceramic building material	Tile	17/07/2024	AF	Tile, brick red in colour. 3.9cm long, 2.6cm wide, 0.9cm, deep

Finds Tray	Find Number	Context	Artefact / Material Type	Sub-type	Date	Initials	Description
B1	014	002	Other		17/07/2024	AF	Slag? 6.4cm long, 5.4cm wide, 1.7cm deep
B1	015	002	Ceramic building material	Tile	17/07/2024	AF	Tile, grey in colour, trapezium shape. 10.7cm long, 4.2cm wide, 1.4cm deep
A3	016	005	Ceramic building material	Tile	19/07/2024	IJ	Ceramic lipped roof tile. Glazed. 11cm length, width 10cm at top, 6.6cm at bottom
A3	017	005	Ceramic building material	Tile	19/07/2024	IJ	Ceramic lipped roof tile. Unglazed. 10cm length, width 12cm at top, 7cm at bottom. Fragment
A3	018	005	Ceramic building material	Tile	19/07/2024	IJ	Ceramic lipped roof tile. Unglazed. 8.5cm length, width 9cm at top, 7cm at bottom. Fragment
A3	019	005	Ceramic building material	Tile	19/07/2024	IJ	Ceramic lipped roof tile. Unglazed. 5cm length, width 7cm at top, 4cm at bottom. Fragment
A3	020	005	Ceramic building material	Tile	19/07/2024	IJ	Ceramic lipped roof tile. Unglazed. 8cm length, width 6cm at top, 7cm at bottom. Fragment
A3	021	005	Ceramic building material	Brick	19/07/2024	IJ	Sagger/spacer brick, unglazed. Square, 4cm x 4cm. Honeycombed design/construction
A3	022	005	Ceramic building material	Brick	19/07/2024	IJ	Sagger/spacer brick, unglazed. 5cm length, 4cm width, 5cm depth. Honeycombed design/construction
A3	023	005	Ceramic building material	Tile	19/07/2024	IJ	Floor tile. Ceramic, unglazed. Triangular shaped. 9.5cm length, width at top 9cm. 1.5cm thick.
A3	024	005	Ceramic building material	Tile	19/07/2024	IJ	Floor tile. Ceramic, unglazed. Hole towards top. Depth 1.5cm, 5cm x 4cm
A3	025	005	Ceramic building material	Tile	19/07/2024	IJ	Floor tile. Ceramic, unglazed. Depth 1.5cm, 5cm x 2.5cm
A3	026	005	Ceramic building material	Tile	19/07/2024	IJ	Floor tile. Ceramic, unglazed. Depth 2cm, 7cm x 6cm
A3	027	005	Ceramic building material	Tile	19/07/2024	IJ	Floor tile. Ceramic, unglazed. Depth 1.5cm, 11cm wide at base
A3	028	005	Ceramic building material	Tile	19/07/2024	IJ	Floor tile. Ceramic, unglazed. Depth 1.5cm, 16cm x 16cm
A3	029	005	Ceramic building material	Tile	19/07/2024	IJ	Floor tile. Ceramic, unglazed. Mortar still attached. Depth 1.5cm, 4cm x 3.5cm

Finds Tray	Find Number	Context	Artefact / Material Type	Sub-type	Date	Initials	Description
A3	030	005	Ceramic building material	Brick	19/07/2024	IJ	Sager/spacer brick? (fragment), unglazed. 4cm length, 1cm width, 1cm depth.
A5	031	005	Ceramic building material	Brick	19/07/2024	AF	Complete brick. Brick red in colour. 19.2cm long, 8.8cm wide, 5.6cm deep
A5	032	005	Ceramic		19/07/2024	AF	Clay pipe stem segment. White in colour. 0.5cm diameter, with 0.1cm bore. 2.9cm in length
A5	033	005	Ceramic		19/07/2024	AF	Clay pipe stem segment. White in colour. 0.5cm diameter, with 0.1cm bore. 2.7cm in length
A5	034	005	Wood	Charcoal	19/07/2024	AF	Piece of charcoal. 3.9cm long, 3.7cm wide, 2.8cm deep
A5	035	005	Glass		19/07/2024	AF	Curved glass (possibly from bottle). 4.9cm long, 2.5cm wide, 0.3cm thick
A4	036	005	Wood	Charcoal	19/07/2024	AF	Piece of charcoal. 5.6cm long, 2.5cm wide, 2.3cm deep
A4	037	005	Ceramic building material	Brick	19/07/2024	AF	Piece of brick with indent. Broken and partially notched. 10.4cm long, 5.9cm wide, 4.8cm deep
A2	038	005	Ceramic building material	Brick	19/07/2024	AF	Piece of blown brick. Grey in colour with flecks of brick red. 10.4cm long, 8.3cm wide, 6.3cm deep
A2	039	005	Wood	Charcoal	19/07/2024	AF	Charcoal. 1.9cm long, 1.3cm wide, 0.8cm thick
Not used	040	Not used					
A2	041	005	Ceramic		19/07/2024	AF	Glazed piece of pottery. Glaze covers lip and bottom. Gravel embedded in inner part of the glazing. 7.5cm long, 3.8cm wide, 1.9cm thick
A2	042	005	Ceramic building material	Tile	19/07/2024	AF	Curved (roof?) tile. Brick red in colour. 8.6cm long, 6.1cm wide, 1.2cm thick.
A2	043	005	Ceramic building material	Tile	19/07/2024	AF	Curved (roof?) tile with lip. One side covered in soot (soot on side with lip). Brick red in colour. 19.2cm long, 12.4cm wide, 1.8cm thick.

Finds Tray	Find Number	Context	Artefact / Material Type	Sub-type	Date	Initials	Description
A2	044	005	Ceramic building material	Tile	19/07/2024	AF	Glazed coloured (floor?) tile. Brick red in colour, but with back glazed face and curved lighter design feature. 9.9cm x 5.6cm, 1.5cm thick.
Not used	045	Not used					
A2	046	005	Ceramic building material	Tile	19/07/2024	CJ	Roof tile with lug. Red clay. 115mm(L) x 67mm(W) x 11mm(D)
A2	047	005	Ceramic building material	Tile	19/07/2024	CJ	Yellow clay tile with black inclusions. Three fragments in physical contact with each other: 42mm(L) x 20mm(W) x 10mm(D) 32mm(L) x 20mm(W) x 18mm(D) 30mm(L) x 20mm(W) x 20mm(D) - with mortar on one surface.
A2	048	005	Ceramic building material	Tile	19/07/2024	CJ	Yellow clay tile. 78mm(L) x 37mm(W) x 16mm(D)
A4	049	005	Ceramic building material	Brick	19/07/2024	CJ	Red brick with mortar. 105mm(L) x 50mm(W) x 44mm(D)
A4	050	005	Ceramic building material	Tile	19/07/2024	CJ	Red curved roof tile. 110mm(L) x 104mm(W) x 15mm(D)
A4	051	005	Ceramic building material	Tile	19/07/2024	CJ	Red roof tile with nail(?) notch. 76mm(L) x 65mm(W) x 12mm to 16mm(D)
A4	052	005	Bone		19/07/2024	CJ	Piece of bone. 68mm(L) x 42mm(W) x 15mm(D)
A4	053	005	Fe		19/07/2024	CJ	Very corroded staple(?) 38mm(L) x 31mm(W) x 17mm(D)
A4	054	005	Ceramic building material	Tile	19/07/2024	CJ	Yellow tile. 50mm(L) x 33mm(W) x 13mm(D)
A4	055	005	Other		19/07/2024	CJ	Slag (brick?) May air pockets. 48mm(L) x 36mm(W) x 40mm(D)
A4	056	005	Ceramic		19/07/2024	CJ	Thrown bowl/cup fragment. Gazed inner and outer. 35mm(L) x 26mm(W) x 3mm to 4mm(D)
A4	057	005	Ceramic building material	Brick	19/07/2024	CJ	Piece of red clay sagger. 112mm(L) x 110mm(W) x 35mm to 38mm(D)
A4	058	005	Other		19/07/2024	CJ	Slag (brick?) Dark brown. Fine air pockets throughout. 56mm(L) x 47mm(W) x 25mm(D)



Finds Tray	Find Number	Context	Artefact / Material Type	Sub-type	Date	Initials	Description
A4	059	005	Ceramic building material	Tile	19/07/2024	CJ	Red clay tile. With ferrous nodule and possible piercing for nail. 55mm(L) x 36mm(W) x 14mm(D) (excluding nodule)
A4	060	005	Ceramic building material	Tile	19/07/2024	CJ	Red tile with yellow mortar. Inclusions - black (firing temperature variations?); grey gravel. 75mm(L) x 70mm(W) x 14mm to 17mm(D)
A3	061	005	Ceramic		19/07/2024	IJ	Part of storage pot. Ceramic. Glazed interior, unglazed exterior with lip. 9.3cm(L) x 4cm(W) x 1.5cm(D)
A3	062	005	Ceramic		19/07/2024	IJ	Storage pot (part). Ceramic. Unglazed. 10cm(L) x 6cm(W) x 1.5cm(D)
A3	063	005	Ceramic		19/07/2024	IJ	Storage pot (part). Ceramic. Unglazed. 6cm(L) x 7cm(W) x 1cm(D)
A3	064	005	Ceramic		19/07/2024	IJ	Storage pot (part). Ceramic. Unglazed. 5cm(L) x 3cm(W) x 1.5cm(D)
A3	065	005	Ceramic		19/07/2024	IJ	Ceramic building material. 6.5cm(L) x 2.5cm(W) x 3cm(D). Unglazed
A3	066	005	Ceramic building material	Tile	19/07/2024	IJ	Roof tile. Unglazed. 3cm(L) x 6.5cm(W) x 1.5cm(D)
A3	067	005	Ceramic building material	Tile	19/07/2024	IJ	Roof tile. Unglazed. 7cm(L) x 7cm(W) x 1.5cm(D)
A3	068	005	Ceramic building material	Brick	19/07/2024	IJ	Firing brick with melted green glazing (1,200 degrees+ firing). 9cm(L) x 5.5cm(W) x 8cm(D)
A3	069	005	Other		19/07/2024	IJ	Slag material (molten). 7cm(L) x 3.5cm(W) x 5cm(D)
A3	070	005	Other		19/07/2024	IJ	Slag material (molten). 4cm(L) x 3cm(W) x 2cm(D)
A3	071	005	Other		19/07/2024	IJ	Slag material (molten). 2.4cm(L) x 3cm(W) x 1.5cm(D)
A3	072	005	Wood	Charcoal	19/07/2024	IJ	Charcoal nugget. 2cm(L) x 1cm(W) x 1.5(D)
A3	073	005	Wood	Charcoal	19/07/2024	IJ	Charcoal nugget. 4cm(L) x 2cm(W) x 0.5(D)
FW	074	001	Ceramic building material	Tile	19/07/2024	IJ	Floor tile. Yellow. Unglazed. 5cm(L) x 8cm(W) x 1cm(D)
FW	075	001	Other		19/07/2024	IJ	Slag material. Dark grey. 9cm(L) x 4cm(W) x 6cm(D)

Finds Tray	Find Number	Context	Artefact / Material Type	Sub-type	Date	Initials	Description
A4	076	005	Bone		19/07/2024	CJ	Chicken thigh(?) bone. 3cm(L), 0.4cm diameter. Bone thickness 0.1cm
A4	077	005	Ceramic building material	Tile	19/07/2024	CJ	Red clay tile. 10.1cm(L) x 5.2cm(W) x 1.6cm(D)
A4	078	005	Fe		19/07/2024	CJ	Very corroded nail(?) 5.6cm(L) x 1.9cm(W) x 0.7cm(D)
FW	079	001	Other		19/07/2024	CJ	Slag (brick?). Black internal, brown external. Many air pockets. 7.7cm(L) x 3.3cm(W) x 3.9cm(D)
FW	080	001	Ceramic building material	Brick	19/07/2024	CJ	High temperature fired brick(molten?). 6.4cm(L) x 5.3cm(W) x 2.7cm(D)
FW	081	001	Ceramic building material	Tile	19/07/2024	CJ	Tile with black clay core, tending to red. Becoming yellow on external surfaces. 6.1cm(L) x 4.8cm(W) 1.2cm(D)

## Appendix 20 – Drawing List (July 2024)

Drg No	Scale	Type	Date	Initials	Trench	Description
001	1:10	Section	15/07/2024	IJ	B	Section of NW side of trench B, featuring possible ECW cut feature (poss. top of Fausse-braye)

Please note that the drawings are not included within this report

Appendix 21 – Photograph List (July 2024)

ID Number	File ID (last four digits)	Direction	Taken by	Date	Trench	Description
001	7348	N	DNF	12/07/2024	N/A	Digger approaching site
002	3045	SW	DNF	12/07/2024	B	Initial (digger) excavation of trench B (trench B1 on WSI)
003	2064	S	DNF	12/07/2024	A	Initial (digger) excavation of trench A
004	1093	S	DNF	12/07/2024	A	Initial (digger) excavation of trench A
005	9778	W	DNF	12/07/2024	B	View of trench B
006	8896	SW	DNF	12/07/2024	B	View of trench B
007	9476	SW	DNF	14/07/2024	A	Upper level (just below topsoil), trench A, possible linear feature. Topsoil is context 001
008	9327	E	DNF	14/07/2024	A	Upper level (just below topsoil), trench A, possible linear feature. Topsoil is context 001
009	2231	W	DNF	14/07/2024	A	Upper level (just below topsoil), trench A, bricks in situ
010	9417	SW	DNF	14/07/2024	A	Upper level (just below topsoil), trench A. Western edge of trench
011	5476	SW	DNF	14/07/2024	A	Upper level (just below topsoil), trench A.
012	2417	SW	DNF	14/07/2024	A	View of work in progress on trench A
013	9788	N	DNF	14/07/2024	A	General view of trench A
014	2078	SW	DNF	14/07/2024	A	Overview of trench A at the end of day 2
015	7764	NE	DNF	14/07/2024	B	Overview of trench B at the end of day 2
016	8605	NW	DNF	15/07/2024	B	Northwest side of trench B showing 3 contexts
017	9805	SW	DNF	15/07/2024	B	Northwest side of trench B showing 4 contexts (001, 002, 003, 004)
018	3805	NW	DNF	15/07/2024	B	Northwest side of trench B showing 4 contexts - possible ECW cut (possible top of Fausse Braye)
019	1408	NW	DNF	15/07/2024	A	Trench A, possible linear feature

ID Number	File ID (last four digits)	Direction	Taken by	Date	Trench	Description
020	7337	NW	DNF	15/07/2024	A	Trench A, showing excavations underway during the afternoon
021	1458	SW	DNF	16/07/2024	A	View of trench A following heavy overnight rain
022	6276	S	DNF	16/07/2024	B	View of trench B following heavy overnight rain
023	5063	S	DNF	17/07/2024	A	Trench A, 'L'-shaped insert, showing context 005 & 006. This part of the trench was very wet, hence reason for excavation
024	9117	S	DNF	17/07/2024	A	Trench A, 'L'-shaped insert, showing context 005 & 006
025	5411	W	DNF	17/07/2024	A	Trench A, 'L'-shaped insert, showing context 005 & 006
026	2252	NE	DNF	17/07/2024	B	Trench B insert, showing contexts 001-004
027	1138	SE	DNF	17/07/2024	B	Trench B insert, showing contexts 001-004
028	9244	NW	DNF	17/07/2024	B	Trench B insert, showing contexts 001-004
029	5541	NW	DNF	17/07/2024	B	Trench B insert, showing contexts 001-004
030	6826	NW	DNF	17/07/2024	B	Trench B insert, showing contexts 001-004
031	7913	SW	DNF	17/07/2024	B	Overview of trench B
032	3295	W	DNF	17/07/2024	A	Trench A, northern part. View of gathering of bricks and tiles
033	4379	SW	DNF	17/07/2024	A	Trench A, northern part. View of gathering of bricks and tiles
034	6616	W	DNF	17/07/2024	A	Trench A, northern part. View of gathering of bricks and tiles
035	3660	N/A	DNF	17/07/2024	A	Trench A, finds tray from northern segment of trench. Finds from context 005. Spacer bricks are finds 003 and 004
036	7273	N/A	DNF	17/07/2024	A	Trench A, finds tray from northern segment of trench. Finds from context 005. Spacer bricks are finds 003 and 004
037	7246	N/A	DNF	17/07/2024	A	Trench A, finds tray from northern segment of trench. Finds from context 005
038	5394	W	DNF	17/07/2024	A	Trench A, central part. View of gathering of bricks and tiles
039	2358	W	DNF	17/07/2024	A	Trench A, central part. View of gathering of bricks and tiles
040	3267	W	DNF	17/07/2024	A	Trench A, central part. View of gathering of bricks and tiles
041	9257	W	DNF	17/07/2024	A	Trench A, central part. View of gathering of bricks and tiles

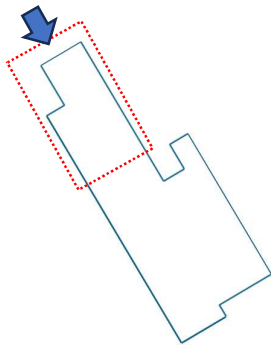
ID Number	File ID (last four digits)	Direction	Taken by	Date	Trench	Description
042	0198	W	DNF	17/07/2024	A	Trench A, central part. View of gathering of bricks and tiles
043	6330	W	DNF	17/07/2024	A	Trench A, central part. View of gathering of bricks and tiles
044	6440	S	DNF	17/07/2024	A	Overview of trench A, northern part
045	0551	S	DNF	17/07/2024	A	Overview of trench A
046	7552	S	DNF	17/07/2024	A	Overview of trench A, central and northern parts
047	4486	W	DNF	18/07/2024	A	Northern part of trench A, showing the brick and tile gathering
048	1905	W	DNF	18/07/2024	A	Northern part of trench A, showing the brick and tile gathering
049	0907	S	DNF	18/07/2024	A	Northern part of trench A, showing the brick and tile gathering
050	7791	W	DNF	18/07/2024	A	Northern part of trench A, showing the brick and tile gathering
051	9928	NW	DNF	18/07/2024	A	View of trench A from top of spoil heap
052	0129	W	DNF	18/07/2024	A	Central part of trench A, showing the brick and tile gathering
053	1135	W	DNF	18/07/2024	A	Trench A, central part, showing the brick and tile gathering
054	0898	W	DNF	18/07/2024	A	Southern part of trench A, showing the brick and tile gathering
055	9453	N	DNF	18/07/2024	A	Southern part of trench A, showing gathering of bricks and tiles
056	6862	W	DNF	18/07/2024	A	Trench A (southern part), showing gathering of bricks and tiles
057	2926	NW	DNF	18/07/2024	B	Dug insert of trench B, showing cracks in context 003 (which was thought to be possibly an ECW cut)
058	7245	N/A	DNF	19/07/2024	A	Find 031
059	3723	N/A	DNF	19/07/2024	A	Find 031
060	3351	N/A	DNF	19/07/2024	A	Finds 032, 033, 034, 035, 036
061	3625	N/A	DNF	19/07/2024	A	Finds 037, 038
062	3540	N/A	DNF	19/07/2024	A	Find 001
063	6749	N/A	DNF	19/07/2024	A	Finds 003, 004
064	6614	N/A	DNF	19/07/2024	A	Finds 003, 004
065	2204	N/A	DNF	19/07/2024	A	Find 028
066	0500	N/A	DNF	19/07/2024	A	Finds 016, 017, 018, 019, 020



ID Number	File ID (last four digits)	Direction	Taken by	Date	Trench	Description
067	2711	N/A	DNF	19/07/2024	A	Finds 050, 051, 052
068	3229	N/A	DNF	19/07/2024	A	Find 057
069	8783	N/A	DNF	19/07/2024	A	Find 043
070	7997	N/A	DNF	19/07/2024	A	Find 044
071	8169	N/A	DNF	19/07/2024	A	Find 044

Appendix 22 – 2024 Site and Finds photographs

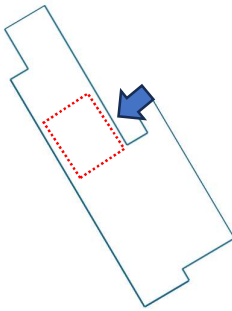
Refer to Appendix 21 – Photograph List (July 2024) for information



*Figure 49 – Overview of Trench A (image number: 6440)*  
Overview of the northern part of Trench A, looking south



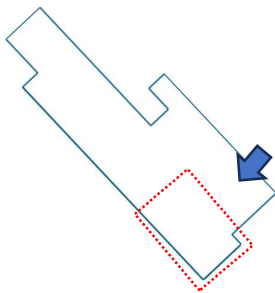
*Figure 50 - View of gathering of bricks and tiles in trench A (image number: 5394)*  
 A view of the central part of Trench A (looking west) showing the gathering of bricks and tiles. Note the absence of mortar.







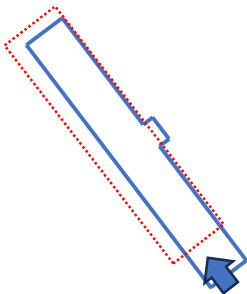
*Figure 51 - Overview of trench A (image number: 6862)*  
Trench A (southern part, viewed looking west) showing gathering of brocks and tiles







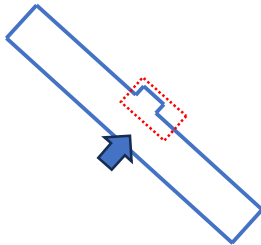
*Figure 52 - View of trench B looking south-westwards (image number: 7913)*  
Overview of Trench B, looking south-west. Insert to right







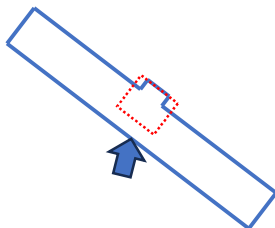
*Figure 53 - View of possible Fausse-Braye cut (image number: 9244)*  
Trench B insert looking north-west, showing contexts 001-004







*Figure 54 – NW-side of trench B (image number: 9805)*  
 Northwest side of Trench B showing 4 contexts (possible ECW cut, possible top of Fausse Braye). See also Figure 48



*Figure 55 - St Georges Courtyard*  
 A variety of brick types and ages present in St. George's Courtyard in Kings Lynn. Some of these bricks might have come from the North East Bastion kiln.





*Figure 56 - Trench A finds tray (image number 3660)*

A view of a finds tray from Trench A. Of particular note is the piece of brick on the right that has been exposed to very temperatures (higher than those required to fire bricks)



*Figure 57 - Trench A finds tray (image number: 7273)*

Another view of the finds tray from Trench A



*Figure 58 - Trench B finds tray (image number: 7246)*  
A view of a finds tray from Trench B





Figure 59 - Find 001 (image number: 3540)  
A German-made knife probably dating from the 1950s



Figure 60 - Finds 037, 038 (image number: 3625)  
Two pieces of brick from Trench A. The grey piece (find: 038) is a piece of brick that has blown on firing, caused by incomplete drying prior to firing.



Figure 61 - Finds 003, 004 (image number: 6614)  
Two pieces of sagger bricks. These might have been produced for hop kilns for local brewers



Figure 62 - Finds 032, 033, 034, 035, 036 (image number: 3351)  
A selection of finds from Trench A, including two pieces of clay pipe stems (Finds: 032, 033)





Figure 63 - Finds 050, 051, 052 (image number: 2711)

Two pieces of roof tile (note nail hole in 051) and a piece of bone (052) from Trench A

## Appendix 23 – Dig Diaries 2022-2024

### **2022**

During the 2022 investigation, David Flintham kept a diary of activity, findings, etc. This diary is reproduced below. It should be noted that this is a daily record rather than an account of the fortnight written at the end of the period.

#### **Sunday, 17th July 2022**

First day of the 2022 dig. A hot day, and much of the morning was spent ferrying people and equipment (thanks Jo and Charlie) to and from the SHARP base at Sedgford (affectionally referred to as the 'mothership'!!).

The big surprise of the day was the unexpected decision from the designated dig supervisor to withdraw from the project. This put considerable additional pressures on me, as alongside being the project director, I would now have to supervise the day to day digging. In this, however, I was greatly assisted by Nick in week one, Matthew in week two, and also by Gary.

Team for week one comprises the two Iains, Andrew, and Nick, plus Charlie and David. We were joined by David W. who brought along his mid-17th century English dog-lock pistol.

David introduced everyone to the project, to the site, and its context. Late morning was spent marking out four trenches: Trench A (8x4m), Trench B (4x2m), Trench C (4x2m), and Trench D (4x2m). A mini digger has been arranged

After lunch the 'marque' (a rather flimsy looking structure, described on the box as a 'party tent') was assembled. Bricks etc. used to add some stability to the structure.

David Spoke to Gary. He will be on site with Brian on Monday.

#### **Monday, 18th July 2022**

The hottest day on record, ever.

Early morning text from Steve R. (landowner's son): marque blew down Sunday afternoon (turned out to be a write-off). Steve R., and his Dad, Les (the landowner) tried to rescue it.

Andrew, Charlie, the two Iains, and Nick, on site. Mini digger arrived at 08:30. Brian and Gary arrived at 09:15. Brian gave the health and safety briefing.

It was decided to open a single trench (Trench A), but would make this bigger than the original plan. The digger cut the trench at 09:45. At 10:00, field-walking commenced (this was led by Iain J.). The field-walking returned more than 16 finds (numbered FW-B1-56 to FW-?-71).

At 10:30 we were joined by Cllr. Ben Jones. Brian and Gary returned to Sedgford late morning.



*Figure 64 - 2022 Trench being opened (Image number: 0307)*

The 2022 Trench being opened with fieldwalking progressing in the background

At 12:00 the digger over-heated, so time was spent addressing this issue. The digger then worked until just before 14:00: Trench A is now 'L'-shaped, occupying an area of 6.9m (N-S) x7.52m (E-W).

At 13:45 a post at the foot of the line of the ramparts was discovered (for clarity, these posts will be referred to as 'rampart-posts'). This was covered to prevent drying out. The area of the trench where the post was located was also covered.

Due to the heat, the day finished at 14:15. It was agreed that the priority for Tuesday would be tidying up the edges of the trench. In terms of recording the dig, eight photographs were taken.

### Tuesday, 19th July 2022

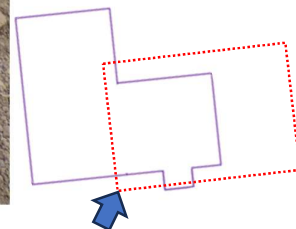
Another hot day. Work commenced at 08:00 with Andrew, Charlie, the two Iains, and Nick, on site. Focus on cleaning sides of trenches (six sides: 6.9m, 3.5m, 2.8m, 3.15m, 3.47m, and 7.52m), squaring off, and cleaning any features. Gary joined us at 09:30.



For ease of clarification, the various parts of Trench A (and the subsequent test pits) were allocated unique identifiers, each beginning with the letter 'A' followed by a number (A001, A002, A003, etc., etc.).

The cleaning work occupied the morning. There was a discussion about next steps, and it was agreed that on Wednesday, the focus would be on surveying and recording the site (five photographs were taken on Tuesday).

Cllr. Elizabeth Nockolds visited the site at 11:15. Again, due to the heat, the day finished at 12:45.



*Figure 65 - Work in progress (2022 - week 1) (Image number: 0318)*

Work is underway during week 1. The first rampart post has already been discovered (and is protected beneath an upturned finds tray)

### Wednesday, 20th July 2022

Although the temperatures were not quite as high as in previous days, work again commenced at 08:00 with Andrew, Charlie, and the two Iains (Nick was unwell), on

site. Andrew led the surveying using the dumpy level. The datum point is TF 62382 20900. At first, this point was identified as being 4m above sea-level, but this height measurement (as shown on the Ordnance Survey) is actually positioned on Raby Avenue (TF 62484 20942), approximately 100m north-east of the datum point. Following investigation, the actual height of the datum point was confirmed as 3.34m above sea level.

The site was thoroughly surveyed with heights recorded for 16 points in and around Trench A.

Unfortunately, as the report from the September 2021 (*Great British Dig*) excavation had not (at the time of the 2022 excavation) been published, precise measurements from 2021 were not available. So, whilst Trench A was positioned so it would cut into the 2021 trench, this was based on approximate measurements and calculations. However, during the afternoon, a cut from the 2021 trench was discovered (A004). In addition, a clay nodule which was thought to contain wood traces was uncovered by Iain S. Although no site drawings have yet been made (drawing materials have been requested from Sedgeford), a further five photographs were taken.

The day also witnessed the first visits to the site by larger groups: The East Anglian Region of the Battlefields Trust, and the Cromwell Museum (the latter coming by coach).

It was agreed that Thursday's focus would be the 2021 trench, and following the features that this uncovered. Finally, Andrew, and David discussed the possibility of a 2023 season – Steve R. would be happy to welcome us back (Nick would also like to return).

#### Thursday, 21st July 2022

A 07:45 start. On site: Andrew, David, Charlie, Iain J., and Iain S. The initial focus for today was the September 2021 trench. The location of the northern cut was confirmed in A004, which meant that we could make an additional cut to the south to re-discover the rampart post uncovered in September 2021.

Further surveying work was undertaken, included measurements of the parameter of the now extended trench. 17 photographs were taken. Rebecca Rees (True's Yard Fisherfolk Museum) visited the site – this became the dig's first appearance on social media. At the end of the day (16:00) we bid farewell to Iain J.

#### Friday, 22nd July 2022

Today is the final day of week one. A 08:00 start for Andrew, Charlie, and Iain S. At 09:30, Gary joined us, and with his drone, took some superb arial photographs of the trench and overall site.





*Figure 66 – Drone photograph of the July 2022 site  
One of the superb drone photographs of the site taken by Gary Rossin*

Following yesterday's discussion, the trench was extended southwards through the 2021 backfill, looking for the 2021 post, creating a new area (A006).

The various contexts were marked out, and some augering took place (both led by Andrew). Charlie commenced the plan drawing of the entire site. 11 photographs were taken.

At 14:25, Ian S. rediscovered the 2021 post in A006. This was also covered to prevent drying out. The area covering of the trench was enlarged to encompass this post.

The day (and week one) concluded with a visit to the site by Anna Keay and Simon Thurley. The site was discussed, including whether the rampart posts were actually some sort of marker posts used when the site was laid out prior to the construction of the fortifications. It was agreed that this was a plausible theory, although the absence of similar posts making out other features (such as the moat), suggests that this was unlikely, and instead the posts were part of the fabric of the fortifications themselves.

The entire trench was covered in tarpaulin, and then farewells to the week one team were said, and we all promised to keep in touch.

### Saturday, 23rd July 2022

David spent the so-called 'rest day' reflecting on week one, and ensuring that all the various logs and registers were up to date (context records and register, levels register, drawing register, field-walking log, auger record sheets, finds list, and photograph register).

David identified the tasks for week 2:

- Excavate around the 2021 rampart post in A006 to look for the wooden-cross piece (according to a photograph I took in September 2021, this cross piece was 0.202m below the top of the post).
- Clean sides of southern edge (A004) of trench to look for rampart cut.
- Investigate 2022 rampart post further (including distance and bearing back to datum point).
- From calculations (rampart had a depth of 12m), mark alignment of rear of rampart.
- Calculate location of rampart as it continues northwards, including positions at 45o and 90o. This will help me plot the 'turn' of the rampart/fortifications.
- Explore the brick-making aspects of the site, including excavate the brick fill feature along the western section of the trench, and also the tiles to the south of this area.

Cataloguing the finds would also be a task for week two.

### Sunday, 24th July 2022

The first day of week two. The team for this week was Charlie, David, Matthew, Paul, Peter, and Steve, and we assembled at 09:00. David delivered the health and safety briefing, and then introduced everyone to the project, to the site, and its context, including what had happened in week one.

David measured the position of the datum point to the 2022 post (39.14m on a bearing of 306o). David theorised whether today's ditch (the remains of the moat) marked the outer line of the moat as it runs S-N, but after the 90o turn at the point of the bastion, then becomes the inner-line of the moat as it continues E-W. This would make the 90° turn slightly less tight.

The first task of the day was to remove the tarpaulin from the previous week.

Paul and Peter focused on looking for further evidence of the rampart, but unfortunately, this cut proved elusive. Steve levelled the surface of the 2021 back-fill, whilst Charlie, Matthew and me surveyed the area to the north of the trench, and measured/plotted the likely turn (90° from S-N to E-W) of the rampart. Later, Matthew, Charlie and Peter started to clean the surface of the brick-kiln in-fill

(designated area A005) - this is currently higher than the overall trench surface (although lower than ground-level). Then Paul and Steve cleaned the 2021 post cut (area A006).

Gary visited the site. We discussed progress and agreed the next steps:

- Excavate around the 2021 rampart post to expose the top 3cm of the post.
- Leave the 2021 rampart post and A006 uncovered so it can dry out.
- Leave the 2022 rampart post as it is for the time being.
- Continue work with the brick-kiln in-fill (A005), and chase the various cuts.

During the afternoon, Charlie and Paul worked on the 2021 rampart post (or stake), whilst Matthew, Steve, and Peter focused on the brick-kiln area.

Recording was on-going, with Peter drawing the section of the brick-kiln fill (A005), and David took three photographs.

Following the earlier discussion with Gary, the area around A006 was left uncovered.

#### Monday, 25th July 2022

Today's team comprised of Charlie, Matthew, Paul, Peter, and Steve, and during the morning we welcomed Brian and Dr John (Jolleys) to the site. Cleaning of A004 continued, as well as investigating possible fill traces at A001.

David cleaned up the 2021 rampart post, and then, for recording purposes, the top of the 2022 rampart post. Charlie recorded this in a plan drawing, whilst David photographed it. Meanwhile, Matthew, Paul, Peter, and Steve recorded then took down A005.

A total of nine photographs were taken.

#### Tuesday, 26th July 2022

A 09:00 start for the team comprising of Charlie, David, Matthew, Paul, Peter, and Steve. Steve R. (son of the landowner) brought a couple of his friends to the site for a tour, and this was followed, at 10:30, by a visit from the King's Lynn and West Norfolk Archaeological Society under the leadership of Clive Bond.

The on-going investigation of A005 revealed further evidence of brick-kiln related waste. The condition of the 2021 rampart post has deteriorated, so has been covered.

It was agreed that we would search for further rampart posts by excavating a test pit, positioned according to the distance between the two known posts (3.35m). Test pit 1 (designated A007) was 0.8m x 1.2m, and located 0.763m to the east of A003. A dark patch was discovered, but hopes that this might be a post were dashed when

this turned out to be just a stain in the clay. The test pit was sunk to a depth of 0.89m.

In total, five photographs were taken, although problems with the camera battery no longer charging (and not being able to find a replacement battery anywhere in King's Lynn) resulted in further photographs being taken on a mobile 'phone.

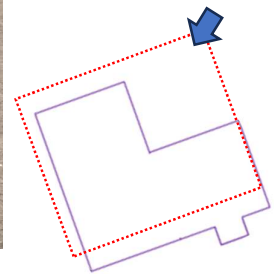


Figure 67 - Work in progress (2022 - week 2) (Image number: 0350)  
A view of the trench looking west (along E-W line)

### Wednesday, 27th July 2022 (Norfolk Day)

Alex, Jo. and Sophie joined the dig for the remainder of the week, so today's team comprised of Alex, Charlie, David, Jo., Matthew, Paul, Peter, Sophie, and Steve.

A second test pit (A0008) was sunk 6m to the south of A0006. This measured 1.2m x 1.10m. A brick layer was encountered at a depth of 15-20cm which was concluded to have come from the nursery greenhouses (demolished during the 1970s). This test pit was closed down. Steve continued the investigation of A005, whilst Sophie and Alex cleaned the face of A0003, and then undertook a plan drawing of it.

Again, on the hunt for rampart posts, a third test pit (A009) measuring 0.83m x 0.60m was opened between A008 and A006 (the distance of this test pit from A006 was 2.62m).

David then visited the *Stories of Lynn* for the launch of the *Civil War Siege Shuffle* card game which have been developed by a group of young historians known as the Time Turners. Afterwards, they visited the site.

Work on A005 continued, and whilst working on A009, Charlie and Matthew discovered what proved to be the best find of the fortnight – two large pieces of a late 17th century ‘onion’ bottle (this would have been used to bottle imported wine and port) This was located in the south face of A009 at an approximate depth of 30cm. It was catalogued as F009-39. However, no traces of wooden posts were found.

Moving away from A003, Sophie and Alex began cataloguing all the finds. It was decided that Thursday’s focus would be on recording.

Seven photographs were taken, and the day ended with a visit by King’s Lynn Town Guides/Civic Trust.

#### Thursday, 28th July 2022

Today’s team comprised of Alex, Charlie, David, Jo., Matthew, Paul, Peter, Sophie, and Steve.

Today was recording day. Sophie and Alex completed the cataloguing of all the finds, whilst Steve and Paul focused on tidying and recording A005, concluding that this area was likely to have been a ‘spoil’ pit associated with the late 18th century brick kiln. Charlie and Peter concentrated on recording A009.

Later, it was drawings, with Sophie and Alex working on A007, Paul and Steve on A005, and Charlies and Peter on A009.

By 15:00, all recording had been completed (two photographs had been taken), and the site was closed (back-filling would take place tomorrow). All tools were transported back to Sedgeford, and Jo. took the finds to Sedgeford.

Team photographs were taken, and a ‘time capsule’ (a piece of flat stone in A001 which we all signed and dated) left. Farewells were bid to those members of the team leaving us today.

Alex, Charlie, Jo., Sophie, and David then headed to Snettisham for the Snettisham v SHARP cricket match. The SHARP team nearly caused an upset, losing by one wicket in the final over.





*Figure 68 - The 2022 fixture between Snettisham CC and SHARP*

St Mary's Church is an impressive backdrop for the annual cricket match between Snettisham CC and SHARP

### Friday, 29th July 2022

Today's team comprised of Alex, Charlie, Jo., and Peter.

The mini digger arrived at 09:30. As observed on Tuesday, the 2021 post was showing signs of deterioration. As neither this nor the 2022 post were lifted this year (something for another season), we were careful to cover both posts with geotextile sheets prior to reburial.

At 10:19, backfilling commenced, and was completed at 11:02. One photograph was taken.



*Figure 69 - 2022 Trench being closed (image number: 101951)*

The remaining members of the team departed the site at 11:30.

Although this was the end of the practical part of this year's investigation, the post-excavation process has now commenced.

The onion bottle (F009-39) was cleaned by the finds specialist at SHARP, whilst Jo. Took overall responsibility for all the finds. Meanwhile, I will be processing all the records and notes from the fortnight.

Planning for 2023 has commenced, and a planning meeting has been arranged<sup>37</sup>.

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<sup>37</sup> The meeting took place on 14<sup>th</sup> January 2023 in Huntingdon



Figure 70 - Kings Lynn Under Siege: a national project rooted in the local community  
 KLUS enjoys the support and interest from a wide range of individuals, organisations, societies, museums, publishers and broadcasters



## **2024**

As in 2022, during the 2024 investigation, David Flintham kept a dairy of activity, findings, etc. This diary is reproduced below. It should be noted that this is a daily account rather than a record written at the end of the week.

### **Friday, 12th July 2024**

Alex, Peter, and David arrived on site at 13:00. Portaloo had already been delivered (and not in the same location as in 2022). The (not so) mini-digger arrived just after 13:30. Thanks to the skill of the driver, the digger (just under 9ft wide) negotiated its way onto site.

The field is muddy thanks to a combination of recent rain, and longer-term rain which had left the water table unusually high.

The first trench to be opened was (after much debate) at the inner angle of the bastion face. On the written statement of intent, this was designated B(1), but since B(2) was not opened, this trench is known as Trench B. This trench measured approximately 15m x 1.8m. The depth was approximately 1m. No obvious traces of the fortifications were immediately observed, but there are two features that need further investigation. These have been marked.



*Figure 71 - Trench B being opened (image number: 002)*

Trench A (the brick kiln trench was opened next. This covered an area of approximately 4m x 4m (although it isn't square). There is almost immediate archaeology observed, including charcoal and misfired bricks. It was decided to divide the trench into two parts, with the western segment (closest to the boundary fence being excavated to a depth of approximately 0.3m (e.g. just the topsoil being removed), whilst the eastern segment being excavated to the depth of approximately 0.5m.

A video dig diary of the week would be recorded for the BBC's *Digging for Britain* programme; today three video dig-diary clips were recorded. Six photographs were taken.

#### Saturday, 13th July 2024

David and Nick (C) (dig supervisor) visited the site on the Saturday afternoon. On viewing Trench B, it was noted that a puddle had formed from the underlying water-table.

The following priorities for the Sunday (14th July 2024) were agreed upon:

- Welcome and introductions, health and safety briefing, introduction to the project, including background and objectives;
- Unload tools, and put-up tent;
- Decide the lunch rota;
- Show participants the site and the two trenches;
- Cut entry steps into Trench B;
- Bail Trench B;
- Clean sides of both trenches;
- Level and clean bottom of Trench A.

#### Sunday, 14th July 2024

Nick (P), Nick (C), Chris, David, Peter, Charlie, and Iain on site.

David, Nick (P), and Chris arrive on-site at 09:00, followed by Nick (C), and Peter. Most of the equipment from Sedgeford (SHARP) arrived with Nick (C). Onloaded kit and put-up tent. Tent far sturdier than that provided in 2022. Landowners have generously provided a shed to store the kit in overnight, and a number of folding chairs.

The tent was up by 10:30. David gave the H&S briefing, and introductions, before taking the team around the site. Big puddles of water had formed in both Trench A and Trench B. Nick (P) and Chris worked on cutting the steps into Trench B.



Now joined by Charlie, the rest of the team focus on Trench A and the tidying of the edges, and then trowelling back the floor of the upper level. Iain joined.

After lunch, Peter, Chris, and Nick (P) got to work draining the water from the lower level of Trench A using sponges, bowls, and buckets. Trench A (upper level) was extended northwards. There seems to be plenty of evidence of brick-making on site: mixture of broken and blown old bricks, plus some newer bricks. Also, a lot of charcoal deposits and other burnt material. These are concentrated in particular areas rather than scattered across the entire site. This, and the absence of other finds (save for a few pieces of pottery) would seem to eliminate the possibility that this material had simply been dumped on the site.

At 15:30, Trench A was covered in ground sheets ready for day 3. It was agreed that day 3 would start at 09:00

Three video dig-diary clips were recorded, and nine photographs taken.

#### Monday, 15th July 2024

Alex, Nick (P), Nick (C), Chris, David, Peter, Charlie, Iain, and James on site.

Alex rejoined the team (he was doing an archaeological archiving course at SHARP yesterday), and the team was joined by James, who was part of the KLUS team in 2020 and 2021.

Despite the work yesterday, the lower level of Trench A was flooded, and there was flooding in the southwestern end of Trench B.

The work in Trench A (Alex, Charlie, Chris, and Nick (P)) would focus on expanding the existing trench, and chasing features of interest.

Nick (P) with the aid of his metal detector attempted to re-discover the site's datum point. This was established in March 2022 and was marked with a metal spike. This has been lost sometime between July 2023 and July 2024. Fortunately, using measurements from July 2023, David was able to triangulate back to the position of the datum point.

Peter and Iain are working on Trench B and at 11:00 identified a horizontal cut feature, measuring approximately 1.5m in length, and situated 0.05 m below the surface. This could be a cut from the Civil War defences (the top of the Fausse-braye?). Nick (C) measured, and Iain made a section drawing.

At 11:30 dark linear ground shading was observed running north-south in the upper level of Trench A.

After lunch, it was decided to fill in the waterlogged (lower) section of Trench A, and to abandon the waterlogged south-western end of Trench B. Trench B is expanded by 1m x 0.5m north-westwards to investigate the possible Civil War cut.

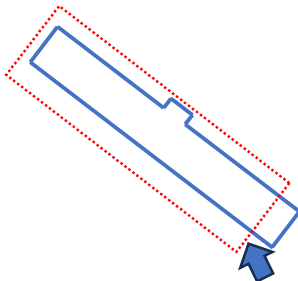
Rain arrived at 14:30, and after covering the active areas with groundsheets, work ended for the day.

Two video dig-diary clips were recorded, and five photographs taken.

### Tuesday, 16th July 2024

Alex, Charlie, Chris, David, Iain, Nick (C), and Peter and on site.

Arrived to find that following the heavy overnight rain, the site was very muddy (ankle deep in places) and the exposed parts of both trenches were covered in puddles. The sides of the southwestern end of Trench B had also collapsed. As the rain was continuing, it was decided to abandon digging of the day.



*Figure 72 - Rain day (image number: 022)*

The team walked to the Trues Yard Fisherfolk Museum (David met Gaynor who had planned a visit to the site today. This has now been postponed.)

Then Peter put his town guide hat on and took the team on a walking tour of King's Lynn (this became known as the Puritan Pub Crawl and we went past, and learned about several pubs without stopping) We observed various examples of brickwork in situ, including probable late 18th and early 19th century examples. We also visited the cellar of the Bank House Hotel, date back to the 18th century.

Alex, Chris, David, Nick (C), and Peter returned to site at 16:00. As the rain had stopped, the groundsheets were removed, and as much of the surface water was sponged off.

Following communication with the *Digging for Britain* producers, due to the current lack of ECW archaeology, it is unlikely that the dig will be features, although the dig-diary will continue to be recorded.

One video dig-diary clip was recorded, and two site photographs taken. In addition, during the tour, three other photographs of ECW interest were taken.

### Wednesday, 17th July 2024

On site today are Iain, Peter, Nick (C), Nick (P), Alex, David, Charlie, Chris, and Jo. (who is joining the dig for two days).

Peter and Iain finished excavating the insert in Trench B to chase the suspected ECW cut. This was on the northwestern side of the trench and was 6.8m from the northeastern end of the trench (e.g. closest to the existing ditch). The insert measured 1.4m x 0.4 to 0.5m, and was 0.3m below the surface (and 0.54m from the bottom of the trench). There were no further signs of the ECW cut, so it was decided to cease further work on the trench. It was recorded and then the trench was closed down. As has been the case throughout the dig, work was focused on Trench A. Nick (P) and Chris focused on the southern end of the upper section, extending it further south. Jo, then joined by Peter and Iain, focused on cleaning the central section, and Alex and Charlie focused on the northern part of the upper level, extending it further north.



Figure 73 - Work in progress on Trench A (image number: 051)

For the sake of finds management, the site was divided into five sections: B1 (all finds from Trench B); A2 (Trench A, upper level, southern end); A3 (Trench A, upper-level central part including any finds from the lower-level part); A4 (Trench A, upper-

level central part including any finds from 'L'-shaped insert); and A5 (Trench A, upper level, northern end).

There were groupings of bricks and tiles in both the central and northern sections of the upper level, as well as numerous traces of burnt charcoal.

David excavated a small 'L'-shaped section within the upper level of Trench A. This occupied an overall area of 0.96m x 0.5m and to a depth of 0.41m below the surface (in this location, the topsoil was at a depth of 0.12m). This was excavated because the area was particularly boggy and was impacting on the excavations elsewhere in the trench. He then cleaned, recorded, and close this insert.

As well as evidence of brick working, there was some evidence of ironworking on the site, which led to the speculation that this might be linked to the construction of the fortifications and the repair of tools on-site by blacksmiths.

Some spacer/sager bricks were recovered (finds: 003; 004), together was a glazed and misshaped brick (002) which might have been part of the actual structure of the kiln, the glazing being the melted silicone caused by the constant firing and re-firing. It was subsequently identified that this effect could only be caused by exposure to temperatures in excess of 1,200°, therefore, far too hot for a brick kiln, but not too hot for iron smelting.

Three dig diary video clips were recorded, and 24 photographs taken.

#### Thursday, 18th July 2024

On site today are David, Alex, Iain, Nick (C), Nick (P), Chris, Jo., Charlie, and Peter.

David plotted location of trenches from datum point and measured the trenches (it was agreed that this would be their fullest extent. David also completed the context recording to date.

The team concentrated on levelling the bottom of the upper level of Trench A, and cleaning edges and surfaces. There were groupings of bricks and tiles in four locations in the upper level of Trench A – as these were grouped in clear concentrations rather than scattered across the site, it is further proof that they were not dumped as part of demolition rubble, and instead are either traces of a brick-kiln structure, or are deposits from the brick making process itself.

Once the groupings had been recorded, they were removed to allow the floor of the trench to be further investigated.

At 11:00 the team welcomed a visit from True's Yard Fisherfolk Museum (postponed from Tuesday). The tour group comprised of seven visitors.

The washing of finds got underway during the afternoon.

A single dig diary video clip was recorded, and 11 photographs taken.

#### Friday, 19th July 2024

On site today are Peter, Chris, David, Alex, Iain, Nick (C), and Charlie.

The final day. The tent was taken down and the equipment loaded to be returned to SHARP. The rest of the morning was spent recording and measuring. Charlie, Nick (C), and Peter spent the morning in the trenches taking the various height measurements with a dumpy level.

Alex, Chris, Iain, and Peter focused on cleaning, sorting, measuring, recording, and bagging the finds: a total of 79 finds were recorded. Other final recording also took place.

Work continued until 12:10 when Alex and David departed for home. Iain departed soon after.

Peter, who has been such a fundamental part of the organisation and running of the week's dig, kindly took the finds home with him.

The port-a-loo was collected during the afternoon, although the mini-digger did not return to site as had been previously arranged.

The final dig diary video clip was recorded, and 14 photographs taken (all of finds).

#### Monday, 22nd July

The mini-digger returned to site during the afternoon, and back-filled both trenches, overseen by Peter.



## Appendix 24 – Video Dig Diary (July 2024)

Prior to the 2024, the BBC's *Digging for Britain* programme asked for the dig to be videoed. This was undertaken as a daily video dig diary.

Sequence Number	File ID (last four digits)	Taken by	Date	Duration (h:mm:ss)	Description
001	0592	DNF	12/07/2024	0:01:17	Day One: introduction to the project and the site (taken as 'selfie'). This sets out the location (the site of the north-east bastion, constructed during 1643-44 as part of the re-fortification of the town following the siege, earlier in 1643), its importance, and the sophistication of the design.
002	7326	DNF	12/07/2024	0:00:30	Day One: digger excavating trench B - this is the largest of the two trenches (15m x 1.8m) and aims to uncover traces of the English Civil War (ECW) fortifications, particularly the inner-edge of the moat and the Fausse-braye (or Fraussebraye). The trench is approximately aligned NE-SW. As can be seen in this clip, as a result of the wetter than expected spring and summer, the water table is higher than anticipated (the site is 3.62m above sea level). Based on experiences in both 2021 and 2022, traces of the ECW fortifications are expected to be encountered at a depth of more than a metre.
003	2041	DNF	12/07/2024	0:00:23	Day One: digger excavating trench A - this was initially intended to measure 1.8m x 6.5m (it subsequently doubled in size) and was located on the edge of the brick kiln as depicted in a 1797 map). The trench is approximately aligned N-S, with the western edge close to the fence (and brambles and nettles!)
004	6283	DNF	14/07/2024	0:00:46	Day Two: trench B - the combination of the high-water table and some weekend rain has resulted in a puddle at the SW end of the trench.

Sequence Number	File ID (last four digits)	Taken by	Date	Duration (h:mm:ss)	Description
005	8545	DNF	14/07/2024	0:00:53	Day Two: trench A - to give trench B some time to dry out, focus is on the site of the brick kiln, with the team excavating this area. The team this day is Charlie, Chris, Iain, Nick C., Nick P., and Peter (with David filming).
006	3586	DNF	14/07/2024	0:00:44	Day Two: trench A - Work continues on the trench with signs of brick making (traces of charcoal and mis-fired bricks) are encountered almost immediately.
007	7181	DNF	15/07/2024	0:01:00	Day Three: trench B - a little adequate drying weather has improved conditions slightly, and has revealed a horizontal cut that might relate to the top of the Fausse-braye. This needs to be investigated further.
008	3610	DNF	15/07/2024	0:01:03	Day Three: trench A - the team has been joined by Alex, and (for Monday only) James. Possible traces of a linear feature have been encountered, which might be the eastern (or southeastern) end of the brick kiln. It is not known what the brick kiln would have looked like, but given that it was featured on a map, it is unlikely to have been a temporary structure.
009	1613	DNF	16/07/2024	0:00:38	Day Four: trench B - heavy overnight rain has flooded half of trench B, and has resulted in the sides of the trench (SW end) collapsing. There has also been some flooding in trench A. Given the continuing wet (and therefore hazardous) conditions, work on the site has had to be abandoned for the day. This did, however, give the team the opportunity to explore King's Lynn's historic buildings, particularly to compare the different types and sizes of bricks used. A few members of the team returned to site in the evening (once the rain had stopped) to begin mopping-up operations.

Sequence Number	File ID (last four digits)	Taken by	Date	Duration (h:mm:ss)	Description
010	8054	DNF	17/07/2024	0:00:56	Day Five: trench B - this shows an attempt to investigate the possible ECW feature by excavating a small insert approximately midway along the northern side of the trench. Iain and Peter worked on this. However, conditions proved to be too difficult, and potentially hazardous to continue, so after recording the trench, it was closed.
011	3752	DNF	17/07/2024	0:01:14	Day Five: trench A - due to the previous day's rain, and despite mopping-up, the eastern part of the trench A has been abandoned. This has enabled work to progress in the remaining parts of the trench, which has been expanded northwards and southwards. Jo joined the dig for days five and six.
012	2555	DNF	17/07/2024	0:01:03	This is a small selection of the finds from trench A. Finds include kiln 'furniture' (saggars and spacers), mis-fired bricks (inadequate drying of the bricks prior to firing causes them to 'explode' whilst in the kiln), charcoal and clinker, plus some evidence to suggest that some sort of iron-working might have also taken place on site (period yet unknown).
013	0415	DNF	18/07/2024	0:00:59	Day Six: trench A - an overview of the trench from the top of the spoil heap, looking north, and northwest. The concentrations of bricks and tiles in the trench demonstrate that bricks were being made on this area (there is little or no evidence to suggest that this was a dump - if it were, dumped material would be present right across the site), and it is likely that we have encountered the southern, or southwestern end of the brick kiln itself.

Sequence Number	File ID (last four digits)	Taken by	Date	Duration (h:mm:ss)	Description
014	5470	DNF	19/07/2024	0:03:00	Day Seven: the last day of the 2024 'season'. Actual excavation has now ceased, and the team has embarked on the final recording and measuring, as well as finds processing (nearly 80 finds have been recorded, which is almost the same number of finds recorded during the two-week dig in 2022). Whilst the results from trench A have probably exceeded expectations and have provided significant evidence for brick-making on the site during the 18th and 19th centuries, as well as suggesting other industrial activity (yet undated), trench B has been disappointing. There has been a glimpse of a suspected trace of the fortifications (this is possibly becoming more obvious as the trench dries), but the conditions have simply prevented the excavations that had been planned and required to reveal further traces of the defences.

Unfortunately, this video diary was not included in the programme.

## Appendix 25 – Chronology of the Site

The exploration of the site between 2020 and 2024 has enabled the project to produce a chronology of the site and then maps its components. This chronology comprises of six phases, which are set out below. For the sake of clarity, the chronology used to group the finds (see section 8.1) is also included.

### Phase One: The Defensive Phase

Richard Clampe's design for the town's defence after the 1643 siege pushed the line of the fortifications significantly to the north of the then existing defensive line which was based on the Fisher Fleet and the Loke. This newly enclosed area contained a line of fishponds parallel to the Great Ouse to the west, but probably its chief purpose was to enclose and protect an area of grazing land, most likely for horse and oxen, both of which would haul wagons and carts, and thus were critical to the transportation of supplies overland. Rastrick's 1725 *Ichnographia Burgis perantigum Lennae* depicts animals grazing on this land<sup>38</sup>.

As the 2021 investigations discovered, the width of the fortifications at the North East bastion (east face) measured 59.39m, which is some 3.2m wider than that planned by Clampe for the southwest bastion (this is due to a slightly wider moat: 20m versus 16.76m). At this stage in the project's investigation, it is not possible to identify how the North East bastion was armed, but a document in The National Archive indicates that King's Lynn's forts and bastions were being armed from January 1644<sup>39</sup>.

Unlike elsewhere in the country, the Restoration of the Monarchy in 1660 did not result in the demolition of the fortifications. One reason for this was unlike in many other towns, the fortifications here were not built across existing suburbs. Visiting Kings Lynn in the 1720s, Daniel Defoe observed: "The situation of this town renders it capable of being made very strong, and in the late wars it was so; a line of fortifications being drawn around it at a distance from the walls; the ruins or rather remains of which works appear very fair to this day; nor would it be a hard matter to restore the bastions, with the ravelins and counterscarp, upon any sudden emergency, to a good state of defence; and that in a little time, a sufficient number of workmen being employed; especially because they are able to fill all their ditches with water from the sea, in such a manner as that it cannot be drawn off." <sup>40</sup>

A glossary of terms used in fortifications is included at Appendix 26.

In 1745, in response to the Jacobite threat, steps were taken to refortify the town. Such was the sense of urgency (or perhaps, panic), "Headed by the valiant mayor

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<sup>38</sup> Wenceslas Hollar, *The Groundplat of Kings Lyn*, (c.1645); Henry Bell, *The Groundplat of Kings Lyn*, (1680); Rastrick, *Ichnographia Burgis perantigum Lennae*, (1725); David Andrews, *Kings Lynn Maps and Plans, 1101-1892*, (2013).

<sup>39</sup> The National Archives, SP28-238 f.2r, 'An account of w[ha]t[?] pay is due to the cannoneers At Lyn from the 10th Jan to the 12th March 1643 [1644] inclusive'

<sup>40</sup> Daniel Defoe, P. N. Furbank and W. R. Owens (editors), *A Tour Through the Whole Island of Great Britain*, (Newhaven and London: Yale University Press, 1991), p. 31



Philip Case of Gaywood Hall, the members of the Corporation and the élite of society, unhesitatingly turned out with spade and pickaxe to assist the workmen”<sup>41</sup>.

For the reasons set out above, phase one, the defensive phase, covers the period 1643-1750, and includes the finds periods: Pre-Civil War (i.e., before 1642); ECW/Military occupation of site (1642-60); and Post Civil War (1660-1750).



Figure 74 – The 1680 plan overlaid on a modern aerial photograph

## Phase Two: The Industrial Phase

The maps and plans of the town up to 1725 are largely based on Hollar’s c. 1660 Groundplat, and each depict the multi-layer composition of King’s Lynn’s fortifications. By 1797, the fortifications running south from the East Gate had largely been removed, leaving just the moat and the occasional tract of the ramparts (most notably at the Red Mount). However, north of Kettle Mill, the fortifications appear to be largely intact. Both Faden’s 1797 *Map of King’s Lynn*, and the 1812 *Plan of Lynn*

<sup>41</sup> Henry James Hillen, *The History of King’s Lynn*, (Wakefield: EP Publishing Limited, 1978), volume 2, pp. 489-90, p. 519

depict a “Brick Kiln” inside both the North East and north bastions<sup>42</sup>. By the second half of the eighteenth century, King’s Lynn was expanding, and the town was being built in brick<sup>43</sup>. Mature, weathered clay makes better bricks than fresh, newly dug clay, and the remaining ramparts would have contained tonnes of perfect brick-making clay. So, it is of no surprise that the brick-makers harvested this clay, and set up brick kilns close to the source. Currently, it is unknown when brickmaking on the site started, or when it finished, and the next map covering the site (dated 1886-7, so more than 70 years later) does not feature any brick kilns.



Figure 75 – The 1797 plan overlaid on a modern aerial photograph

According to the 1797 and 1812 plans, the North East bastion brick kiln was positioned against the inside of the north-west flank of the bastion, with a track running approximately south-eastwards across the base of the bastion. The 2021 investigation found (at the western end of the trench) a small quantity of mis-fired and blown bricks (likely to be caused by bricks being insufficiently dried out prior to

<sup>42</sup> Faden, *Map of King's Lynn*, (1797); *Plan of Lynn in Norfolk*, (1812)

<sup>43</sup> Paul Richards, *King's Lynn*, (Stroud: Phillimore & Co. Ltd., 2017), pp. 12-13



firing), which were discarded following firing. The 2022 dig uncovered further examples, together with pieces of clinker and charcoal, all evidence of brickmaking on the site.

Phase two, therefore, covers the period between 1750 and 1820 and includes the finds periods 'Industrial' (brickmaking) period (1750-1900).

### **Phase Three: Open Field**



*Figure 76 – The 1887 Ordnance Survey map overlaid on a modern aerial photograph*

It is not known when brick making ceased. The kiln was shown on the Ordnance Survey 1 inch to 1 mile First Series Maps of the British Isles (1805-1845), but by the time of the 1886-7 Ordnance Survey, there were no surface traces of the rampart, whilst the moat had been narrowed to what would later be known as the "Drain", which enclosed an area of open land depicted on the 1887 Ordnance Survey map. This map shows two features: a small structure close to the inside of the northern face bastion (to the east of the western flank), and to the south of this feature, a small pond.

Phase three covers 1820 to 1900 and covers the finds periods of 'Industrial' (brickmaking) period (1750-1900); and Post-industrial/return to agriculture (1900 to present day).

#### **Phase Four: Market Garden**

Between the Ordnance Survey of 1886-87 and the next one in 1905, the site witnessed significant development. The structure featured in 1886-7 had been extended with a new wing running southwards, whilst further to the east, against the inside face of the bastion, an aviary had been constructed. This period also marks the start of the site's transition into a market garden. The site is crisscrossed by a number of tracks and paths, whilst towards the southern edge of the site, several greenhouses have appeared – the 1905 survey shows three, all close by the southern flank of the bastion. A further building has been constructed by the track which runs south to north along almost the entire length of the bastion.



*Figure 77 – The 1905 Ordnance Survey map overlaid on a modern aerial photograph*



By the 1928 survey, the aviary has gone, whilst to the south two further greenhouses have been added (positioned a little further north to the 1905 ones).

Phase four covers 1900 to 1940 and includes the finds period Post-industrial/return to agriculture (1900 to present day).

### **Phase Five: Fairlawn Nurseries**

The next Ordnance Survey was in 1968. This map shows that the buildings in the northern part of the site have been cleared, and the land appears to have been returned to open land. Now named 'Fairlawn Nurseries', the greenhouse complex has expanded to seven greenhouses, plus some ancillary buildings or sheds. The brick wall which today marks the southern edge of the site dates from this period and is probably the remains of the long narrow greenhouse which ran eastwards from the south-north track.

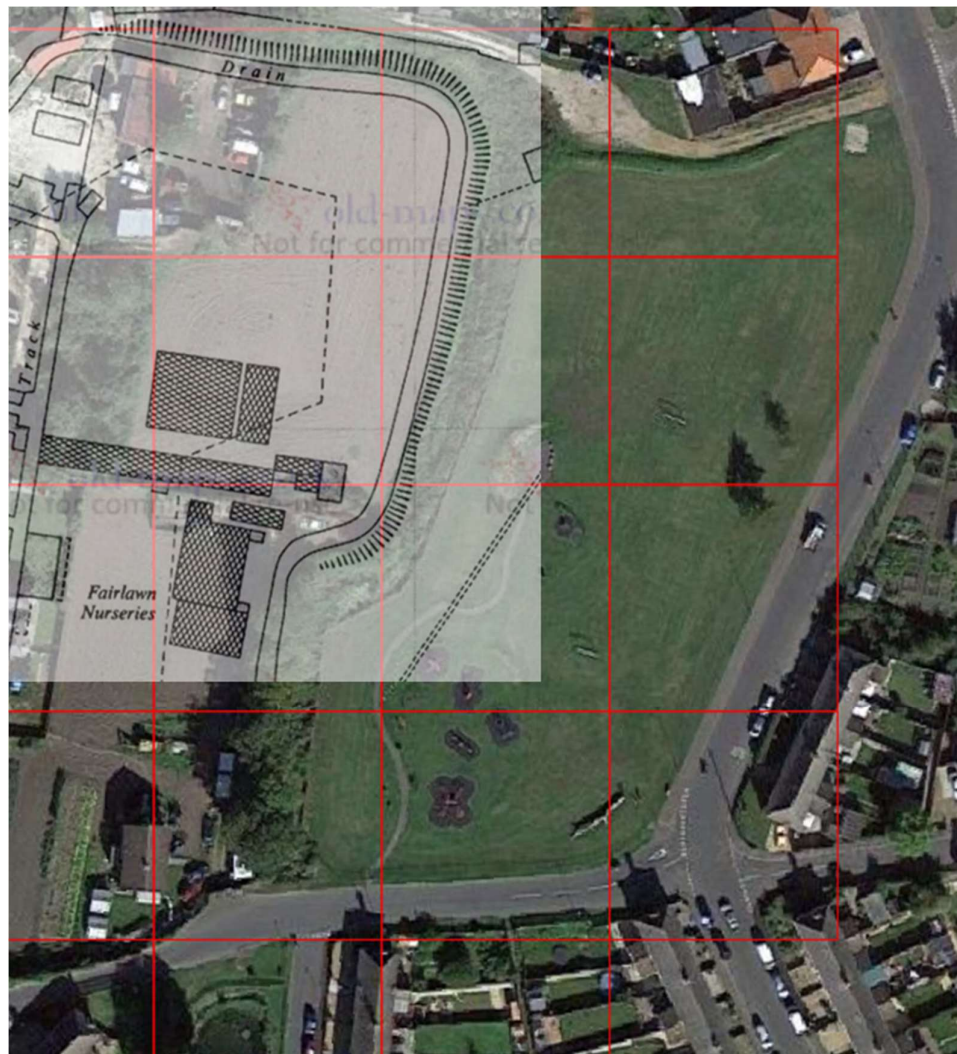


Figure 78 – The 1967 Ordnance Survey map overlaid on a modern aerial photograph



Sometime after 1968, the present Fairlawn House was built, and during the same period, the nursery greenhouses were demolished.

Phase five covers the period 1940 to 2020 and includes the finds period Post-industrial/return to agriculture (1900 to present day).

### **Phase Six: Present day**



*Figure 79 – A modern Ordnance Survey map overlaid on a modern aerial photograph*

King's Lynn Under Siege first encountered the site of the North East bastion in January 2020. Until the summer of 2021, the site was viewed only externally from the neighbouring recreation ground which borders the entire length of the site's eastern edge. Outside the site to the north is an unmetalled track which provides vehicular access to the rear of the house on Turbus Road. The western edge of the site has been divided by corrugated metal fencing, behind which are other properties, reached via Rope Walk. Part of the northern face and the entire western flank of the bastion lies beneath this area and is not accessible. Along the southern

edge of the site runs a brick wall which is likely to be the remains of one of the nursery greenhouses. The overall site is now an open field.

September 2021 was the first time the site itself was visited. One noticeable feature of the approach to the site from Fairlawn House are the pile of demolition rubble from the nursery greenhouses.

During the 2021 *Great British Dig*, a trench measuring 1.8m x 30m and running approximately east to west was excavated. This is summarised in section 4. This revealed traces of the moat, fausse-braye, and rampart, as well as evidence for the construction of the ramparts, and also some evidence for brickmaking on the site. The investigations of the site in 2022 are detailed in sections 6 to 8, and importantly, the test-pitting carried out as part of this investigation suggested the northern-most point of the nursery site. The 2024 investigation is detailed in sections 12 to 14.

Therefore, phase six covers the site during the KLUS investigations.

## Appendix 26 – Glossary of fortification terms

**Bastion:** a work projecting outwards from the main walls of a defensive work and designed to enable the garrison to defend the adjacent perimeter

**Berm:** a level space between two features, commonly the outer foot of the rampart and the scarp of the ditch

**Chevaux-de-frise:** horizontal tree-trunks with sharpened stakes or branches protruding at all angles

**Counterscarp:** the outer facing sloping wall of the ditch facing the ramparts

**Coupure** or a **retirade:** in this context, it is an improvised line of defence erected behind a breach in the main defences

**Covered-way:** a path on top of the counterscarp protected by a parapet formed from the crest of the glacis

**Crown-work:** a horn-work to which a full bastion had been added between the two demi-bastions

**Cunette:** A deeper ditch or furrow running along the centre of a ditch or moat. This would help with drainage for a dry-moat, and as it would take longer to freeze, provide additional winter protection for a moat

**Curtains:** the main wall of a defensive work, usually the length of rampart between two bastions

**Demi-lune:** a small, detached outwork placed before a curtain

**Enceinte:** the fortified perimeter of a fortified work, and the area enclosed by it

**Enfilading fire:** fire from the flank of a bastion along the faces of the adjacent works, or along the line of defence

**Fausse-braye:** an outer rampart added exteriorly to the walls of a fortress, but lower in height than the main enceinte and preceded by a ditch

**Glacis:** the sloping ground in front of a fortress spanning from the top of the parapet of the covered way down until it reaches open country

**Graffe:** A trench, ditch, or fosse used in fortification especially as a moat

**Horn-work:** an outwork fronted by two demi-bastions (half-bastions)

**Moat** (if wet) or **Ditch** (if dry), and sometimes also called a fosse: a trench dug outside a fortified work, sometimes water-filled, alternatively, dry.

**Orillon:** A screen projecting from the shoulder of the bastion to project weapons placed on the bastion flank

**Parapet:** a breastwork on top of a rampart intended to provide shelter for the soldiers behind it

**Ravelin:** a triangular outwork placed in front of a curtain wall

**Tenaille:** a small outwork placed outside the ditch

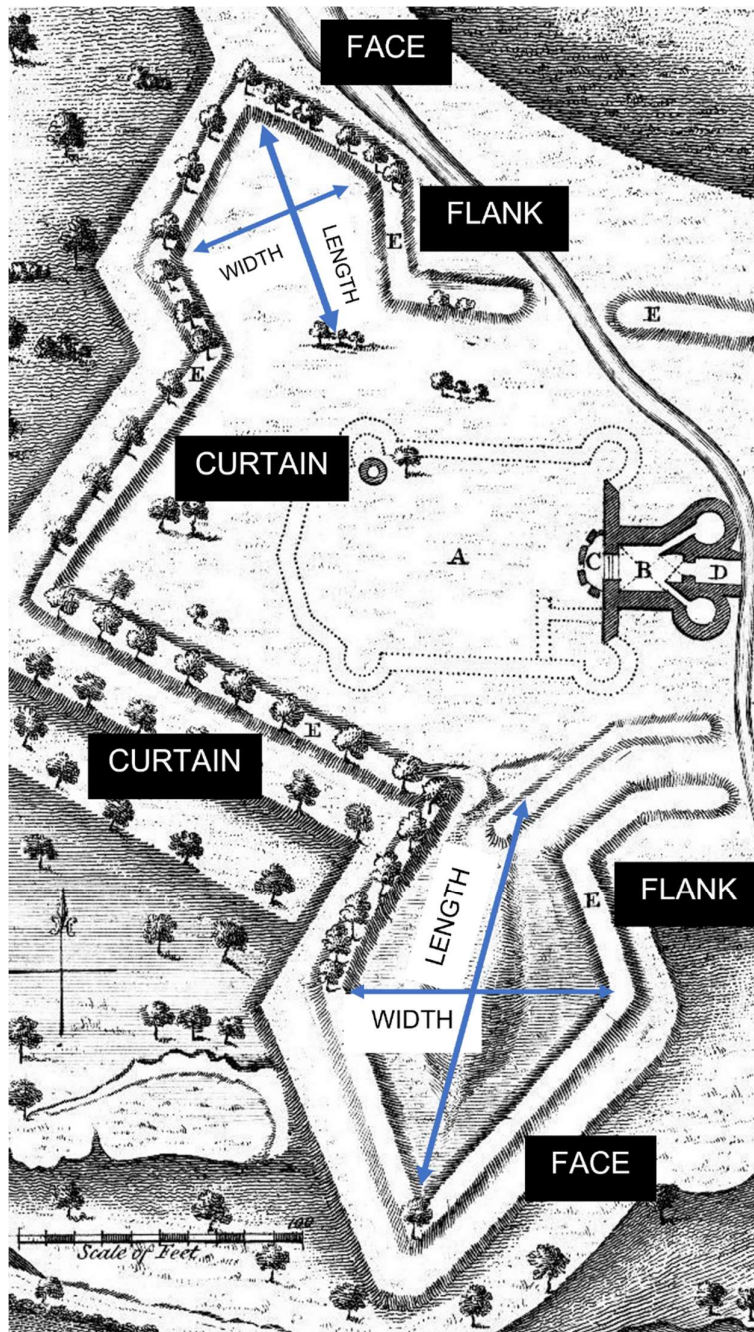


Figure 80 – Bastion components (based on a plan of Donnington Castle)

Definitions from *Illustrated Glossary of Military Architecture Terms*, (Fortress Study Group), <http://www.internationalfortresscouncil.org/mfd.html>, and Jean-Denis Lepage, *Dictionary of Fortifications*, (Barnsley: Pan and Sword Military, 2022)



## Appendix 27 – Earthwork Rampart Construction

The discovery of two posts in alignment at the foot of the rampart suggest a method of construction of an ECW-period rampart, since simply digging a ditch and piling the excavated soil behind it to form a rampart is insufficient to form a structure that would be strong enough or weather-proof. In the absence of evidence of internal frameworks or revetments, our theory is that the rampart was constructed as a series of 'steps'.

According to Nicholas Stone (who was Master Mason to both James VI/I and Charles I), the initial foundations of the rampart were secured by using a 'saucidge' ('sausage') which was a wooden stake of between 30.48–60.96 cm (one and two feet) in height, tied together with 'brush wood'. Such foundations needed to be specifically secured near the ditch (moat).

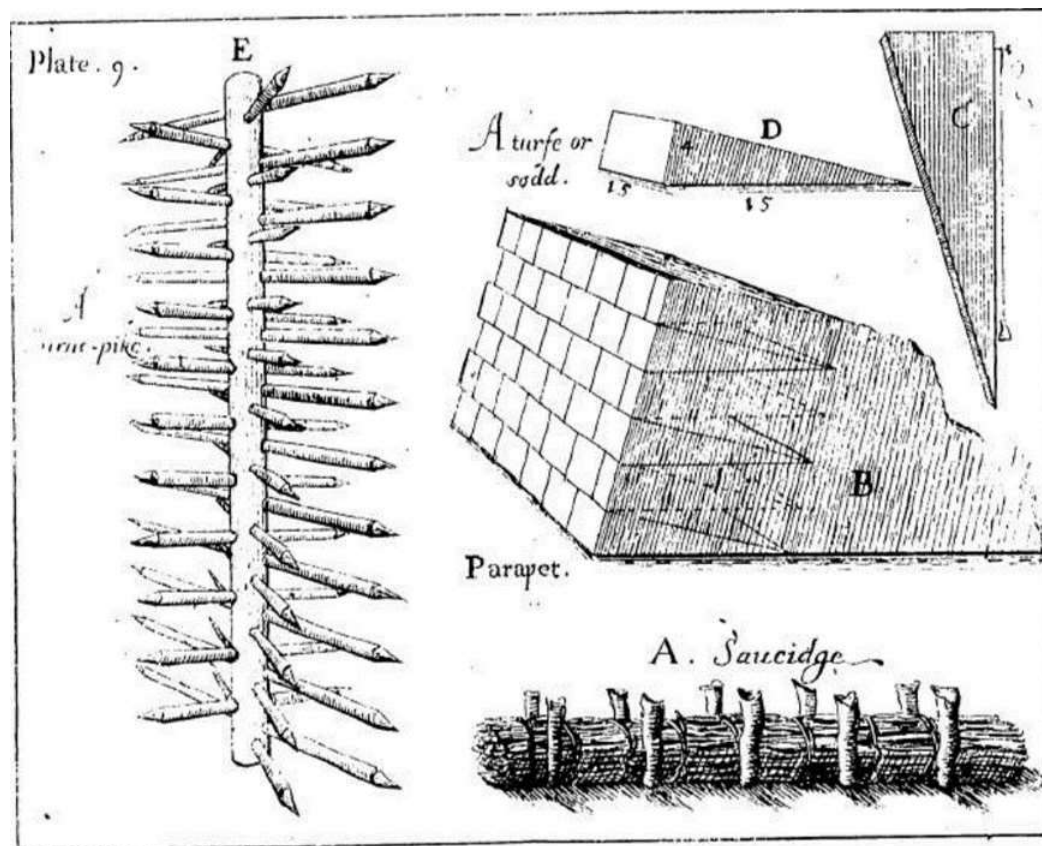


Figure 81 – Plate 9 of Nicholas Stone's *Enchiridion of Fortification* Or *A Handfull of Knowledge in Martiall Affaires* (1645) illustrating how turfs were to be cut, and then used to face ramparts. Also shown is the 'saucidge', something that may well have been used to construct a rampart

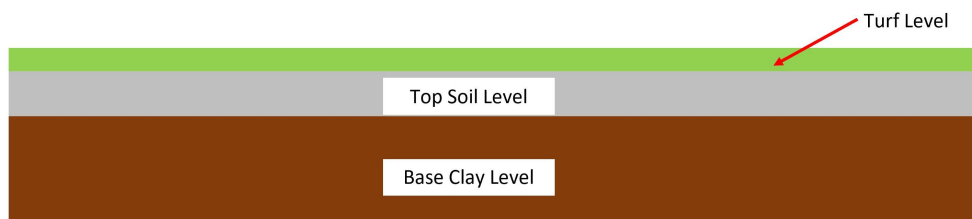
Stone wrote:

"First you must drive stakes of a competent length, and at a reasonable distance, as you Saucidges, either for their greatness, or smallness shall require. Either one foot high, 1 foot and  $\frac{1}{2}$ , or sometimes two foot in height.



Then between these stakes you must depress bundles of small brush wood, bound fast together: Filling them in the midst with brick-bats, if you would sinke them in a River, but with earth, if you intend them a foundation in a Moat all along the said Work.”<sup>44</sup>

The two uncovered rampart stakes are approximately 3.3 m apart, and there are traces of a cross-piece, which could either be remains of a wooden plank or perhaps bound brushwood. This evidence along with what can be learned from the contemporary accounts suggests a method of construction where the rampart would be formed from stepped layers of hammered clay, supported by the wooden stakes. Ensuring that the height and depth of each step are equal will result in the desired 45° angle for the rampart.



**One**  
Site identified/planned

*Figure 82 – Rampart Construction (step 1 of 7)*

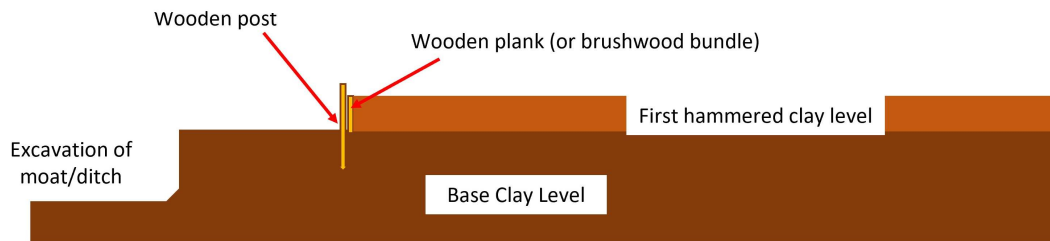


**Two**  
Turf and top soil removed

*Figure 83 – Rampart Construction (step 2 of 7)*

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<sup>44</sup> Nicholas Stone, *Enchiridion of Fortification* (London: Richard Royston, 1645), p.34.



### Three

Moat/ditch excavated. Excavated clay used to build rampart  
 Line of posts inserted along first level (outer 'foot' of rampart). Planking or brushwood bundle lined against posts  
 Initial clay level added (clay is hammered)

*Figure 84 – Rampart Construction (step 3 of 7)*

With the stakes and cross-pieces in place, the ditch would be excavated, and a layer of the excavated earth piled behind the wood. This would be hammered firm.

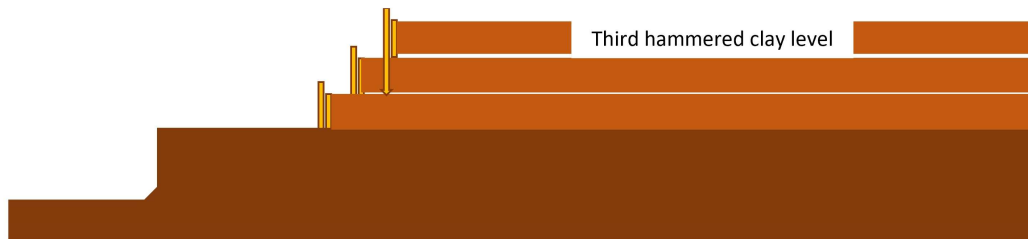


### Four

Line of posts inserted along next level. Planking (or brushwood bundle) lined against posts  
 Second clay level added (clay is hammered)

*Figure 85 – Rampart Construction (step 4 of 7)*

On top of this layer, and slightly further back, a second row of stakes and cross-pieces would be inserted. More earth would be piled against this, and again rammed firm.



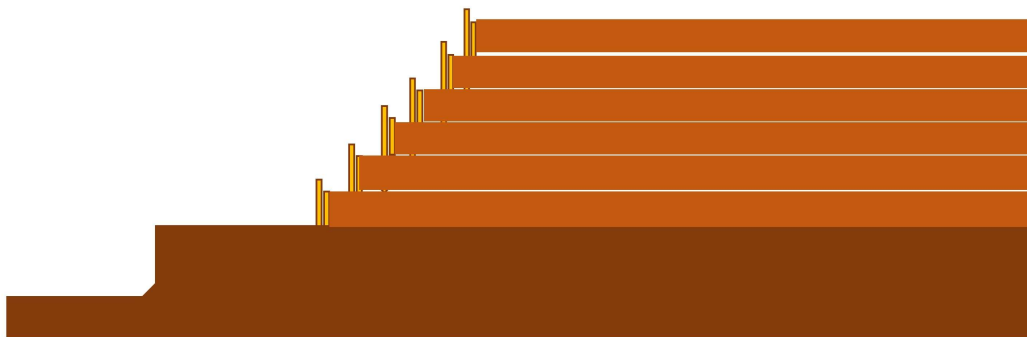
**Five**

Line of posts inserted along third level. Planking/brushwood lined against posts

Third clay level added

Subsequent levels added until require height of rampart is reached

*Figure 86 - Rampart Construction (step 5 of 7)*

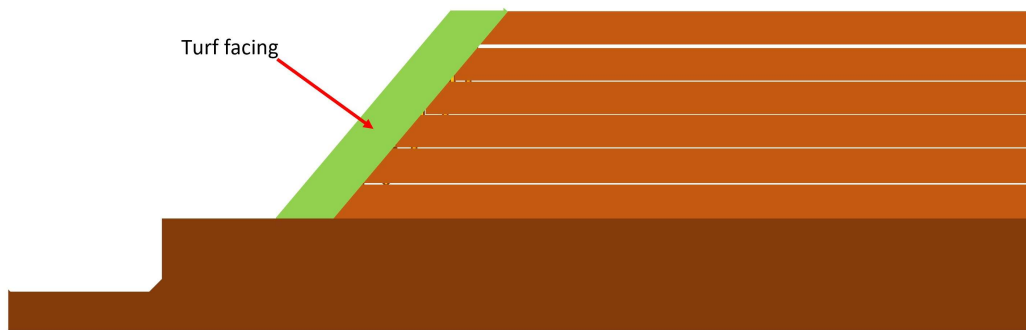


**Six**

Process repeated until desired height is reached. Ensuring that the height and depth of each step are equal will result in the required 45° angle.

*Figure 87 – Rampart Construction (step 6 of 7)*

Subsequent stepped layers of hammered earth, each supported by stakes and wood/brushwood would be added until the desired height of the rampart had been achieved.



#### Seven

Completed rampart is faced by wedges of turf  
(note: parapet not shown)

*Figure 88 – Rampart Construction (step 7 of 7)*

The original turf was then used to face the rampart, providing additional strength and protection. According to Richard Norwood, the individual pieces of turf should be 12.7 cm (4–5 inches) wide and 38.1 cm (14–15 inches) in length and shaped 'like a wedge'. This wedge is cut in a triangular shape so that the rampart achieves its slope.<sup>45</sup> The need for turf would render local pastureland unusable, much to the chagrin of local farmers. At the top of the rampart, a parapet, perhaps constructed from gabions (which will be explained later in the chapter) would be added. Finally, whilst an average sized rampart could keep mounted cavalry out, determined infantry could scale ramparts relatively easily, and as a result, ramparts would also include additional defensive measures including wooden palisades and sharpened storm poles.

Norwood suggested that one man could dig 14.1 cubic metres per day, whilst Sir Richard Cave, a Royalist fortifications expert, estimated that 20 men could cast up some 12 metres of breastworks in 12 hours;<sup>46</sup> so, based on this estimate, a few hundred men could fortify, albeit simply, a small town in a week.

<sup>45</sup> Richard Norwood, *Fortification or Military Architecture* (London: Andrew Crooke, 1639), p.93; Stone, *Enchiridion of Fortification*, p.35.

<sup>46</sup> Norwood, *Fortification or Military Architecture*, p 123; J. Duncumb, *Collections towards the History and Antiquities of the County of Hereford* (Hereford: 1894), Vol. 1, p.248.

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