DigVentures

Soulton Hall

2022 Updated Project Design

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Soulton Hall

Updated Project Design

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Purpose of document

This document has been prepared as an Updated Project Design for continuing community-based research excavations at Soulton Hall, Shropshire. The purpose of the document is to provide an outline of planned fieldwork for 2022, outlining the aims and objectives of the work and methodology to be employed.

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The Project Executive for DigVentures is Lisa Westcott Wilkins and Projects Director is Brendon Wilkins, with Manda Forster as Project Manager, Maiya Pina-Dacier as Head of Community, Nat Jackson as Project Officer and Site Director and supported by Indie Jago, Ben Swain and Harriet Tatton as Community Archaeologists.

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Executive summary

This document has been compiled in support of further archaeological investigation at Soulton Hall to be carried out by DigVentures. In 2019 an initial season of archaeological excavation was undertaken focusing on the scheduled moated site and formal garden remains (HE list entry no. 1017236). In 2021 there was a second season of excavations opening two trenches to investigate discoveries made during the test pitting. This Updated Project Design supports a third season of fieldwork, an extended programme of 3D photogrammetry survey, geophysical survey, landscape survey and trenching. The approach to this work is evidenced through the following MoRPHE / PRINCE2 compliant document, outlining key archaeological research questions, roles, procedures, stages and outputs.

The overarching aim of this fieldwork is to provide baseline information to contribute to the future management and research of the site, creating multiple educational and participatory learning experiences for community participants. This will be achieved through a community-based archaeological research project designed to understand:

- the extent of the surviving archaeological remains found in 2019 and 2021
- groundtruthing anomalies discovered by the geophysical survey in 2021
- the nature, date and survival of archaeology at the site of the Medieval moated site
- the relationship of these remains in a wider landscape settings and ability to contribute to syntheses on the form, development and significance of moated sites.

This Updated Project Design provides an outline of methodology and planned intervention to complete:

Targeted excavation It is proposed that the two trenches opened in 2021 are partially reopened and expanded and that five additional trenches are opened to investigate anomalies discovered in the geophysical survey in 2021. Trenches 7 – 12 will be located in the field north of the B5065 to further investigate the moated site, the moat bridge discovered in 2021, and further characterise the industrial activity area. Trench 13, located on the south side of the B5065, will target remains of a reported paved area or wall. The aim is to define and characterise the exact use, date and nature of the mound and the adjacent area.

Remote sensing Geophysical survey is proposed to investigate the area to the south side of the B5065, to the northwest of the house and gardens. Landscape survey will include walkover survey of land around the site, making note of any potential archaeological features.

Public engagement The project is supported by a comprehensive learning, engagement and activity plan which aims to both raise awareness to the site and provide tangible learning outcomes. An innovative digital recording system will enable volunteers to record and publish results from the field; specifically developed learning materials will be used to deliver schools sessions, with a dedicated project website, underpinned by a digital and audience building strategy, aiming to engage the local community and a global audience in the project.

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1 INTRODUCTION

1.1 Project background

1.1.1 DigVentures are embarking on the third stage of a multi-phased research project investigating the scheduled moated site and formal gardens at Soulton Hall, Shropshire (hereafter 'the Site, Figure 1, NGR SJ 54469 30323). Soulton Hall has invited DigVentures to undertake a programme of archaeological interventions at the site as part of a community research project. The rich archaeological heritage of the site has not been subject to targeted archaeological investigation previously. The community-based research investigation will provide new knowledge about the site and contribute to the better management of the archaeology as a result.

1.1.2 This document provides an Updated Project Design for delivery of a community-based archaeological investigation of Soulton Hall, Shropshire. It defines how DigVentures intends to deliver this phase of the project, and outlines how research aims and participation targets will be met. The project is being managed according to Historic England's MoRPHE project model (Management of Archaeological Research Projects in the Historic Environment).

1.1.3 This Updated Project Design is presented in two parts; *Part 1: Description of the project* provides the project context, including a summary of proposed methodology, key sources and activities required to support the delivery of the proposal's outcomes. *Part 2: Resources and programming* identifies responsibilities of individual project staff members and outlines the tasks and programme.

Part 1: Description of the project

2 BACKGROUND

2.1 Historic background

2.1.1 Soulton Hall, Wem, is an Elizabethan manor house with over four thousand years of history. The first signs of human activity at Soulton Hall date to the Neolithic with a worked flint discovered in 2017. In the Bronze Age, a barrow was built to the east of Soulton and in the Iron Age a significant settlement was established at nearby Burry Walls (http://www.soultonhall.co.uk/page/65/history.htm). In the Roman period the Romans constructed a road from *Uriconium* (Wroxeter) to *Mediolanum* (Whitchurch) over part of the estate. A small town called *Rutunio* was built somewhere very close to the current hall, but its exact location has been lost (*ibid.*).

2.1.2 During the early medieval period the manor occupied the frontier between Powys and Mercia and has been continuously occupied since. The site is recorded in the Domesday Book as Suletune, the first element of which probably relates to the landscape, indicating a gully. Domesday names Beorhtric as the owner of Sultune in 1086, who might be Britric the Saxon, brother of Edric, the last Ealdorman of Mercia. The Anglo-Saxon chronicle described Britric as fleeting, ambitious and proud, killed with his brother by King Cnut in London on Christmas Day 1017 (http://avalon.law.yale.edu/medieval/ang11.asp).

2.1.3 There is some suggestion that that the remains of a deserted medieval village are located to the north of the hall along Soulton Road, although the road may have moved south at some point after the 1100s. There is a remnant of medieval ridge and furrow visible within the existing 50-acre woodland, with a mill race dating to the 1200s still obvious (http://www.soultonhall.co.uk/page/326/archeology-lidar.html). At this time the manor of Soulton belonged to King's Chapel at Shrewsbury Castle, granted by the Earl of Shrewsbury. The Castle Chapel transferred the manor to the Kynaston family sometime in the 11th century, and they in turn gave occupation to the de Soulton family.

2.2 Research context

2.2.1 A mound and associated moated site (Shropshire HER Ref 01015, Scheduled Monument 1017236), was originally identified at Soulton as a medieval ringwork in 1965 from aerial photographs, by one of the compilers of the Ordnance Survey. It has subsequently been identified as the site of an older manor house dating to the 13th century. The Scheduled Monument includes the earthwork, the buried remains of a medieval moated site and a post-medieval formal garden within two separate areas of protection. The moated site, situated on the western edge of the flood plain of Soulton Brook at the base of a gentle east facing slope, is considered to be the centre of the manor of Soulton. An oval shaped moat surrounds a rectangular island which displays a well-defined stepped profile on all sides believed to be the result of its later use as part of the post-medieval formal garden. On the top there are a series of slight scarps, which relate to the building or buildings that once occupied the site.

Crossing the western moat arm are the slight remains of a causeway (Heritage Gateway, PRN 1015).

2.2.2 Records dating to the second half of the 13th century indicate that by that time the manor was being leased to Robert Corbet. In the 16th century it had been bought by Sir Rowland Hill, which probably led to the building of a new residence, known as Soulton Hall, 200m to the south west of the moated site (Historic England, List Entry Number 1017236). Sir Rowland Hill was the first protestant Lord Mayor of London (1549) (http://www.soultonhall.co.uk/page/65/history.html). In 1668, his descendant, Thomas Hill, High Sheriff of Shropshire and a friend of Samuel Pepys placed his marital coat of arms above the front door (ibid.). The exterior of the hall and the internal stud partitions are consistent with a house built in the second half of the 16th century, however the paneling surviving in one of the bedrooms and the upper staircase suggest remodeling during the later 17th century. The hall and the 17th century garden walls are Listed Grade II* and are not included in the scheduling (https://historicengland.org.uk/listing/the-list/list-entry/1017236).

2.2.3 The second area of protection lies to the south of the mound and to the east of the 17th century walled garden of Soulton Hall. It includes the earthwork remains of a formal garden consisting of a series of well-defined terraces and raised areas, including a rectangular building platform measuring 16m by 11m (HER PRN 8247). The earthworks follow the same alignment as Soulton Hall and the walled garden, and are believed to be of the same date. It is apparent that the gardens were laid out in relation to the moated site and to provide an impressive formal setting for Soulton Hall. The spring in the north eastern part of the garden is contained and surrounded by walls of red sandstone blocks and covered by a red sandstone slab. The complex of garden earthworks opposite the walled garden continues to the north of the modern road, incorporating the existing moated site. A series of shallow channels connect with and radiate out from the northern half of the moat, some of which also connect with the ditches defining the western and northern boundaries of the field. An associated linear depression to the north of the moat appears to be the remains of a pond, and there are slight traces of terraces on the sloping ground to the west of the moated site. An early model farm was developed in the 1700s and Soulton Brook was used by the Duke of Bridgewater to trial the creation of canals in the 18th century (http://www.soultonhall.co.uk/page/65/history.htm).

2.2.4 Despite the potential and significance of the site at Soulton Hall, very little archaeological research has been undertaken at the site. Most recently, as part of the development of the Sacred Stones Barrow at Soulton Hall (see http://www.sacredstones.co.uk/locations/shropshire-long-barrow), a LiDAR based survey was undertaken by researchers at University of Cambridge Archaeology. This data has provided some evidence of earlier periods in the development of the history of the estate. A Roman road can be clearly seen to the east of the estate (http://www.soultonhall.co.uk/page/326/archeology-lidar.html), and medieval ridge and furrow survives within the 50-acre woodland. The route of a water mill race, probably dating to the 13th century, is also visible, as are later garden features relating to the 17th century formal gardens running south and east of the hall (ibid.).

2.2.5 Without further investigation, the exact use, date and nature of the mound situated in the north of the scheduled area cannot be fully ascertained. There has been suggestion that the monument is the remains of an anarchy motte rather than a manor house, providing protection at the site of a ford through the stream (Tim Ashton, pers comm) although following the 2021 excavations this seems unlikely. Alternative interpretations have also included a 17th century as a civil war mound with a gun platform, or perhaps a garden feature (ibid.). Regarding the irregular field in which the mound sits, some of the ditches may also have been constructed or later reused as drainage ditches or been incorporated into the formal gardens. The opportunity to undertake a community-based research investigation at the site will provide firm evidence for the character of the extant earthworks and add new information about the nature and preservation of surviving archaeological deposits relating to the early mound and the 17th century formal gardens.

2.3 2019 fieldwork

2.3.1 The first season of fieldwork focused on test pit investigation of locations within the scheduled area of the moated site and formal gardens (HE List Entry No. 1017236). Test Pits 1, 2 and 3 were chosen to target earthwork features identified through LiDAR and walkover survey related to the medieval moated site. Test pit 1 was located to investigate the nature of the top of the mound. Test Pit 2 was located to investigate the construction of the ditch. Test Pit 3 was located outside the moat to investigate the activity in the area immediately adjacent to the mound. Test Pits 4, 5 and 6 were located to examine the survival of the formal gardens. The picture emerging is the development of the site as a 13th-century manor house with a moat, possibly associated industrial activity, which fell out of use in the 16th century. In the later-17th century it became the location for a formal garden associated with Soulton Hall.

2.4 2021 fieldwork

2.4.1 Fieldwork was undertaken in July 2021 to address a series of research questions which focused on the scheduled earthwork remains to the east of Soulton Hall, Shropshire (Historic England List No. 1017236). The scheduled area is defined as an area immediately east of the hall, comprising earthworks related to the gardens laid out from the 17th century AD, and an area to the northeast, comprising earthworks of a particularly unusual sub-circular moated site, likely of Medieval age. The investigations involved a programme of targeted interventions, including geophysical survey and excavation (Jackson et al 2022).

2.4.2 Trench 7, measuring 20 x 3m, investigated the southern side of the mound, targeting the mound and associated ditch. A slot excavated in at the top of the trench investigated the make-up of the mound itself, revealing that it was created by a build up of layers of clay deposits probably brought in from the construction of the moat. The mound itself may have initially been a headland in the bend of Soulton Brook and was cut off to create the moated site. In the lower half of Trench 7 another sondage was put in to investigate the moat. Within this it was discovered that the moat was cut through alluvial clay deposits and a substantial timber structure, likely a moat bridge was partially revealed. A series of masonry blocks were seen loosely forming a wall that may have shored up the mound to prevent slumping or may have

been a part of the superstructure of the moat bridge. Finds recovered from this trench include pottery, animal bone and various special finds such as a pilgrim's badge, an ampulla, several jettons, and a silver penny of either Edward I or II. These all give the moat a probable date of the late 13th or 14th century.

2.4.3 Trench 8, measuring 12 x 4m, was positioned to the west of the mound adjacent to Test Pit 3 where metalworking debris was previously recorded. The aim of the trench was to potentially identify an area of industrial activity possibly associated with the mound. The 2021 excavations recovered a considerable quantity of material that indicated industrial activity was taking place in the area. This activity likely occurred on the site later than the occupation of the mound. It may be that this was related to the construction of the Tudor Hall, or subsequent activity in the 16th or 17th century. The most notable discovery in Trench 8 was a series of timbers discovered in the base of a ditch, these timbers likely formed a small structure such as a lean-to or shed, possibly where the industrial activity took place. Whilst the structure was still standing it burnt down, those burnt timbers were likely disposed of in the base of the ditch.

2.4.4 The geophysical survey in the field to the north of the road around the mound identified a number of positive anomalies which are suggestive of below ground remains, such as a possible wall or structure, a sub-circular enclosure, some pit-like anomalies and an area of thermoremanent anomalies which are suggestive of burning or firing activity. The geophysical survey on top of the mound identified some weak sub-oval trends which are suggestive of a possible structure or enclosure. The geophysical survey in the field to the south of the road revealed magnetically weak trends of an unclear origin, as well as a group of anomalies suggested to relate to the reputed location of a Roman road and a possible well.

2.5 2022 Fieldwork proposals

2.5.1 Recommendations made as part of the archaeological assessment stage (Jackson et al. 2022) suggested that future archaeological fieldwork focus on further characterisation of the moated site, in order to contextualise the medieval archaeological phase already identified at Soulton. Fieldwork in 2022 will comprise the expansion of two trenches dug in 2021 and five further trenches investigating anomalies discovered in the geophysical survey, as illustrated in the accompanying figures (Figure 2 and 3). It is also proposed that further geophysical survey is carried out on land directly in front of the Hall. Additionally, it is proposed that a landscape survey is carried out to place the site in its wider context.

2.5.2 The extension to Trench 7 will measure 8 x 5m and will focus on the southern side of the mound, targeting the probable moat bridge and associated ditch discovered in the 2021 excavations. It is hoped that it will further characterise the moat and moat bridge. The Trench 8 extension will measure 6 x 6m and will be positioned to the west of the mound and at the western end of Trench 8. This was where metalworking debris was previously recorded, and a rubble spread was seen in the 2021 excavations. It is targeting two geophysical anomalies (S2 and S3, see figure 3) which may be related to the industrial activity, and could contribute significantly to our understanding of the use of the site.

2.5.3 Four of the five new trenches are in the north field. Trench 9, measuring 6 x 3m, will be located at the crest and on the top of the mound, this trench is targeting geophysical anomalies which may relate to a structure on the top of the mound. If features are discovered this may be very significant in furthering our understanding of the function of the mound. Trench 10, measuring 6 x 3m, will be located to the north of the mound and within the moat, it is investigating a potential causeway onto the mound and a feature discovered through the geophysical survey. It will also investigate if the roughly made wall seen in Trench 7 continues for the full circumference of the mound. There is also potential of further datable material that may be found within the moat ditch. Trench 11, measuring 6 x 4m, will be located to the north of the mound, and targets a large pit feature that was revealed in the geophysical survey. The aim of the trench would be to characterise this feature and recover any datable material from it. It may be related to either the moated mound or the industrial area, either way it could be significant in furthering our knowledge of the site. Trench 12, measuring 10m x 2m will be located to the west of the mound and within the moat. The aim of the trench is to investigate a potential ringditch discovered in the geophysical survey. If this does indeed turn out to be a ringditch it would be of major importance to our understanding of the site and would push back the known period of occupation there to at least the Iron Age.

2.5.4 The final trench, Trench 13, measuring 6m x 4m, will be located to the south of the B5065 road against the fence-line targeting a previously located (but unrecorded) line of stone paving found by the landowner. Its precise location, form and date is unknown but may relate to the formal garden, the mound structure north of the road, or an earlier road surface.

2.5.5 It is proposed to survey with both magnetometry and resistivity the area of land between Soulton Hall and the B5065 (see Figure 2). This area may contain evidence of the 16th/17th century garden features and may further assist our understanding of the development of the site over time. The area is 0.3 hectares and the surveying will be carried out over the period of a weekend. It will be delivered as a part of the archaeological field school, where participants are trained in multiple geophysical survey techniques. The magnetometer survey will be conducted using a Bartington Grad601 Gradiometer, surveying on an east-west alignment within 30m grid squares set out using a GPS. The earth resistance survey will be conducted using an RM85 resistivity meter (Geoscan Research), surveying within 30m grid squares set out using a GPS.

2.5.6 In addition, landscape survey will also be undertaken during the 2022 field season to investigate the environs of the mound and help place Soulton Hall in its wider context. This survey will consist of a walkover survey of the land around the site, making note of any potential archaeological features. Looking at the medieval ridge and furrow seen on the LIDAR to the southeast of the site and investigating the claim there may have been a deserted village in the area to the north of the B5065.

3 RESEARCH AIMS AND OBJECTIVES

3.1 Project model

3.1.1 The overarching aim of the project is to define and characterise the physical extent of the site through a programme of non-intrusive investigations and intrusive excavation, obtaining baseline data that will facilitate its future management. This project model is framed as overarching aims and key questions/objectives that provide a framework for the methods, stages, products and tasks set out in Part 2 of the Updated Project Design below.

3.2 Research aims

Aim 1 – Identify the physical extent and character of the moated site and formal gardens in their environs.

3.2.1 This aim will entail non-invasive survey of the site, continuing the earthwork survey which was undertaken in 2019. This will add further to our understanding of the moated site by addressing the following questions:

- Q1: Can the layout of the moated site and associated sub-surface archaeology be established by remote survey and refined by trial trenching?
- Q2: Can we identify any phasing in the topographic or remote sensing anomalies indicative of an extended period of use?

Aim 2 - Understand the development of the Site and place it in its multi-period landscape context

3.2.2 The 2019 test pitting activity has enhanced the overall interpretation of the site and has aided in the targeting of future archaeological work. In 2021 the fieldwork focussed on further characterising the elements of moated site to help contextualise the Medieval archaeological phase already identified at Soulton. The 2022 fieldwork is hoping to build on the excavations carried out in 2021. The aim is to define and characterise the exact use, date and nature of the mound and the relationship of the adjacent area. The purpose of the trenches will be to identify and investigate any archaeological features encountered and obtain appropriate samples for archaeological and palaeoenvironmental assessment. In combination, these activities will address the following questions:

- Q3: What is the landscape setting and character of the moated site at Soulton Hall, and how did this shape its design and development?
- Q4. To what do the archaeological remains at the Site survive, and what is the potential of the moated site to inform a greater understanding of the landscape context including its relationship to the manor house/hall?
- Q5. Can we refine the chronological narrative for the Site, including the presence of earlier and later features and structures, as defined in Aim 1?
- Q6. Can we understand the date, form and motivation for the creation of the moated site?
- Q7. Building on previous work undertaken, can we establish an understanding of the historical and cultural context of the moated site?

Aim 3 – Understand the Site's archaeological and palaeoenvironmental conditions

3.2.3 This aim will be achieved with an assessment of the artefacts and samples recovered as defined and collected in Aim 2, using appropriate palaeoenvironmental and archaeological techniques to establish preservation and significance.

- Q8: What is the current state of the archaeological and palaeoenvironmental material across the site?
- Q9: How well do deposits and artefacts survive, and how deeply are they buried?
- Q10: What is the range and spatial patterning of artefacts recovered from the moated site, and can this inform our understanding of the use of the landscape and utilisation of wider resources?
- Q11: Can we increase our understanding of the structures and environment of the moated site at Soulton Hall?

Aim 4 – Making recommendations, undertaking analysis and publication

3.2.4 This aim will require all data from Aims 1-3 to be collated, with an integrated analysis of the archaeological and palaeoenvironmental resource at Soulton Hall making recommendations to conserve, enhance and interpret the heritage significance of the site.

- Q12: What can an integrated synthesis of the results of this work with previous studies of contemporary regional sites tell us about the Site and its setting?
- Q13: What recommendations can be made to protect, conserve and enhance the site?

Aim 5 – Creating opportunities for people and communities

3.2.5 This aim runs throughout the whole programme, from the initial project set up through to dissemination and beyond. The project will offer a range of opportunities for local community members, students, school children and visitors to the area to get involved and learn more about the archaeology of Soulton Hall. Working closely with the wider project team and the estate staff, participation opportunities will include excavation, finds processing, photogrammetry and guided visits. Our programme of participation will include

- train community volunteers and students in excavation and post excavation tasks
- engaging children and young people with our education sessions
- taking part in the project Open Day, guiding visitors around the archaeological trenches and introducing the importance of the site
- co-producing a digital archive and resource for the project website with community participants
- posting updates about the archaeology and our finds on social media so everyone can follow the excavations as they progress

3.2.6 Volunteers will be invited to join the excavations and will be trained in archaeological skills, co-producing the archaeological archive using DigVentures' unique Digital Dig Team software. Results will be recorded directly onto the project microsite, providing

live updates of both technical data and social media via the microsite Timeline. Reports produced following the excavations will be hosted on the website, providing a research resource for anyone interested in the region's prehistoric archaeology.

4 BUSINESS CASE

4.1 Historic England Research Agenda

4.1.1 The project has been designed in accordance with priorities articulated in the Historic England Research Strategy (2017) and Historic England Corporate Plan (2018-21). The Research Strategy defines nine broad themes that describe Historic England's research interests to ensure that any proposed work is aligned with HE's mission. The Gatehouse Project drivers can therefore be articulated within the fundamental theme to #understand (rural landscapes; archaeology of the deeper past in addition to other research outcomes that will address other Historic England and sector priorities, delivering significant value-added benefit. As a consequence of the innovative digital and multi-partner collaborative approach, there is a significant 'value added' dimension to this project, encompassing research themes including #adapt (land management, societal change); #conserve (buildings and landscapes, collections and archives; preserving archaeological remains); #inform (information systems and services); #skill (developing the workforce; working more effectively); #inspire (audience research, research media); #innovate (materials; human environment; dating and chronology; measuring and sensing).

4.2 Research frameworks

4.2.1 Themes identified in the West Midlands research framework for archaeology (Watt 2011) includes a number of avenues of research relevant to this project. Moated sites are widely regarded as one of the classic field monuments of the medieval period and are characteristic of much of the West Midland's region, being particularly associated with woodland landscapes. Moated sites have attracted the attention of historians, geographers and archaeologists, and are often perceived as having been intensively researched and the distribution of such sites across the region is generally well known with many sites listed in the 1990s and even well before. However, fundamental though such mapping is, it is generally the case that this dot on the map is the full extent of our knowledge of the site (*ibid.*,196). Moated and non-moated sites are simply sub-groups of what might be described as manorial complexes, with several sites having been surveyed, but fewer excavated. Manorial complexes represent a neglected theme in the medieval archaeology of the West Midland's region. In particular, further research would enhance understanding of the chronology and development of earthwork castle sites, addressing the relative 'imbalance' within the region that has seen most work conducted on large, stone-built castle sites (*ibid.*,195).

4.2.2 Soulton Hall gardens are registered under the Historic Buildings and Ancient Monuments Act 1953 within the Register of Historic Parks and Gardens by Historic England for its special historic interest (List Entry Number: 1017236). The 16th and 17th century witnessed significant changes in the relationship between houses and

their surrounding landscapes when Italian renaissance influences began to infiltrate with ideals of controlling and improving nature replaced the naturalistic medieval approach. Ornamental gardens were a symbol of status reflecting a new culture of bending nature to useful production with the garden being a symbol of control and purity in a wild and disordered world. This can be seen in the greater regularity of design and relationship between the garden and façade of the house. The 16th and 17th centuries covered a period of intense development of garden forms with residencies marking the transition from small, enclosed, relatively private gardens to larger areas designed to impress through elaborate display. The inward-looking gardens of the medieval period gave way to more grandiose layouts with open and interlinked designs becoming a means of public advertisement. The fashion for garden buildings began post the 1530s and persisted into the 17th century (Fradley et al. 2009, 26).

4.2.3 Some of the most stimulating and innovative of recent castle studies have taken place in Shropshire and the March, particularly in relationship to designed landscapes, already familiar at sites like Kenilworth and Bodiam (Watt 2011, 194). However, designed landscapes relating to manorial estates remain understudied. The themes that relate to castles and their designed landscapes can also be related to manorial estates and their designed landscapes in terms of gardens. While there are no specific research frameworks that relate to the investigation of 17th century gardens, the importance of understanding the development of these gardens is a significant element in understanding the history of the gardens at Soulton and the development of 16th and 17th century gardens at status residencies across the country. Little is known about the development, form, chronology and landscape context of these gardens and the significance and importance of this transitional period from out of the medieval and into the post-medieval period is often overlooked. These gardens consciously reflect the owners social and political status as well as philosophical leanings and a great deal can be learnt about the motivations behind and aspirations within society from the design and layout of the formal gardens. In particular, these investigations will attempt to contribute to understanding the historical and cultural development of 16th and 17th century gardens.

5 INTERFACES

This project will interface with a series of other projects, stakeholders, and initiatives, summarised in the table below:

Interfaces	Description
Academic Advisory Board	An advisory group of subject experts will be formed to ensure that the project remains pertinent to relevant research questions and agendas as it progresses, interfacing with other teams working in similar landscapes in the UK.
Core Project Team	The core project team and specialist staff have consulted widely during the project planning and will continue to build on this as the project develops, forging strong links with local, national and international professionals and institutions actively engaged in a broad range of multi-period sites.
Local Stakeholders	The key local stakeholders are Soulton Hall. The project will showcase the

Interfaces	Description
	archaeology from Soulton Hall, and offer skills-based learning opportunities focused on teaching digital heritage skills to engage as broad a group as possible in the local heritage. A recent survey undertaken by DigVentures has identified that key issues preventing people engaging with their local heritage are based on access and financial concerns. The project will offer free enjoyable learning opportunities, both online and across multiple accessible locations, to help address the strong social and educational needs of the surrounding communities.

Table 1: Project interfaces

6 COMMUNICATIONS

6.1 Project team

6.1.1 The following section details specific staff responsibilities, drawing on terminology devised by Historic England for the MoRPHE project management framework. The overarching project is crowdfunded and overseen by DigVentures. Project Assurance will be undertaken by the Lisa Westcott Wilkins (Project Executive), who will monitor compliance against the deliverables detailed in this document. Manda Forster (Director of Operations) will act as the primary contact point for the project and ensure that stakeholders and clients are regularly updated as to progress. Nat Jackson (Project Officer) will oversee the archaeological strategy and delivery.

6.1.2 The project team have all worked closely together over a number of research projects, including Leiston Abbey (2013-2016), Lindisfarne (a joint project with the University of Durham, 2016) and Barrowed Time (community investigation of a Bronze Age hoard site, 2016). Dr Manda Forster (Director of Operations) will undertake day-to-day management of the project, with fieldwork coordinated and directed by Nat Jackson (Project Officer). Maiya Pina-Dacier (Head of Community) will liaise with and coordinate volunteer and visitors to the site with supported provided by Johanna Ungemach and Harriet Tatton (Community Archaeologists). All core staff are employed in line with CIfA guidelines and are practicing field archaeologists at PCIfA level or above. Senior project staff are Members of CIfA in good standing.

6.2 Project management

6.2.1 The Project Manager will provide Monthly Status Reports for the Project Executive and Project Team throughout this Execution Stage up to the review of the Assessment Report/UPD. This will present an overview of progress, list tasks completed or part completed, including any on-going work and issues affecting progress. The Project Manager will also be responsible for ensuring that the project runs to schedule, and ensure that all major tasks are briefed/debriefed as necessary. Provision will be made for the project in 'Basecamp', which is a web-based project communication package used by DigVentures, enabling project participants to generate and record notes, tasks, milestones and other project-related communication.

6.2.2 DigVentures operates a computer-assisted project management system. Projects are undertaken under the direction of the Project Director who is responsible for the successful completion of all aspects of the project. All work is monitored and checked whilst in progress on a regular basis, and the Project Director/Managing Director checks all reports and other documents before being issued. A series of guideline documents or manuals form the basis for all work.

6.2.3 The Project Manager, Manda Forster, is a full member of the Institute for Archaeologists (MCIfA). DigVentures is a CIfA Registered Organisation (No. 102), and fully endorses the Code of Conduct, the Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology, and the Standards and Guidance documents of the Institute for Archaeologists. All DigVentures staff are employed in line with the Institute's Codes and will usually be members of the Institute.

6.3 Outreach and engagement

6.3.1 As a social business every aspect of the DigVentures approach is cognisant of a wider outreach agenda. Running alongside the Soulton Hall community archaeology project, DigVentures will include a dedicated engagement programme for volunteers offering opportunities for individuals to get involved. The programme will increase local awareness of the area's archaeology and heritage, and amplify this with a coordinated digital and social media strategy. All major social media channels will be used to promote daily blog content. A digital video specialist will be on site throughout the excavation, and broadcast quality footage will be uploaded to YouTube regularly.

6.3.2 The impact of this outreach work will be measured with a quantitative and qualitative evaluation of all participants to establish baseline audience awareness data and assist with future management strategies and promotion. This will be undertaken with a visitor survey conducted throughout the field season, targeting both excavation participants and casual visitors, and critically assessing the breadth, depth and diversity of engagement.

6.4 Dissemination and reporting

6.4.1 Rapid dissemination of the results to, and involvement of, stakeholders of the project is vital throughout. This will take place through multiple channels, addressing a multitude of established and new audiences. Dissemination outlined below will all be undertaken during 2022, and will include, but not be limited to;

- dedicated website with daily news updates on a blog and all major social media channels (Facebook, Twitter, Google+, Flickr and Instagram) amplified through third-party coverage by the networked blogging community: https://digventures.com/soulton-hall/
- dedicated interactive digital archive of the excavation data.
- wide circulation of the Post-Excavation Assessments, Final Report, Updated Project Design and links to the OASIS record digventu1-500585 and the final report.

- site publication in an appropriate local/national journal commensurate with the results.
- deposition of the Post-Excavation Assessment and Final Report with Shropshire Historic Environment Record.

6.5 Project archive

6.5.1 The project archive will be prepared in accordance DigVentures guidelines for Archive Preparation, following Appendix 1, P1 of MoRPHE PPN 3 (English Heritage 2011), fulfilling the Guidelines for the preparation of excavation archives for long term storage (UKIC 1990). All reports produced by the project will be openly and freely disseminated through Historic Environment Record, Archaeological Data Service, OASIS portal and DigVentures website. Copyright on all reports submitted will reside with DigVentures, although a third party in-perpetuity licence will automatically be given for reproduction of the works by the originator, subject to agreement in writing with DigVentures.

7 PROJECT REVIEW

7.1.1 The project will be continually reviewed by the Project Executive and Project Manager, with a formal review undertaken at the end of each Stage as follows:

Stage	Description	Review Point	Completion Date
Initiation	Consideration of Project Proposal	RV1 – Assemble Project Team and liaise with stakeholders	Completed February 2019
Stage 1	Project Start-up, finalizing Project Design and definition of scope	RV2 – Sign-off on MoRPHE Project Design, and liaison with stakeholders and landowners	Completed April 2019
Stage 2	Archaeological Fieldwork – First Season	RV3 – assemble site archive and distribute pertinent data to specialists	Completed June 2019
Stage 3	Assessment Report & Updated Project Design	RV4 – critically review findings, making recommendations for further work or closure	Completed January 2021
Stage 4	Archaeological Fieldwork – Second Season	RV5 – assemble site archive and distribute pertinent data to specialists	Completed July 2021
Stage 5	Assessment Report & Updated Project Design	RV6 – critically review findings, making recommendations for further work or closure	Completed May 2022
Stage 6	Archaeological Fieldwork – Third Season	RV7 – assemble site archive and distribute pertinent data to specialists	Proposed July - August 2022
Stage 7	Assessment Report & Updated Project Design	RV8 – critically review findings, making recommendations for further work or closure	Proposed Spring 2023

Stage	Description	Review Point	Completion Date
Stage 8	Analysis & Publication (*where no further execution stage is undertaken*)	RV9 – final publication sign-off, and prepare archive for accession	Proposed Spring 2023
Closure			Spring 2023

Table 2: Project review stages

HEALTH AND SAFETY

7.1.2 DigVentures will undertake the works in accordance with Health and Safety requirements and a Health and Safety Plan. This document will take account of any design information pertaining to above and below ground hazards. DigVentures will ensure that all work is carried out in accordance with its company Health and Safety Policy, to standards defined in *The Health and Safety at Work etc. Act 1974*, and *The Management of Health and Safety Regulations 1992*, and in accordance with the SCAUM (Standing Conference of Archaeological Unit Managers) health and safety manual *Health and Safety in Field Archaeology* (1996).

Part Two: Resources and Programming

10 PROJECT TEAM STRUCTURE

10.1 Team and responsibilities

10.1.1 DigVentures' Project Team is presented in Table 3. A summary CV, setting out the skills and expertise of DigVentures core team members is set out in Appendix 2, with CVs for the wider specialist team available on request.

Name	Initials	Project Role	Key Responsibility
Lisa Westcott Wilkins	LWW	Project Executive	Overall project responsibility, budget responsibility and project assurance, liaison with project team, partners and Stakeholders
Brendon Wilkins	BW	Projects Director	Oversight of archaeological strategy and quality assurance
Manda Forster	MF	Director of Operations	Archaeological co-direction (on and off-site), liaison with project team, partners and Stakeholders
Stephanie Duensing	SD	Programme Manager	Coordination of programme, post-excavation assessment and reporting
Maiya Pina-Dacier	MPD	Head of Community	Community development, on-site fieldwork, and post-excavation assessment
Nat Jackson	NJ	Site Director	Excavation strategy and site direction, day to day management of field team and quality assurance of site archive.
Indie Jago	IJ	Community Archaeologist	On-site fieldwork, and post-excavation assessment
Ben Swain	BS	Community Archaeologist	On-site fieldwork, responsible for supporting participant field training
Harriet Tatton	HT	Community Archaeologist	On-site fieldwork, responsible for supporting participant field training
Jodie Hannis	JH	Community Archaeologist	On-site fieldwork, responsible for supporting participant field training
David Wallace	DW	Community Archaeologist	On-site fieldwork, responsible for supporting participant field training
Kimberly Teal	KT	Expert - Geophysics	Geophysics
Maggie Eno	ME	Expert – Videographer	Filming
Ritch Grove	RG	Expert – landscape survey	Drone survey, landscape survey, topographic survey

Table 3: Core team and responsibilities

11 METHODOLOGY

11.1 Introduction

11.1.1 The methods reflect the Project Stages set out in Section 7 above. A task list, with allocation of staff time and team members in Section 12 below. Detailed method statements relating the specific techniques or approaches included below can be found in Appendix 1 at the end of this document.

11.2 Stage 6 – Archaeological fieldwork – Third season

11.2.1 A third season project fieldwork (scheduled to run from 18th July – 7th August 2022) will comprise an evaluation trenching exercise on the moated site and area immediately adjacent on the north side of the B5065 road and on the south side of the B5065 road required to meet aspects of Aims 1 and 2 (see Section 7 above). It will aim to inform the following research questions:

- Q3: What is the landscape setting and character of the moated site at Soulton Hall, and how did this shape its design and development?
- Q4. To what do the archaeological remains at the Site survive, and what is the potential of the moated site to inform a greater understanding of the landscape context including its relationship to the manor house/hall?
- Q5. Can we refine the chronological narrative for the Site, including the presence of earlier and later features and structures, as defined in Aim 1?
- Q6. Can we understand the date, form and motivation for the creation of the moated site?
- Q7. Building on previous work undertaken, can we establish an understanding of the historical and cultural context of the moated site?

11.2.2 Specific archaeological interventions will include seven trenches over extent earthworks and geophysical anomalies (Figure 2). Trench locations have been designed to target the moated site and ditch, an area of industrial activity, other geophysical anomalies and a possible paved or wall area. The nature and targets for evaluation trenches are further detailed in the methodological statements included in Appendix 1 (see Table 7).

11.2.3 In addition to the excavation a geophysical survey with both magnetometry and resistivity of the area of land between Soulton Hall and the B5065 is proposed (see Figure 2). This area may contain evidence of the 16th/17th century garden features and may further assist our understanding of the development of the site over time. The area is 0.3 hectares and the surveying will be carried out over the period of a weekend. It will be delivered as a part of the archaeological field school, where participants are trained in multiple geophysical survey techniques. The magnetometer survey will be conducted using a Bartington Grad601 Gradiometer, surveying on an east-west alignment within 30m grid squares set out using a GPS. The earth resistance survey will be conducted using an RM85 resistivity meter (Geoscan Research), surveying within 30m grid squares set out using a GPS.

11.2.4 A landscape survey will be carried out to help place the site at Soulton Hall in its wider context. This survey will consist of a walkover survey of the land around the

site, making note of any potential archaeological features. Looking at the medieval ridge and furrow seen on the LIDAR to the southeast of the site and investigating the claim there may have been a deserted village in the area to the north of the B5065.

11.3 Stage 7 – Assessment report and updated project design

11.3.1 This Stage will address Aim 3, focusing on answering the following research questions:

- Q8: What is the current state of the archaeological and palaeoenvironmental material across the site?
- Q9: How well do deposits and artefacts survive, and how deeply are they buried?
- Q10: What is the range and spatial patterning of artefacts recovered from the moated site, and can this inform our understanding of the use of the landscape and utilisation of wider resources?
- Q11: Can we increase our understanding of the structures and environment of the moated site at Soulton Hall?

11.4 Stage 8 – Further work, analysis and publication

11.4.1 Addressing Aim 4, this is the main reporting and recommendation stage of the project, focusing on the following research questions.

- Q12: What can an integrated synthesis of the results of this work with previous studies of contemporary regional sites tell us about the Site and its setting?
- Q13: What recommendations can be made to protect, conserve and enhance the site?

12 STAGES, PRODUCTS AND TASKS

12.1 Methodological Linkages

12.1.1 It is anticipated that the 2021 work will be undertaken in three stages (see Table 2). These are set out in the table below and are set against the project aims and questions that will be met at each stage, the products that will be produced and the tasks undertaken.

Stage	Description	Project Aims/ Questions	Products	Task & ID Number
Stage 6	Archaeological Fieldwork	Aim 1 Q1-3 Aim 2 Q4-8 Aim 5	6. Field Archive	8. Site Preparation 9. Fieldwork (remote sensing, survey & excavation) 10. Assemble site archive & distribute to specialists
Stage 7	Assessment Report & Updated Project	Aim 3 Q9-12	7. Stratigraphic & Assessment Report	13. Specialist finds and palaeoenvironmental assessments

Stage	Description	Project Aims/ Questions	Products	Task & ID Number
	Design			14. Integrated assessment report 15. Recommendations for further work
Stage 8	Analysis and Publication (*where no further execution stage is undertaken*)	Aim 1-4 Q1-14	10. Final report 11. Publication 12. Completed and accessioned archive	18. Specialist analysis 19. Finalise report and publication 20. Prepare data and archive for deposition 21. Final sign-off 22. Closure

Table 4: Stages, Products and Tasks

12.2 Task list by person days and team member

12.2.1 DigVentures projects are managed according to Historic England's MoRPHE project model (Management of Archaeological Research Projects in the Historic Environment) based on a PRINCE2 framework.

Task ID Number	Aims	Task Description	Performed by:	Start (no later than)
Stage 6: Fieldwork				
5	1 & 2	Site Preparation	MF, NJ, MPD, IJ, BS, HT	July 2022
6	1 & 2	Fieldwork (trenches)	MF, NJ, MPD, IJ, BS, DW, HT, JH, RG	July 2022
7	1 & 2	Assemble site archive & distribute to specialists	Project Team	October 2022
Stage 7: Assessment and recommendations				
8	3	Specialist finds and palaeoenvironmental assessments	Expert Team	October 2022 - December 2022
9	3	Integrated Report	ESC & Project Team	February 2023
10	4	Recommendations for further work	Project Team	February 2023
Stage 8: Analysis and publication *(where no further execution stage is undertaken)*				
11	4	Specialist analysis	Project Team	March 2023
12	4	Finalise report and publication	Project Team	July 2023

Task ID Number	Aims	Task Description	Performed by:	Start (no later than)
13	4	Prepare data and archive for deposition.	Project Team	July 2023
14	4	Final sign-off	Project Team	July 2023
15	4	Closure	Project Team	July 2023

Table 5: Project Task List

13 OWNERSHIP

13.1.1 The Copyright on all reports submitted will reside with DigVentures and Soulton Hall. The original copyright holder will retain copyright in pre-existing data.

14 RISK LOG

Risk	Description	Probability	Impact	Counter measures	Estimated time/cost	Owner
1	Inclement weather - prolonged periods of rain	Medium	Delay work programme	Provision of site hut, and planned indoor archiving tasks with flexible programme	3 Days	BW / NJ
2	Exceptional weather (drying exposed archaeology)	Medium-Low	Slow progress	Provision of water bowser + spray	None	BW / NJ
3	Absence of core team member	Low	Delay work programme	Reallocate responsibilities or appointment of alternative	Minimal if done by adjustment	BW / NJ
4	Absence of specialist team member	Low	Delay work programme	Reallocate responsibilities or appointment of alternative	Minimal if done by adjustment	BW / NJ
5	Equipment theft/breakages	Medium	Delay work programme	Removal of finds material and digital equipment from site	3 days	BW / NJ
6	Serious site injury	Medium	Delay work programme	Detailed H&S Risk Assessment + daily safety briefing	3 days	BW / NJ
7	COVID-19	Medium	Delay work programme	Reallocate responsibilities or appointment of alternative	Minimal if done by adjustment	BW / NJ

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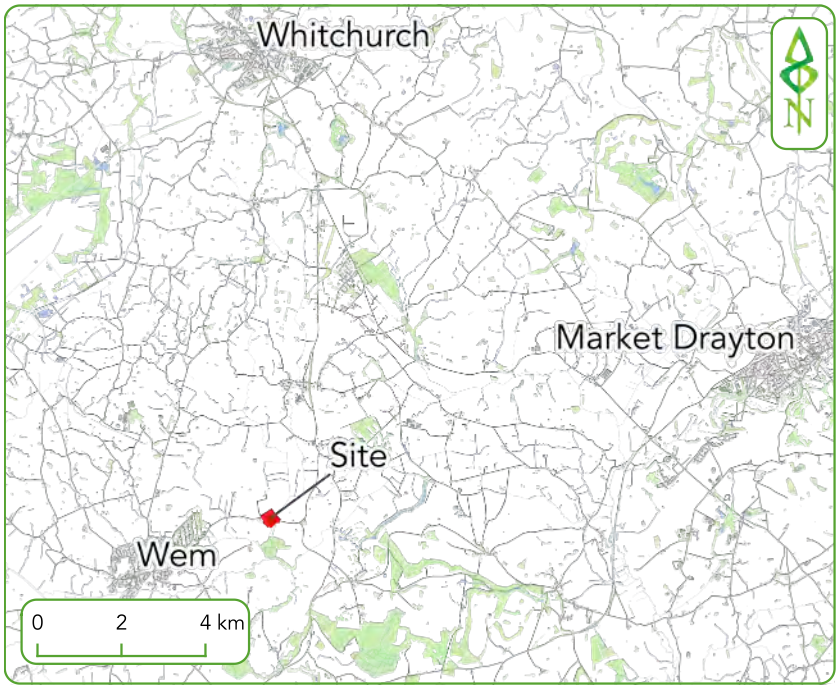
DigVentures



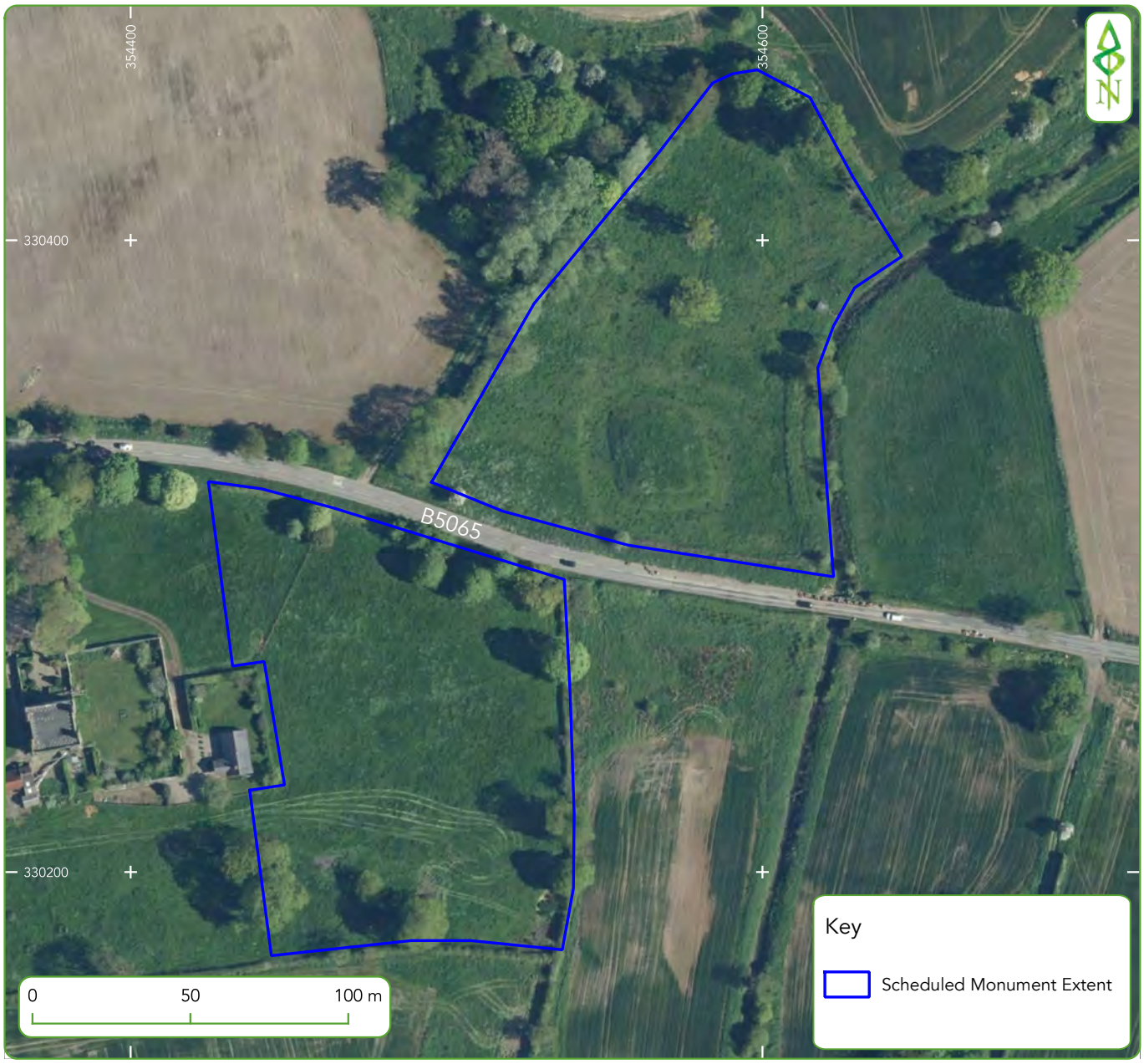


Figure 1. Site location

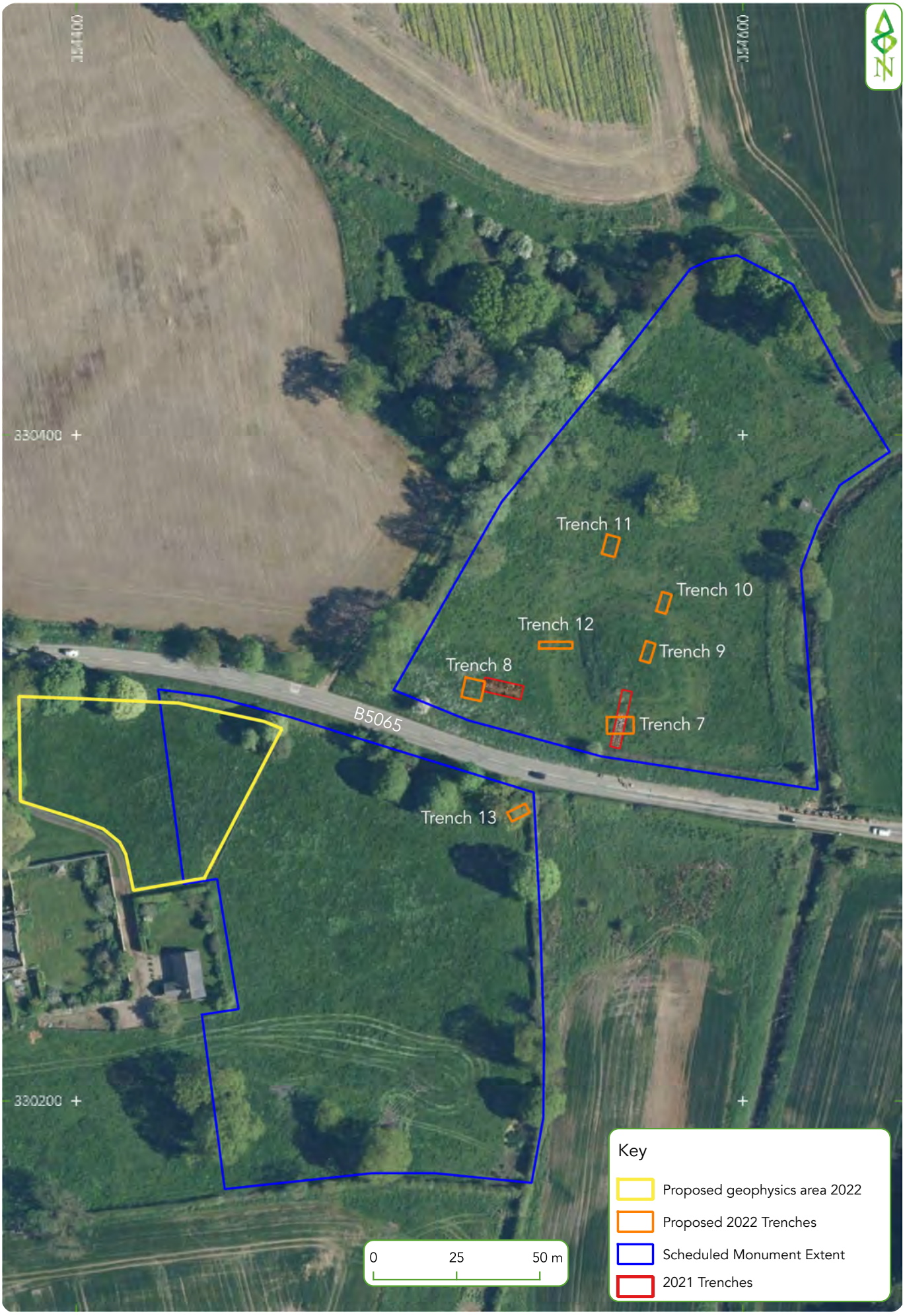
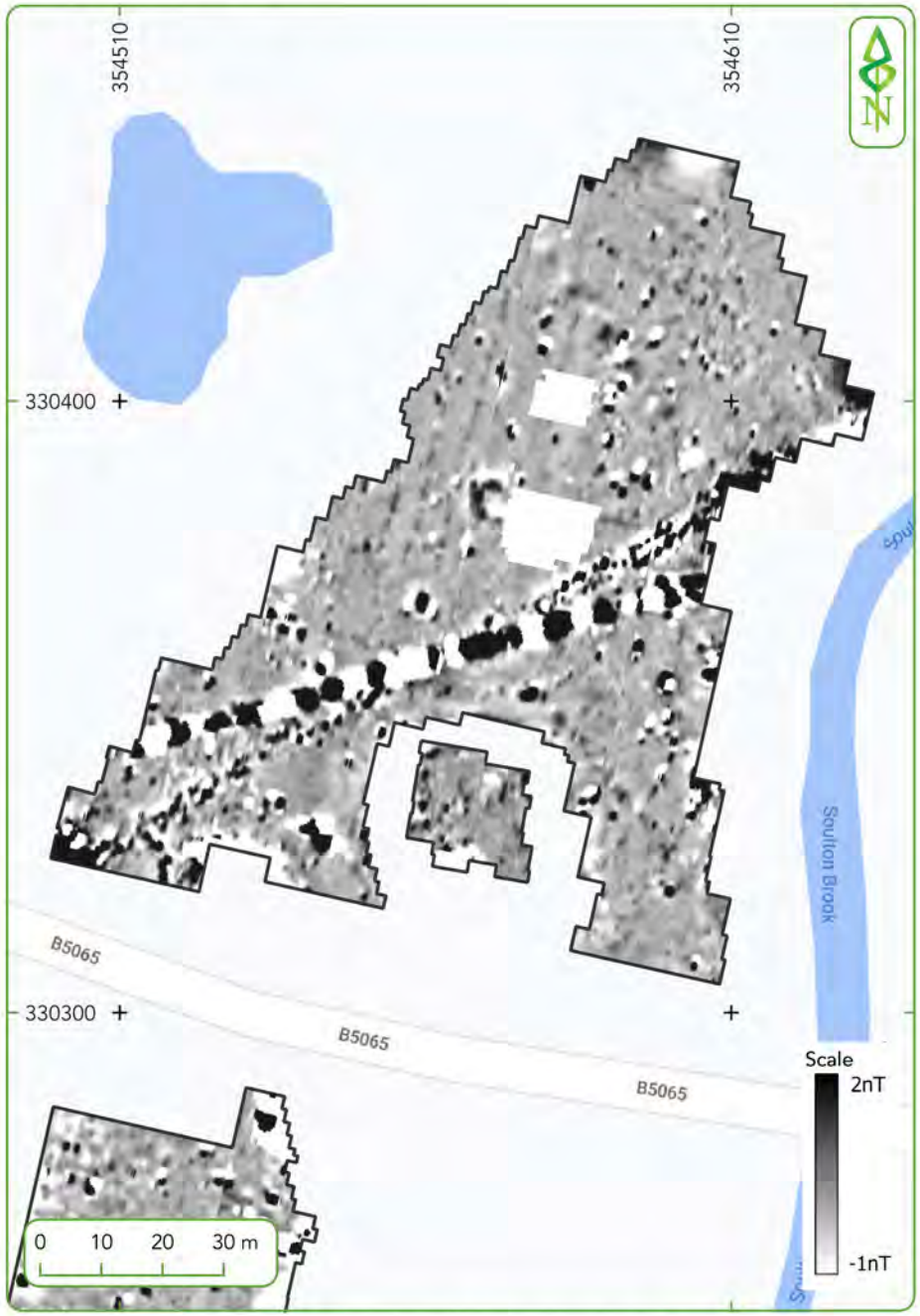
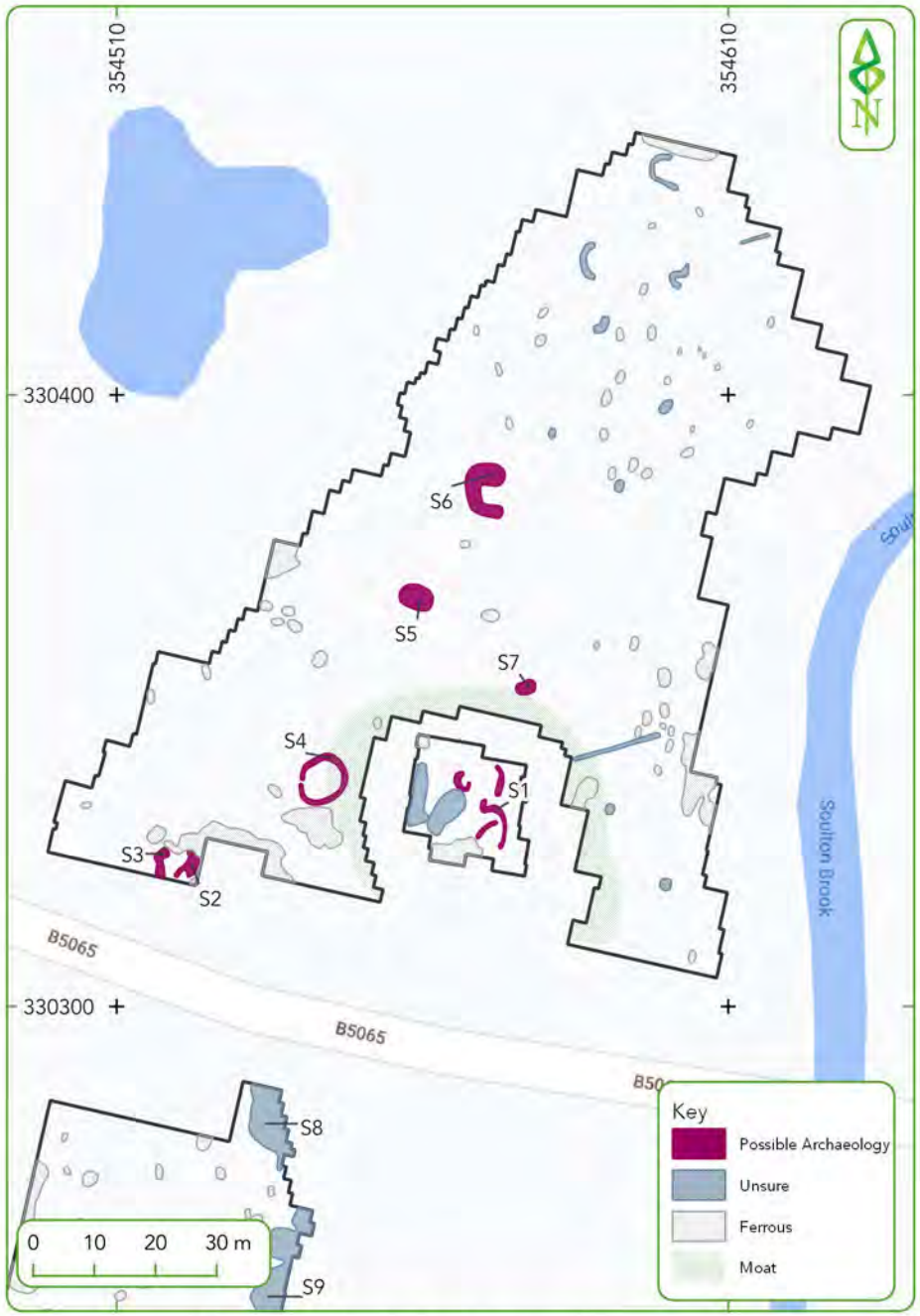


Figure 2. Location of proposed trenches and geophysical survey area



Magnetometer Data - Greyscale Plot



Magnetometer Data - Simplified Interpretation

Figure 3. North Field - Magnetometer survey results and simplified interpretation

Appendices

Appendix 1 Method statements

The methods for the proposed project cover all stages of work and may involve a combination of Lidar survey, GIS modelling, archaeological excavation, sampling, palaeoenvironmental sampling and assessment. The methods are linked directly to the project aims and objectives (see Table 1) and detailed below.

Key Questions and Objectives	Earthwork survey	Photogrammetry	Archaeological Excavation	Sampling	Environmental Assessment	Finds Assessment	Synthesis and Data integration
Q1	✔	✔					
Q2	✔	✔					
Q3			✔				
Q4		✔	✔				
Q5			✔		✔	✔	
Q6		✔	✔	✔			
Q7			✔	✔	✔	✔	
Q8				✔	✔	✔	
Q9				✔	✔	✔	
Q10			✔	✔	✔	✔	
Q11			✔	✔	✔	✔	
Q12			✔		✔	✔	✔
Q13		✔	✔			✔	✔

Table 6: Linking methods with objectives

Photogrammetry survey

Photogrammetry survey will utilise Agisoft PhotoScan 3D Modelling software to detect the feature points of the structure, and match these in different images to create a point cloud. The camera positions will be calculated automatically by the software and a dense reconstruction or geometric model will be built to create a DSM and orthomosaic plans.

Images will be captured perpendicular to the recorded areas using telescopic mounted cameras, to deliver optimum results requiring little or no rectification. All images are taken with DSLR camera with a variety of standard and other lenses, captured in RAW format for later processing into high resolution JPG and TIF files.

Where vehicular access is possible Aerial-Cam can be used to record the larger areas of a structure using perpendicular positioning, as well as going to a greater height to provide general overview and context aerial perspectives. Surface boards will be laid down where necessary to minimise surface impact. Where access is restricted the Pole-Cam operated in the space of a single person, can be used for perpendicular positioning and for close up detailed images of masonry features etc. The methods used to generate raw data in advance of DSM processing are detailed below.

Archaeological excavation (trenches)

In total, seven trenches will be excavated, Table 7. Trench 7 will be reopened and extended targeting the moat bridge and associated ditch, this will enable full stratigraphic sequence through both features and the features to be potentially fully characterised and dated. Trench 8 will be reopened and extended to the west where metalworking debris was previously recorded. The potential for identifying an area of industrial activity possibly associated with the mound would contribute significantly to our understanding of the use of the site. Four of the five new trenches are in the north field. Trench 9 will be located at the crest and on the top of the mound, this trench is targeting geophysical anomalies which may relate to a structure on the top of the mound. Trench 10 will be located to the north of the mound and within the moat, it is investigating a potential causeway onto the mound and a feature discovered through the geophysical survey. It will also investigate if the roughly made wall seen in Trench 7 continues for the full circumference of the mound. Trench 11 will be located to the north of the mound and targets a large pit feature that was revealed in the geophysical survey. Trench 12 will be located to the west of the mound and within the moat investigating a potential ringditch feature observed in the geophysics. Trench 13 located to the south of the B5065 road against the fence-line targeting a previously located (but unrecorded) line of stone paving found by the landowner. Its precise location, form and date is unknown but may relate to the formal garden, the mound structure north of the road, or an earlier road surface.

Trench	Dimensions	Target	Description
7 (extension)	8 x 5m	The southern side of the mound, targeting the probable moat bridge and associated ditch discovered in the 2021 excavations	Trench 7 extension, measuring 8 x 5m, will focus on the southern side of the mound, targeting the probable moat bridge and associated ditch discovered in the 2021 excavations. Hoping to further characterise the moat and

Trench	Dimensions	Target	Description
			moat bridge. Recording the full stratigraphic sequence through both features will enable them to be characterised and dated. There is potential for datable material to be recovered from the base of the ditch and from environmental sampling of any buried soil deposits beneath the mound.
8 (extension)	6 x 6m	Area to the west of the moat and mound, where industrial activity was seen in the 2021 excavations	Trench 8 extension, measuring 6 x 6m, will be positioned to the west of the mound and at the western end of Trench 8 where metalworking debris was previously recorded and a rubble spread was seen in the 2021 excavations. It is targeting two geophysical anomalies (S2 and S3, see Figures 2 and 3) which may be related to the industrial activity, and could contribute significantly to our understanding of the use of the site.
9	6 x 3m	Top of the mound	Trench 9, measuring 6 x 3m, will be located at the crest and on the top of the mound, this trench is targeting geophysical anomalies which may relate to a structure on the top of the mound. If features are discovered this may be very significant in furthering our understanding of the function of the mound.
10	6 x 3m	North side of the mound and moat	Trench 10, measuring 6 x 3m, will be located to the north of the mound and within the moat, it is investigating a potential causeway onto the mound and a feature discovered through the geophysical survey. It will also investigate if the roughly made wall seen in Trench 7 continues for the full circumference of the mound. There is also potential of further datable material that may be found within the moat ditch.

Trench	Dimensions	Target	Description
11	6 x 4m	A large pit anomaly seen in the geophysics	Trench 11, measuring 6 x 4m, will be located to the north of the mound, and targets a large pit feature that was revealed in the geophysical survey. The aim of the trench would be to characterise this feature and recover any datable material from it. It may be related to either the moated mound or the industrial area, either way it could be significant in furthering our knowledge of the site.
12	10 x 2m	A potential ringditch	Trench 12, measuring 10m x 2m will be located to the west of the mound and within the moat. The aim of the trench is to investigate a potential ringditch discovered in the geophysical survey. If this does indeed turn out to be a ringditch it would be of major importance to our understanding of the site and would push back the known period of occupation there to at least the Iron Age.
13	6 x 4m	An area of reported pavement or a wall	Trench 13, measuring 6m x 4m, will be located to the south of the B5065 road against the fence-line targeting a previously located (but unrecorded) line of stone paving found by the landowner. Its precise location, form and date is unknown but may relate to the formal garden, the mound structure north of the road, or an earlier road surface.

Table 7: Trench target, location and description

Interventions

Topsoil will then be removed by machine and all trenches will then be cleaned by hand, planned and photographed prior to any further excavation. A representative section, not less than 1m in width, of the entire deposit sequence encountered will be recorded. If complex stratigraphy and/or significant remains (e.g. structural remains, artefact scatters, remains clearly of a funerary nature etc.) are encountered, these may only be excavated to the minimum requirement in order to satisfy the project objective, to avoid compromising the integrity of remains that may be either (a) preserved in situ, or (b) excavated in detail during any next phase of research excavation. Interventions will focus on feature intersections in order to establish relative chronologies, and 'clean' sections to maximise retrieval of stratigraphically secure dating evidence and environmental samples.

Full written, drawn and photographic records will be made of each trench even where no archaeological remains are identified. A plan at an appropriate scale (1:50 or 1:100) will be prepared, showing the areas investigated and their relation to more permanent topographical features, and the location of contexts observed and recorded in the course of the investigation. Plans, sections and elevations of archaeological features and deposits will be drawn as necessary at an appropriate scale (normally 1:20, or 1:10 for complex features). Drawings will be made in pencil on permanent drafting film.

Each trench, will be recorded using a Digital format created for Digital Dig Team, following the DigVentures single context recording system. Digital photography will be used for all photography of significant features, finds, deposits and general site working. The photographic record will illustrate both the detail and the general context of the principal features and finds excavated, and the Site as a whole.

Backfilling and reinstatement

Where turf is removed it will be stacked away from the trench edge, maintaining their integrity by ensuring that the turves are placed in a correct position (turf side up) and are watered frequently and monitored daily. Topsoil and subsoil will be removed and retained separately for reinstatement.

Palaeoenvironmental sampling

All deposits with good palaeoenvironmental potential will be sampled; bulk samples shall be taken from the section as appropriate, under advisement from the project specialist. Context specific samples will be taken by the most appropriate means (kubiena tins, contiguous columns, incremental block, bulk etc.) for multi-disciplinary analysis. All aspects of the collection, selection, processing, assessment and reporting on the environmental archaeology component of the evaluation shall be undertaken in accordance with the principles set out in *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2011) and with reference to the *Association for Environmental Archaeology's Working Paper No. 2, Environmental Archaeology and Archaeological Evaluations* (1995).

Metal working debris sampling

If significant quantities of metalworking debris are encountered, an on-site reference collection will be assemblage under the supervision of an experienced archeometallurgist. This will provide on-site monitoring of the metalworking debris recovered to flag up if evidence for processes other than iron smithing was emerging and the excavation strategy

adapted to optimise the recovery of the evidence. It would facilitate post-excavation processing and also provide a training and information resource for volunteers and visitors. Magnets will be available on-site to assess the presence of hammerscale and other micro-residues in contexts containing slag or other evidence for ironworking.

Bulk sampling strategy

Bulk samples will usually be 40-60 litres in size, depending on the likely density of macrofossils. Ten litre samples will only be used for the recovery of plant macrofossils from waterlogged contexts. Samples will be stored in ten litre plastic buckets with lids and handles. A waterproof label will be fixed to the bucket and will record site code, context number and sample number and number of buckets in comprising the sample. A duplicate label will be retained inside the bucket. Samples will be protected from temperatures below 5° and above 25° Celsius and will be prevented from either wetting or drying out.

- Bulk samples selected for processing shall be wet-sieved/floated and washed over a mesh size of 250 microns for the recovery of palaeobotanical and other organic remains, and refloated to maximise recovery;
- Non-organic residues shall be washed through a nest of sieves of 10mm, 5mm, 2mm, 1mm and 250 micron mesh to maximise finds recovery;
- Both organic and non-organic residues shall be dried under controlled conditions;
- The dried inorganic fractions shall be sorted for small finds or any non- buoyant palaeoenvironmental remains, and scanned with a magnet to pick up ferrous debris such as hammerscale;
- The dried organic fractions shall be sorted under a light microscope to identify the range of species or other material on a presence/absence basis, the degree of preservation of the bio-archaeological material and the rough proportions of different categories of material present;
- In the event that waterlogged deposits are identified and sampled, further processing shall be undertaken as appropriate and agreed, including paraffin flotation to recover insect remains. Any such remains shall be scanned to identify and assess their potential;
- Selection of other types of sample for processing and the methods to be used for processing and assessment shall be undertaken on the advice of the relevant specialist and shall be agreed with the Consultant before implementation.

Contexts that are well stratified and potentially datable are all of value, so a systematic approach to selecting samples for processing and assessment will be taken. These will be divided into three categories:

- Category A (always sampled): contexts where the composition of the sediments are likely to inform us of the use of a particular structure or feature or if the deposits are waterlogged. These will include: *in situ* occupation deposits and fills/layers associated with particular activities; hearths; destruction deposits; basal pit/slot trench fills; waterlogged deposits, cesspits or latrines.
- Category B (always sampled, though discretion should be exercised): deposits identified as containing material that could yield information regarding their origin or the process that produced them. These will include: dumps, middens, upper pit fills with evidence for charred material, shell, bone and industrial waste.

- Category C: deposits containing material which is not necessarily related to the function of the feature to which they are related, but which can characterise deposits from different areas of the site. These will include: secondary and tertiary fills, postholes, levelling deposits, spreads etc.

Category A and B deposits should always be sampled, and Category C deposits sampled on a random basis (such as 1 in 5). These samples can help to characterise the background noise of a site, so as to highlight spatial or temporal trends and provide material that can be directly compared with those from Category A and B. All samples will be taken in large white 10 litre tubs, with labels placed inside with the deposit and attached to the bucket. All samples will be processed on site in a dedicated floatation and wet sieving area.

Zooarchaeology

If large deposits of bone or marine shell are encountered advice of the project zooarchaeologist (Matilda Holmes) will be sought as regards further sampling. If large deposits of bone or marine shell are encountered the project zooarchaeologist advice will be sought as regards further sampling. If articulated groups of bones are encountered, they will be surveyed, recorded in situ, (including digital photography and planning), and then excavated to retain the group's integrity. Bones from each articulated limb will be bagged separately. If inhumations or cremation burials are encountered and excavated the surrounding soil will be sampled to retrieve any loose teeth or bone fragments.

All hand collected animal bones and bones from processed samples will be assessed, following English Heritage Environmental Archaeology guidelines (2002). If warranted by the size of the recovered assemblage, it will be assessed using two different quantification methods to determine the most suitable for full analysis, taking into account methods used in comparative assemblages. The assessment will not distinguish between certain taxonomic groups, for example equids (horse and donkey); full speciation should be carried out as part of any recommended analysis, using a vertebrate comparative collection. In addition to quantification of domestic species and occurrence of wild species, the assessment will consider the number of articulated bone groups, and the prevalence of aging, sexing and osteometric data available for full analysis, following standard published conventions. The assessment report will comment on the potential of the assemblage, particularly in the context of the excavation's research questions and current understanding of comparative assemblages. It will also provide recommendations for any necessary future analysis.

Human osteoarchaeology

In the event of the discovery of human remains (inhumations, cremations and disarticulated fragments) they should be left in situ, covered and protected, until the English Heritage Inspector of Ancient Monuments has been informed. If a decision is taken to remove them, they will be fully recorded and excavated in compliance with the relevant Ministry of Justice Licence. The excavation of human remains will be carried out in accordance with the procedures detailed in the document Excavation and post-excavation treatment of cremated and inhumed human remains (McKinley and Roberts 1993, IFA Technical Paper 13). Significant assemblages of human remains will be subject to an assessment of DNA preservation to establish potential familial relationships.

Inhumations will be scanned with a metal detector prior to excavation, and the position of possible metallic grave goods will be noted. Wherever possible, each burial will be excavated within a single working day, particularly with regard to visible grave goods. To minimise unauthorised disturbance of human remains, partially exposed remains will be covered overnight, though in such a way as to not draw undue attention, using loose excavated spoil.

Excavation of inhumations will be undertaken using a trowel, plasterer's leaf, plastic spoon and paintbrush as appropriate depending on the condition of the bones. When lifted the bones will be bagged by skeletal area (skull, axial, upper and lower limbs) with separate bags for the left and right side. A standard series of samples will be taken from each inhumation burial to ensure full recovery of any remaining osseous tissues or small artefacts. Once human remains are removed from inhumation graves, any soil residue remaining at the base of the grave will be retrieved for bulk processing.

Inhumations and cremations will be drawn at a scale of 1:10 and photographed prior to lifting. They will be recorded on Skeleton Record Sheets that form an integral part of the site pro forma recording system. The recording will include condition, completeness, articulation, orientation and posture. Fragile objects found within graves will be lifted with appropriate care and handling to minimise breakage. This may include subsequent controlled excavation under laboratory conditions. A trained conservator will be employed on the site if necessary.

All cremation burials and cremation-related contexts will be excavated and sampled in quadrants to ascertain the distribution of any archaeological components within the fills, with division into spit also if appropriate. Cremation-related features other than burials may be subject to more detailed sub-divisions, the appropriate strategy being developed by a specialist as the size and nature of the remains becomes clear. Undisturbed and slightly disturbed, but largely intact, urned cremation burials will be lifted en masse for excavation under laboratory conditions. The urns will be wrapped in crepe bandages and securely boxed for transportation. Where a vessel has been crushed, thereby disrupting any original internal deposition of the cremated remains, it will be lifted *en masse* after separate recovery of displaced sherds. All cremation-related contexts will be subject to whole-earth recovery from the point at which any cremated bone or other pyre debris is observed. If deposits of placed human bone are encountered in features, these may be excavated in spits if appropriate. The soils from these features will be bulk sampled.

Finds

Finds will be treated in accordance with the relevant guidance given in the *Chartered Institute for Archaeologist's Standard and Guidance for Archaeological Evaluation* (2008), excepting where statements made below supersede them. All artefacts will be retained from excavated contexts, except features or deposits undoubtedly of modern date. In these circumstances sufficient artefacts will only be retained to elucidate the date and function of the feature or deposit. All artefacts from the evaluation works will, as a minimum, be washed, marked, counted, weighed and identified.

Conservation

Artefacts will be recovered as a matter of routine during the excavation. When retrieved from the ground finds will be kept in a finds tray or appropriate bags in accordance with First Aid for Finds (Walker 1990). Where necessary, a conservator may be required to recover fragile finds from the ground depending upon circumstances.

After the completion of the fieldwork stage, a conservation assessment will be undertaken which will include the X-radiography of all the ironwork (after initial screening to separate obviously modern debris), and a selection of the non-ferrous finds (including all coins). A sample of slag may also be X-rayed to assist with identification and interpretation. Wet-packed material, including glass, bone and leather will be stabilised and consolidated to ensure their long-term preservation. All finds will be stored in optimum conditions in accordance with First Aid for Finds and Guidelines for the Preparation of Excavation Archives for Long-Term Storage (Walker, 1990).

The conservation assessment report will include statements on condition, stability and potential for further investigation (with conservation costs) for all material groups. The conservation report will be included in the updated project design prepared for the analysis stage of the project.

Scientific dating

Where uncontaminated deposits are recorded which are able to inform understanding of the research aims (in particular, relating to the construction of the banks and ditches), appropriate samples will be taken. Radiocarbon dating will be appropriate for clarifying and linking aspects of archaeological and environmental chronologies, and a strategy for this will be agreed following discussion with HE Science Advisor and the relevant specialists.

Synthesis and data integration

The results of the project will be integrated and synthesised with those from the previous investigations and other relevant work within the region and further afield (see Section 1 and 2 above). This will include a literature review of other pertinent sites.

Geophysical Survey

The geophysical surveys undertaken at the site comprised a magnetometer survey and an earth resistance survey. All geophysical survey work was carried out in accordance with recommended good practice specified in the EAC guideline documents published by Historic England (Schmidt et al. 2016) and the Chartered Institute for Archaeologists Standard and Guidance for archaeological geophysical survey (2014).

Both survey methodologies were conducted across a set of grids measuring 30m by 30m. The survey grids were set out using a Trimble R10 GPS using real time corrections to an accuracy of <0.10m. The survey grid was established using a baseline methodology and all grid corners were recorded using the GPS. Control points were also recorded at adjacent buildings and stationary features by way of assessing the accuracy of the GPS in post-processing. The survey grid was demarcated using bamboo canes as temporary markers which were removed following completion of the survey.

Magnetometer Survey

A magnetometer survey was conducted across the field to the north of the road surrounding the mound, as well as a small area on top of the mound, which measured approximately 0.81Ha. A strip in the field to the south of the road was also surveyed by the University students as part of their field school which measured approximately 0.32Ha.

The magnetometer survey was undertaken using a Bartington Grad601-2 magnetic gradiometer. The Bartington Grad601-2 is a dual sensor instrument, incorporating two Grad-01-1000 sensors set at 1m apart. The sites were surveyed in a grid-like pattern within 30m-by-30m grid squares. Recordings were taken every 0.25m along traverses set 1m apart in a zig-zag patterning resulting in 3600 readings per full 30m grid. The gradiometer was zeroed on a magnetically quiet point within the site before survey commenced and again before the afternoon's survey. If significant drift occurred, the machine was re-balanced.

The data was downloaded using Bartington's Grad601 download software and then imported into Geoplot v4.0 (Geoscan Research) for data processing. The gradiometer data was combined with the GPS points and georeferenced in QGIS and is presented in this report as greyscale data plots. Interpretations of the data have also been created in QGIS as line and polygon data and these interpretative figures are presented alongside the data.

Earth Resistance Survey

An earth resistance survey was conducted on top of the mound to clarify the magnetometer survey results, over an area measuring approximately 0.03Ha. A single grid of earth resistance survey was also undertaken in the field to the south of the road by the University students as part of their field school.

An RM85 resistivity meter (Geoscan Research) was used to undertake the earth resistance survey. The RM85 earth resistance meter consisted of three probes in a parallel twin electrode configuration, which is capable of detecting archaeological remains to a depth of 1m below the surface. The survey was conducted along an east-west alignment in a zig-zag fashion across 30m grid squares, utilising a sample interval of 0.5m with a traverse interval of 0.5m.

The earth resistance data were downloaded and processed using Geoplot v4.0 (Geoscan Research) in order to produce greyscale plots of the data. The data was georeferenced in QGIS and presented in this report alongside interpretations of the data, created as lines and polygons in QGIS.

Topographic survey and GIS modelling

Topographical survey work was carried out using a Trimble Real Time Differential GPS survey system. The Trimble VRS system is used in conjunction with a GPS Rover unit. It allows for surveying without the use of a site specific fixed base station. This is achieved by connecting to Trimble's network of fixed base stations by means of mobile phone communication. This method is highly efficient and accurate (+/- 2cm) when good signal is available. The survey data is exported from the data logger as a comma delimited file (csv) and a Trimble data collector file (dc). Either of these files can be imported into Trimble GeoSite Communicator, which recognises the feature code library and plots all strings, polygons and labels as intended. All survey and excavation data was stored within a GIS environment, which will remain the principle conduit for all spatial data throughout the project. Survey was undertaken to standards identified in best practice guidance, including HE Traversing the Past 2016 and HE Understanding the archaeology of landscapes 2017.