

Tillbridge Solar Project EN010142

Volume 6

Environmental Statement

Appendix 8-6: Archaeological Evaluation Overarching Executive

Report

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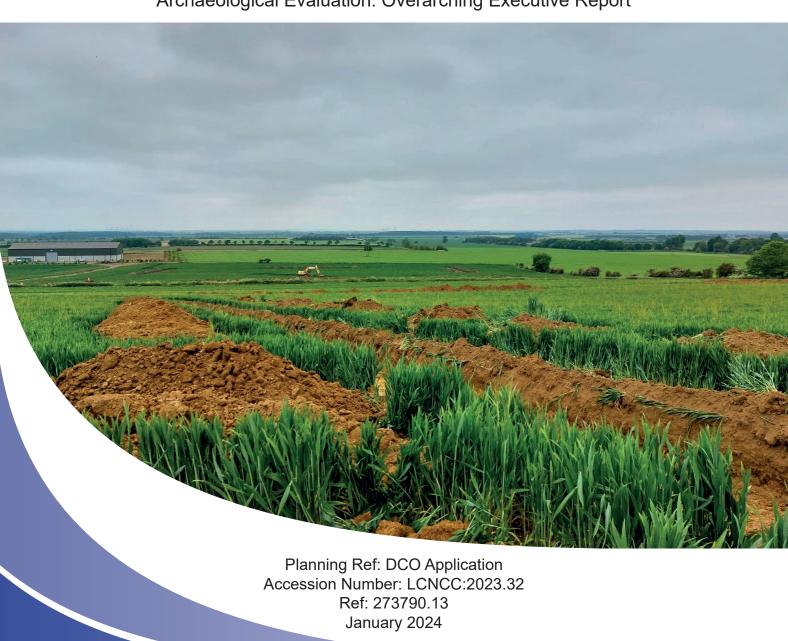
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This report presents a survey of a larger area which was considered for the Scheme during the application and assessment process. As such there are areas surveyed and presented in this report which are no longer within the Order limits. This does not impact on the conclusions of this report.



Tillbridge Solar Scheme Gainsborough, Lincolnshire

Archaeological Evaluation: Overarching Executive Report





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Summary

Wessex Archaeology was commissioned by Tillbridge Solar Limited to undertake the archaeological evaluation of a 1400 hectare parcel of land. The evaluation area is centred on NGR 491197 388413 located to the north and south of Common Lane, Gainsborough, Lincolnshire, DN21 5UZ. The archaeological evaluation was carried out between 3 April and 29 September 2023.

The archaeological evaluation was undertaken in association with the proposed Tillbridge Solar Scheme in Lincolnshire. The proposed scheme comprises the installation of solar photovoltaic generating panels and on-site energy storage facilities, along with associated infrastructure for a cable route corridor to connect into the national grid at Cottam sub-station in Nottinghamshire. A Development Consent Order application is in progress.

The evaluation forms part of a staged approach determining the archaeological potential of the Tillbridge site. Earlier non-intrusive works comprised a cultural heritage desk-based assessment as well as geophysical, air photo and LiDAR surveys. Across the Tillbridge Solar principal site, 2628 archaeological evaluation trenches were investigated and recorded and 44 geoarchaeological boreholes were undertaken, with a further eight boreholes located within the cable route corridor. It is anticipated that intrusive fieldwork will be required at a later stage within the cable route corridor, which will be implemented as part of a mitigation strategy taking account of other overlapping solar schemes and their archaeological mitigation strategies.

This overarching executive report is the final in a series of reports presenting the results of site-wide geoarchaeological survey and the archaeological evaluation trenching within the principal site. The purpose of this report is to provide a summary consolidation of the results of the evaluation, to interpret the results within a local, regional, or wider archaeological context and assess whether the aims of the evaluation have been met. The presented results provide further information on the archaeological resource that may be impacted by the proposed scheme and facilitate an informed decision with regard to the requirement for, and methods of, any further archaeological mitigation.

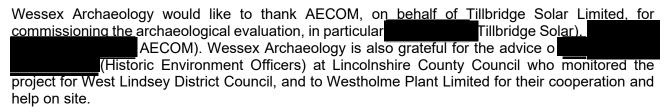
Archaeological features and deposits were identified in 427 trenches and comprise ditches, gullies, pits, postholes, furrows and structures. Features are reasonably well distributed across the principal site, with several notable concentrations and accord well, for the most part, with the results of the earlier geophysical survey. Taken in tandem with the earlier surveys, the archaeological evaluation has confirmed the presence of at least 20 Late Iron Age to Romano-British activity sites, a Late Neolithic/Early Bronze Age pit, a possible medieval moated site and the remains of former RAF Sturgate. More limited activity during the medieval, post-medieval and modern periods was also identified, in the form of ridge and furrow cultivation, former field boundaries and dew ponds.

Evidence for Neolithic and Bronze Age activity in Lincolnshire is scarce and is more frequently recorded in the Wolds, as such, the activity recorded at Tillbridge is of significance. The Romano–British sites, whilst typical of rural farmsteads, provide a somewhat unique and remarkable insight into settlement density and provide a landscape scale study of the changes that occurred regionally following the Roman Conquest. The identification of the moated site, considered somewhat rare regionally, and referenced only on historic mapping, is also notable.

The evaluation has, therefore, achieved its aim of providing information on the archaeological potential of the site. The results of the evaluation help to refine the understanding of the presence, nature and distribution of archaeological features, and by extension, historical human activity, across the principal site and have significant potential to contribute to the East Midlands Historical Research Agenda.



Acknowledgements





Tillbridge Solar Scheme, Gainsborough, Lincolnshire

Archaeological Evaluation: Overarching Executive Report

1 INTRODUCTION

1.1 Project and planning background

- 1.1.1 Wessex Archaeology was commissioned by Tillbridge Solar Limited ('the client') to undertake the archaeological evaluation of a 1400 hectare (ha) parcel of land ('the principal site') centred around Common Lane, Gainsborough, Lincolnshire, DN21 5UZ. The evaluation area is centred on NGR 491197 388413 (Fig. 1).
- 1.1.2 The archaeological evaluation was undertaken in association with the proposed Tillbridge Solar Scheme in Lincolnshire (the 'scheme'). The proposed scheme comprises the installation of solar photovoltaic generating panels and on-site energy storage facilities at the principal site in Lincolnshire, along with associated infrastructure for a cable route corridor, which will comprise underground electrical infrastructure required to connect the principal site to the national grid at Cottam sub-station in Nottinghamshire.
- 1.1.3 Due to its proposed generating capacity being more than 50 megawatts, the scheme is classified as a Nationally Significant Infrastructure Project, and therefore requires consent via a Development Consent Order (DCO), under the Planning Act 2008 (Section 14(1)(a) and 15(2)). The scheme is considered to fall within the definition of 'Environmental Impact Assessment (EIA) development' under the Infrastructure Planning (EIA) Regulations 2017 (Ref. 1-1), requiring an EIA to be prepared as part of the Application (AECOM 2023a).
- 1.1.4 The evaluation is part of a staged approach in determining the archaeological potential of the principal site. A Preliminary Environmental Information Report for the scheme (AECOM 2023a) was prepared in relation to the DCO application. This report included appendices relating to the archaeological background and the archaeological potential of the scheme which informed the fieldwork scope. The Cultural Heritage Desk-Based Assessment (AECOM 2023b) has been updated for the DCO submission and is referenced in relation to the Environmental Statement, along with other non-intrusive archaeological reports that accompanied the Preliminary Environmental Information Report, as:
 - Appendix 8-2 EN010142/APP/6.2 Cultural heritage desk-based assessment (AECOM 2023b);
 - Appendix 8-4 EN010142/APP/6.2 Air photo and LiDAR mapping and interpretation (Deegan 2023); and
 - Appendix 8-5-1 EN010142/APP/6.2 Geophysical Survey Report (Magnitude Surveys 2023).
- 1.1.5 Across the Tillbridge Solar Scheme, 2628 archaeological evaluation trenches were investigated and recorded. Geoarchaeological work was also undertaken that comprised a borehole survey and deposit modelling. It is anticipated that intrusive fieldwork will be required at a later stage within the cable route corridor, which will be implemented as part



of a mitigation strategy taking account of other overlapping solar schemes and their archaeological mitigation strategies.. The rationale for the trench positioning was informed by the cultural heritage desk-based assessment (AECOM 2023b) and geophysical, air photo and LiDAR surveys (Magnitude Surveys 2023; Deegan 2023), and was presented within the written scheme of investigation (WSI) for the project (Wessex Archaeology 2023a). Trenches were positioned to target:

- non-designated assets as recorded on the Historic Environment Record (HER);
- geophysical anomalies interpreted as probable/potential archaeological features;
- geophysical anomalies interpreted as possible features of non-archaeological origin;
- LiDAR anomalies interpreted as possible archaeological features;
- anomalies identified on aerial photography;
- a sample of areas with ridge and furrow coverage, which may or may not be masking buried archaeological features; and
- a sample of 'blank' areas.
- 1.1.6 All works were undertaken in accordance with the WSI which detailed the aims, methodologies and standards to be employed in order to undertake the evaluation (Wessex Archaeology 2023a). The Historic Environment Officer at Lincolnshire County Council (LCC) approved the WSI, on behalf of the Local Planning Authority (LPA), prior to fieldwork commencing.
- 1.1.7 The evaluation comprising 2628 trial trenches (2% sample) was undertaken between 3 April and 29 September 2023.

1.2 Scope of the report

- 1.2.1 In line with the agreed reporting arrangements, this report is the last of a series presenting the results of the archaeological evaluation of the principal site and geoarchaeological survey of both the principal site and cable route corridor. Previous reports covered the results of the evaluation by land parcel as well as the results of the geoarchaeological survey (Wessex Archaeology 2023b–k; 2023m; Fig. 1).
- 1.2.2 The purpose of this report is to provide a consolidation of the results of the evaluation, to interpret the results within a local, regional or wider archaeological context and assess whether the aims of the evaluation have been met. The presented results will provide further information on the archaeological resource that may be impacted by the proposed development and facilitate an informed decision with regard to the requirement for, and methods of, any further archaeological mitigation.

1.3 Location, topography and geology

1.3.1 The Tillbridge Solar principal site encompasses an area of approximately 1400 ha and is located entirely within the administrative area of West Lindsey District Council. It is situated approximately 5 km to the east of Gainsborough and approximately 13 km north of Lincoln.



- 1.3.2 The principal site is located to the north and south of Common Lane. It is bounded to the north by the A631, to the east by Middle Street (B1398), and extends 500 m south of Kexby Road. The villages of Springthorpe, Harpswell and Glentworth lie to the west, east and south-east respectively. The principal site is predominately open agricultural land, with a mixture of arable and pasture, and small areas of scattered woodland.
- 1.3.3 From north to south, the topography of the principal site is essentially flat with gentle undulations, located at an average of 22 m OD. From west to east, the land gently rises from 16 m to 32 m OD at Harpswell before rising more steeply to 65–68 m OD along the B1398, which follows the upper edge of the Lincoln Cliff.
- 1.3.4 The underlying bedrock geology across the majority of the principal site is mapped as Mudstone of the Charmouth Formation, although towards its western side Scunthorpe Mudstone Formation is recorded. Along the eastern boundary of the principal site, the geology is variable. It is formed of narrower north–south aligned bands of sedimentary rocks (Limestone of the Lincolnshire Formation, Mudstone of the Whitby, Charmouth and Grantham Formations and ferrunginous Limestone and Sandstone of the Marlston Rock Formation), which correlate with a spring line and the Lincoln Cliff.
- 1.3.5 The bedrock geologies are overlain by superficial deposits of glacial till. Localised bands of Holocene alluvium, comprising clay, silt, sand and gravel, are prevalent along small watercourses that traverse the site (British Geological Survey 2023).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

2.1.1 The archaeological and historical context of the proposed development site was assessed in a prior cultural heritage desk-based assessment (AECOM 2023b) which considered the recorded historic environment resource within 1 km (non-designated heritage assets) and 3 km (designated heritage assets) of the proposed scheme. The results were outlined in the WSI (Wessex Archaeology 2023a), and are further summarised below. Relevant entry numbers from the Lincolnshire Historic Environment Record (LHER; prefixed with MLI below) and the National Heritage List for England (NHLE) are included, with additional sources of information referenced as appropriate.

2.2 Archaeological and historical context

Summary

2.2.1 No designated heritage assets are located within the principal site but there are 17 scheduled monuments within 3 km of the entire Tillbridge Solar Scheme (principal site and cable route corridor combined), including a Romano-British fort south of Littleborough Lane (NHLE 1004935), the Roman town of Segelocum (Littleborough; NHLE 1003669), a Roman settlement at Owmby (NHLE 1004922), medieval settlements at Harpswell (NHLE 1019068), Coates (NHLE 1016979) and Temple Garth (NHLE 1007689), and the medieval town of Torksey (NHLE 1004991). Religious centres are also recorded, such as the site of 12th-century Heynings Priory (NHLE 1008685) and the site of a college and Benedictine Abbey at Stow (NHLE 1016979).

Palaeolithic and Mesolithic (950,000–4000 BC)

2.2.2 No Palaeolithic remains or artefacts have been identified within the principal site, or in the local area (AECOM 2023b). The nearest worked flint findspots lie alongside the River Trent,



- near Torksey, 13 km to the south-west. These include a flint bladelet (MLI98514), a core adze (MLI98513) and several scrapers and microliths (MLI98505).
- 2.2.3 Evidence for Mesolithic occupation in Lincolnshire is limited, mostly comprising surface scatters or isolated findspots of flint artefacts. Mesolithic activity within the principal site is limited to a single findspot (MLI51357) at the north-west corner of the site near School Lane, where three or four Mesolithic flints were recovered. These indicate the potential for dispersed earlier prehistoric remains within the Trent Valley.
 - Neolithic and Bronze Age (4000–700 BC)
- 2.2.4 Artefactual evidence for Neolithic activity within the principal site is limited to a single isolated findspot of a straight-sided polished stone axe (MLI51341) recorded in its north-west corner. Further evidence for Neolithic activity in the landscape to the north-west of the principal site is provided by other findspots of lithic artefacts including a stone axe (MLI51358) and a stone axe and flint scrapers (MLI51349).
- 2.2.5 Although there is a notable concentration of Bronze Age metal finds along the river valleys of the Trent and Witham, the Bronze Age is poorly represented within the proposed development area. A bronze flanged axe is recorded approximately 130 m north of the principal site, north of Harpswell Lane (MLI50983).
 - Iron Age (700-AD 43)
- 2.2.6 Greater levels of activity during the later prehistoric period are apparent. Within the principal site, south-east of Harpswell Grange, a series of cropmarks appear to represent a later prehistoric settlement enclosure (MLI53952). Iron Age remains, including a fragment of Early Iron Age pottery associated with a skeleton (MLI50980), were found during the 1930s just east of the Harpswell crossroads.
- 2.2.7 Within the eastern central part of the principal site, and located immediately to the east of Field 104, numerous ditches and pits representing the edge of a small Late Iron Age to early Romano-British settlement have been recorded (MLI86409). One ditch produced stratified pottery sherds dating to the Late Iron Age to early Roman transition (50 BC–AD 150). The remains were found during an archaeological watching brief undertaken ahead of the replacement of a gas main between Caenby Corner and Sturgate Airfield (Pre-Construct Archaeology 2003).
- 2.2.8 In the wider area, excavated evidence for extensive Iron Age rural settlement lies to the west of the River Trent, and additional Iron Age and Romano-British settlement has been recorded south of Cottam power station and at Rampton Quarry, both 14 km south-west of the principal site.
 - Romano-British (AD 43–410)
- 2.2.9 Three main Roman roads were established in Lincolnshire, meeting at *Lindum Colonia* (Roman Lincoln). These were Ermine Street (connecting London to York via Lincoln), the Fosse Way (Exeter to Lincoln) and Till Bridge Lane (linking Lincoln, via a ford crossing the River Trent at Marton, with the small town of *Segelocum* now Littleborough on Trent). A section of Ermine Street (now the A15) passes 2.5 km to the east of the principal site boundary and Till Bridge Lane is around 6 km to the south.
- 2.2.10 The presence of this communication network encouraged a number of smaller settlements to develop, exploiting the agriculturally fertile soils of the area as well as the resources and



- transport route provided by the River Trent. This growth included a number of forts designed to control the region. Roman forts are located just off Till Bridge Lane near Marton and at Gate Burton.
- 2.2.11 Owmby Roman Settlement, a scheduled monument (NHLE 1004922), is located 3 km to the south-east of the principal site. The site comprises the remains of an extensive Romano-British settlement straddling Ermine Street 2 km east of Fillingham.
- 2.2.12 As mentioned above, the Roman town of Segelocum, located 10 km to the south-west of the principal site, is also a scheduled monument (NHLE 1003669). Archaeological investigations have identified extensive settlement evidence including building foundations, pavements, kilns and ovens, along with multiple small finds. A piece of paving, possibly associated with the Roman road of Till Bridge Lane, was also found in Marton in the 18th century.

Early medieval and medieval (AD 410–1500)

- 2.2.13 By the 7th century, the kingdom of Lindsey was formed from a number of smaller tribal groups, eventually becoming part of Mercia following the Battle of the Trent in AD 679. The evidence for early and middle Saxon settlement in Lincolnshire is sparse, however, with only a small number of sites excavated and most of the evidence derived from cremation cemeteries.
- 2.2.14 The first Viking raids on Lincolnshire started in 841, with the Great Viking Army overwintering at Torksey in 872–873. Their camp has been identified to the north of Torksey village, in the parishes of Brampton and Torksey, 11 km to the south-west of the principal site (Hadley *et al.* 2016).
- 2.2.15 There are three Grade I listed churches in the local area, all associated with late Saxon villages. These are the Church of St Mary, Stow (NHLE 1146624), the Church of St Margaret of Antioch, Marton (NHLE 1359484), and the Church of All Saints, Rampton (NHLE 1233879), all located between 9 km and 17 km south-west of the principal site. A possible holy spring (MLI50423) is recorded at All Saints' Church in Heapham. St Chad's Church in Harpswell (NHLE 1309029) is also situated on the site of a holy spring (MLI50422); the church has a small Saxon west tower.
- 2.2.16 The pattern of settlement within the area in the 11th century is recorded in the Domesday Book of 1086, which details significant settlements, population, land use and ownership. The medieval landscape was one of manorial sites and religious houses set within open agricultural land interspersed with small villages, farmsteads and moated complexes.
- 2.2.17 Medieval settlements nearby, some recorded in Domesday Book and others as the cropmarks and earthworks of deserted villages, include Hemswell, Glentworth, Corringham, Little Corringham, Springthorpe, Sturgate, Heapham, Harwick and Thorpe. As is typical across the Midlands, each medieval village would have been surrounded by a series of communally farmed unenclosed, open fields, evidenced today by ridge and furrow earthworks surviving either as visible earthwork remains or as cropmarks. Ridge and furrow is recorded at several locations within the boundary of the principal site.

Post-medieval and modern (AD 1500-present)

2.2.18 The 16th and 17th centuries saw a further decline in the rural population as former arable land was converted to pasture by wealthy landowners, who gained much previously



- monastic land following the Dissolution. In the 17th century the existing medieval field systems were altered by private enclosure into smaller land parcels and a pattern of dispersed farmsteads developed within the newly enclosed fields.
- 2.2.19 A number of villages shrank in size with changing estate management. Harpswell Hall (NHLE 1019068) is located on the eastern edge of the principal site and consists of the earthworks and buried remains of a post-medieval house and geometric formal gardens overlying the remains of the medieval village of Harpswell.
- 2.2.20 Large country houses with surrounding designed landscapes are notable features of the post-medieval landscape. Two examples, Fillingham Castle (NHLE 1166045) and Glentworth Hall (NHLE 1063348), are located close to the principal site. In addition, the site of the former parkland and gardens (MLI98355) associated with Glentworth Hall is located within the principal site.
- 2.2.21 Historic mapping reveals an agricultural landscape, with thin rectilinear fields in arable use and small, nucleated settlements and isolated farms interspersed throughout. Farmsteads in the area are mostly of 19th-century date.
- 2.2.22 Other post-medieval land use within the principal site is recorded by the LHER in the form of a possible brick kiln at 'Brick Kiln Holt' (MLI53950) which is shown on the 1888 Ordnance Survey map. Further post-medieval activity is signalled by 16th- and 17th-century metal objects (MLI51093) found north of Park Lane in the south-east corner of the site. Industrial features include several red brick tower mills, and the Grade II listed Corringham Windmill (NHLE 1359417) is located approximately 200 m north-west of the principal site. Other mills in the wider landscape include a windmill at Heapham (NHLE 1064049). To the north-west of the principal site a former brickyard lies close to Harpswell Lane (MLI50996), and earthworks of quarries have been identified to the south of Church Street in Hemswell (MLI81810).
- 2.2.23 The flat open landscapes of Lincolnshire are well suited to military aviation and a number of airfields were constructed within the area during World War I and II. There are two associated World War II assets located within the principal site. The first is the former RAF Sturgate (MLI50912), which partially lies within Field 39 and immediately to the west and south-west of Fields 30–32. The eastern end of the main runway, taxiways, concrete perimeter track and several dispersal areas extend into the western side of the principal site. The second is the site of a World War II searchlight battery and gun emplacement (MLI80678), located towards the north of the principal site on the south side of Harpswell Lane.

Undated

- 2.2.24 Many of the undated heritage assets consist of archaeological features identified through cropmarks, soil marks and earthworks, which may provide evidence for past settlement of the landscape. These comprise:
 - a cropmark and earthwork enclosure (MLI53953) located in the north-eastern part of the principal site;
 - a possible trackway or boundary near the centre of the principal site (MLI53951);
 - a possible soil mark of a linear boundary in the south-east corner of the principal site (MLI54000); and



- cropmarks of two sides of a rectangular ditched enclosure are located to the northwest of Billyards Farm (MLI51010).
- 2.2.25 The A631 Harpswell Lane (MLI53954), which runs along the northern boundary of the principal site, is also identified by the LHER as a former major routeway of unknown date. The routeway would have formed a cross-road with Roman Ermine Street at Caenby Corner.

2.3 Previous investigations related to the proposed scheme

Geophysical survey at Tillbridge Solar (Magnitude Surveys 2023)

- 2.3.1 A geophysical survey was conducted across approximately 1325 ha of the principal site, with 134 fields subject to survey by fluxgate gradiometer. This identified 12 major 'Areas of Archaeological Activity' (AAA). These appear to form settlement complexes focussed on elevated points of the landscape and comprise ditched enclosures, ring ditches, trackways, former field systems and discrete pits. These major areas were thought to represent multiperiod archaeological landscapes, and were probably associated with various phases of occupation. Other anomalies consist of ditches, trackways and a moated feature (Magnitude Surveys 2023).
- 2.3.2 Evidence for historical and modern agricultural use of the landscape was also noted. This includes two demolished 19th-century farmhouses and widespread indications of historical and modern agriculture (ridge and furrow cultivation, ploughing, drainage, former field boundaries and ponds). Anomalies of more recent origin correlate with the former RAF Sturgate (in the west of the principal site).
- 2.3.3 Geological variations were also detected across the surveyed area, particularly in the east where they may indicate the presence of glaciofluvial deposition. In addition, a number of anomalies have been classified as undetermined, these of uncertain date and function and have little supporting context (Magnitude Surveys 2023).
 - Air photo and LiDAR mapping and interpretation (Deegan 2023)
- 2.3.4 An assessment of aerial photographs and LiDAR imagery was undertaken for the Tillbridge Solar Scheme. It identified the likely remains of Iron Age and Romano-British settlements in Fields 60, 68, 87 and tentatively within Fields 94 and 115, but highlighted the potential for further remains of these periods not detected by the survey.
- 2.3.5 Extensive medieval or post-medieval remains were also identified, including a possible moat, hollow-way or deer park pale and a possible medieval settlement within Fields 123 and 124. Ridge and furrow, plough headlands and associated boundaries or enclosures were noted within Fields 16, 50, 55, 87, 94, 98, 108, 109, 115, 116, 123, 132 and 137. A number of potential post-medieval dew ponds were identified across the principal site.
- 2.3.6 Visible 20th century features comprise a searchlight battery, gun emplacement and associated structures and buildings in Field 61, east of Harpswell Low Farm. Multiple features associated with Sturgate Airfield, which had its origins in World War II, were identified in Fields 33, 35 and 39.



3 AIMS AND OBJECTIVES

3.1 General aims

- 3.1.1 The general aims of the evaluation, as stated in the WSI (Wessex Archaeology 2023a) and in compliance with the ClfA *Standard and guidance for archaeological field evaluation* (ClfA 2014a), were to:
 - provide information about the archaeological potential of the site; and
 - inform either the scope and nature of any further archaeological work that may be required; or the formation of a mitigation strategy (to offset the impact of the development on the archaeological resource); or a management strategy.

3.2 General objectives

- 3.2.1 In order to achieve the above aims, the general objectives of the evaluation were to:
 - determine the presence or absence of archaeological features, deposits, structures, artefacts or ecofacts within the specified area;
 - establish, within the constraints of the evaluation, the extent, character, date, condition and quality of any surviving archaeological remains;
 - place any identified archaeological remains within a wider historical and archaeological context in order to assess their significance; and
 - make available information about the archaeological resource within the site by reporting on the results of the evaluation.

3.3 Site-specific objectives

- 3.3.1 Following consideration of the archaeological potential of the site and the regional research framework (Knight *et al.* 2012; Research Frameworks 2023), the site-specific objectives of the evaluation are to:
 - test the results of the geophysical survey;
 - test the 'blank areas' for any previously undetected archaeological remains;
 - determine the presence or absence of early prehistoric remains covered by alluvial deposits or by peat;
 - examine evidence for remains of Late Iron Age/Roman dispersed settlements that may exist within the site;
 - examine evidence for medieval/post-medieval agricultural remains and assess if this has impacted on any earlier remains;
 - examine the evidence of water management and land drainage change in the postmedieval and modern (AD 1750+) periods;



- determine the depth of the alluvial sequence and examine the archaeological and palaeoenvironmental potential of alluvial deposits;
- examine the artefactual and ecofactual potential of archaeological deposits, some of which may be waterlogged; and
- assess the potential for the recovery of artefacts to assist in the development of type series within the region.

4 METHODS

4.1 Introduction

4.1.1 All works were undertaken in accordance with the detailed methods set out within the WSI (Wessex Archaeology 2023a) and in general compliance with the standards outlined in CIfA guidance (CIfA 2014a) and the Lincolnshire County Council's Archaeology Handbook (Jennings 2019). The methods employed are summarised below.

4.2 Fieldwork methods

General

- 4.2.1 The trench locations were set out using a Global Navigation Satellite System (GNSS), in the approximate positions proposed in the WSI, and are shown on Figure 1. Minor adjustments to the layout and trench lengths were required to take account of constraints such as known or located services, vegetation, and to allow for machine manoeuvring. Where trenches crossed modern agricultural vehicle routes (tramlines), the route was left unexcavated and the trench extended accordingly to ensure the intended length was achieved. Trench positions also took into account the locations of known underground buried services which crossed the principal site, and suitable health and safety buffers were maintained between the trenches and services at all times.
- 4.2.2 Across the principal site a total of 2628 trial trenches, each measuring approximately 50 m in length and 2 m wide, were excavated in level spits using a 360° excavator equipped with a toothless bucket, under the constant supervision and instruction of the monitoring archaeologist. Machine excavation proceeded until either the archaeological horizon or the natural geology was exposed.
- 4.2.3 Where necessary, the base of the trench/surface of archaeological deposits were cleaned by hand. A sample of archaeological features and deposits was hand-excavated, sufficient to address the aims of the evaluation.
- 4.2.4 Spoil from machine stripping and hand-excavated archaeological deposits was visually scanned for the purposes of finds retrieval. Artefacts were collected and bagged by context. All artefacts from excavated contexts were retained.
- 4.2.5 A number of possible asbestos containing materials (ACMs) were identified during the course of the evaluation:
 - Field 35, trench 1059,
 - Field 39, trench 1114 and 1123,
 - Field 80, trench 2061



- Field 132, trench 2000.
- 4.2.6 In Fields 35 and 39 the ACMs were associated with areas of modern disturbance related to former RAF Sturgate, and in Fields 80 and 132 they were identified in modern refuse deposits. In these instances, the location of the material was recorded and reported, and no further exploratory activity occurred.
- 4.2.7 Trenches completed to the satisfaction of the AECOM Heritage Team (technical consultants for the Tillbridge Solar Scheme), client and the and in agreement with the Historic Environment Officers at (Lincolnshire County Council) and the land agent (acting on behalf of individual landowners), were backfilled using excavated materials in the order in which they were excavated, and left level on completion. No other reinstatement or surface treatment was undertaken.

Recording

- 4.2.8 All exposed archaeological deposits and features were recorded using Wessex Archaeology's pro forma recording system. A complete record of excavated features and deposits was made, including plans and sections drawn to appropriate scales (generally 1:20 or 1:50 for plans and 1:10 for sections) and tied to the Ordnance Survey (OS) National Grid.
- 4.2.9 A Leica GNSS connected to Leica's SmartNet service surveyed the location of archaeological features. All survey data is recorded in OS National Grid coordinates and heights above OD (Newlyn), as defined by OSTN15 and OSGM15, with a three-dimensional accuracy of at least 50 mm.
- 4.2.10 A full photographic record was made using digital cameras equipped with an image sensor of not less than 16 megapixels. Digital images were subject to managed quality control and curation processes, which has embedded appropriate metadata within the image and will ensure long term accessibility of the image set.

4.3 Finds and environmental strategies

4.3.1 Strategies for the recovery, processing and assessment of finds and environmental samples were in line with those detailed in the WSI (Wessex Archaeology 2023a). The treatment of artefacts and environmental remains was in general accordance with: Standard and guidance for the collection, documentation, conservation and research of archaeological materials (ClfA 2014b), Environmental Archaeology. A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage 2011), and ClfA's Toolkit for Specialist Reporting (Type 2: Appraisal; ClfA 2022a).

Human remains

4.3.2 A Licence for the Removal of Human Remains has been obtained from the Ministry of Justice for the Tillbridge Solar Scheme evaluation (licence no. 23-0214). Post-excavation processing of human remains has been in accordance with Wessex Archaeology protocols and in-line with current guidance documents (e.g., McKinley 2013) and the standards set out in ClfA Technical Paper 13 (McKinley and Roberts 1993).

4.4 Monitoring

4.4.1 The Historic Environment Officers at Lincolnshire County Council monitored the evaluation on behalf of the LPA via a series of weekly monitoring meetings which were also attended by the AECOM Heritage Team. Any variations to the WSI, if required to better address the



project aims, were agreed in advance with the client and the Historic Environment Officers at Lincolnshire County Council (acting on behalf of the LPA) and the AECOM Heritage Team (technical consultants for the Tillbridge Solar Scheme).

5 GEOARCHAEOLOGICAL BOREHOLE SURVEY SUMMARY

5.1 Introduction

- 5.1.1 A geoarchaeological borehole survey was undertaken to provide further information on the archaeological and geoarchaeological resource that may be impacted by the proposed scheme. The survey methods were outlined within the approved geoarchaeological WSI (Wessex Archaeology 2023I). The survey comprised the following types and number of investigations split between the principal site and cable route corridor:
 - 35 purposive geoarchaeological boreholes scheduled to 4.0 m below ground level (bgl) targeting alluvial deposits across the principal site;
 - eight purposive geoarchaeological boreholes to 4.0 m bgl targeting alluvial deposits along the cable route corridor;
 - nine purposive geoarchaeological boreholes targeting moat fill deposits in a suspected moated enclosure in Field 124; and
 - a programme of geoarchaeological deposit modelling (Wessex Archaeology 2023m).

5.2 Results

5.2.1 A total of 52 geoarchaeological boreholes were undertaken, their positions are shown on Figure 2. The results of the borehole survey were integrated via a programme of geoarchaeological deposit modelling, that comprised seven transects located in various areas of the scheme (Wessex Archaeology 2023m).

Deposit modelling

- 5.2.2 The full sequence of superficial geological deposits recorded during the borehole survey and monitoring of the GI works, and forming the basis of the deposit modelling, comprises:
 - Made ground (modern)
 - Topsoil/ploughsoil (modern)
 - Moat fill (medieval/post-medieval)
 - Alluvium (Holocene)
 - Peat (Holocene; present only in the valley of the River Trent)
 - Clayey sands and gravels (?Pleistocene)
 - Holme Pierrepont Sand and Gravel Member (Late Devensian; present only in the valley of the River Trent)
 - Till (Pleistocene)



- Bedrock (Jurassic)
- 5.2.3 More detail on the variability and composition of these deposits and a consideration of their geoarchaeological and archaeological potential is described in the geoarchaeological borehole survey report (Wessex Archaeology 2023m) with a summary outlined below.

Bedrock

- 5.2.4 The weathered upper surface of the bedrock, recorded as a very stiff, blue grey or grey silty clay with bands of sandstone and mudstone, was recorded only within the cable route corridor in the area of boreholes WA-C01 to WA-C08.
- 5.2.5 Here the surface of the bedrock rises slightly from the south-west to north-east as the boreholes move away from the River Till and up a tributary valley of the Till, from a level of 7.8 m OD in WA-C08 to between 8.0 and 8.7 m OD in the area of boreholes WA-C04 to WA-C06. The bedrock here is overlain by Pleistocene till in all but WA-C08, located close to the River Till, where it is overlain by Holocene floodplain alluvium of the Till (Fig. 2).

<u>Till</u>

- 5.2.6 Deposits generally described as a firm to stiff, generally sandy or silty clay with frequent or abundant sub-angular to sub-rounded clasts of chalk, flint, siltstone or sandstone are widespread across both the principal site and the cable route corridor, recorded in all but WA-C01 to WA-C03 and WA-C08 in the valley of the River Till (Fig. 2) and borehole WA-P30 towards the south-east of the principal site in Field 126.
- 5.2.7 The till deposits are of unknown thickness in all but the area of the River Till within the cable route corridor, where it was recorded overlying weathered bedrock and was between 0.35 and 0.60 m thick. Thicknesses of a minimum of 2–3 m were recorded outside of the valley of the River Till, where the till was not bottomed.

Clayey sands and gravels

- 5.2.8 Sands and gravels in a matrix of clay were recorded in boreholes WA-P24 (Field 75) and WA-P30 (Field 126) located towards the south-east of the principal site on the margins of a stream valley to the west of Glenworth (Fig. 2). These were recorded at between 1.00 and 1.85 m bgl in WA-P24 overlying till, and as the basal unit in WA-P30 between 3.0 and 4.0 m bgl.
- 5.2.9 In both boreholes these deposits are described as an orangey brown slightly clayey sand and gravel with sub-angular to angular flint and rare chalk clasts. The depositional environment and date of these deposits is currently unclear; on the basis of the angularity of the gravels and the poorly sorted nature of the deposits, they are provisionally interpreted as material worked downslope during the Pleistocene (Head), although they may include Holocene colluvium.

Holme Pierrepont Sand and Gravel Member

5.2.10 Deposits recorded as a variously sandy or silty gravel were recorded widely where the cable route corridor crosses the valley of the River Trent. These deposits were generally present at elevations between 5 and -8 m OD, and increased in thickness towards the centre of the valley. As a whole they ranged in thickness from 0.7 m to 10.55 m, with thinner deposits recorded at the sides of the valley, thinning to absence in the east.



5.2.11 These sands and gravels are interpreted as fluvial sands and gravels of the Holme Pierrepont Sand and Gravel Member, forming the youngest Pleistocene unit of the Middle Trent Valley terrace stratigraphy of Late Devensian date (12.9–11.7 Ka) (Bridgland et al. 2014; Howard et al. 2011)

<u>Alluvium</u>

- 5.2.12 Deposits of variously sandy or silty clay were recorded in most boreholes, generally including rare or occasional inclusions of sub-angular to angular gravel clasts of various lithologies including flint, chalk and sandstone. These deposits are interpreted as Holocene alluvium, forming through overbank flooding in mapped stream valleys which drain into the River Trent or River Till.
- 5.2.13 The principal site encompasses two different catchments, with stream valleys towards the north of the principal site draining into the River Trent (WA-P01 to WA-P17), and towards the south draining in to the River Till (WA-P18 to WA-P35; Fig. 2). In the principal site there is little to differentiate the alluvial deposits in these stream valleys. The alluvium is almost entirely minerogenic, and generally between 0.5 and 1.5 m thick. No distinct organic alluvium or peat units were recorded. The alluvium generally overlies till, and in places the interface between these deposits is unclear, with alluvial reworking of the till evident in places.
- 5.2.14 The stream valley in the area of boreholes WA-C01 to WA-C03 (cable route corridor; Fig. 2) drains in to the River Till, with boreholes WA-C04 to WA-C08) located within the valley of the River Till itself (which in turn is a tributary of the River Witham, meeting that river at Lincoln). The alluvium here is generally between 0.5 and 1.2 m thick, and similar to the principal site; the deposits here are entirely minerogenic, with no distinct organic alluvium or peat units recorded. The alluvium generally overlies till, with alluvial reworking of the till evident in places, although towards the axis of the River Till the river has incised to bedrock, with only a thin remnant of till evident on the north-eastern side of this valley.
- 5.2.15 Where the cable route corridor crosses the valley of the River Trent a sequence of alluvial deposits are recorded as variously silty and sandy clays, encountered between 4.1 m OD and 1.6m OD, and ranging in thickness from 0.3 m to 8.68 m. The alluvium was generally present at elevations between 0.0 and 4.0 m OD.

Peat

5.2.16 Peat was recorded in three GI boreholes towards the centre of the valley of the River Trent, encountered at elevations between 1.61 m OD to 1.07 m OD and ranging in thickness from 1.7 m to 2.9 m (Wessex Archaeology 2023n). The peat is indicative of a transition to semi-terrestrial conditions on the Holocene floodplain of the River Trent, supporting the growth of wetland vegetation.

Moat/ditch fill

- 5.2.17 An additional nine boreholes (WA-P36 to WA-P44) were undertaken across a moated enclosure within Field 124, shown on historic Ordnance Survey mapping and investigated by geophysical survey (Magnitude Surveys 2023) and trial trench evaluation, as shown in Figure 2. The additional boreholes were aligned in a broadly north—south transect extending across the arms of the moat and interior of the enclosure.
- 5.2.18 The deposits recorded in all nine boreholes in this area include sediments related to either fills of the moat or associated ditches, these generally recorded as a grey, slightly sandy or



- sandy clay with occasional chalk and flint clasts and a notable reddish mottling which distinguished it from the alluvium. In places, these deposits may incorporate Holocene sediments accumulating during overbank flooding on the wider floodplain.
- 5.2.19 The sediments interpreted as infilling the moat/ditch were generally 0.5–1.5 m thick, and overlie till in all but boreholes WA-P36, P38 and P39, where they overlie alluvium. If these deposits relate to the moat or associated ditches, it appears that they were cut into the alluvium towards the north and the till towards the south, likely having the effect of at least partly levelling the natural topography on this edge of the valley. The deposits within the moat were entirely minerogenic except for occasional detrital plant remains in all but borehole WA-P37, in which the basal fill was organic between 1.60 and 1.95 m bgl, containing mostly decomposed organic matter but with occasional plant remains.
- 5.2.20 The upper part of the moat fill in boreholes WA-P38, P39 and P40 comprised a sandy clay with occasional anthropogenic material including burnt flint, CBM and charcoal, potentially representing more recent deliberate backfill of the moat.

Made ground

5.2.21 Modern made ground, generally difficult to distinguish from the underlying alluvium but demonstrating evidence for artificial redistribution of the underlying alluvial sediments (e.g., poorly consolidated and containing occasional anthropogenic material including slag) was recorded in boreholes WA-P16 (Field 109), P30 (Field 126), P32 (Field 125) and P33 (Field 127; Fig. 2). These deposits were 0.35–0.50 m thick and overlain by topsoil/ploughsoil. In places these sediments may represent deeper instances of the ploughsoil.

Topsoil/ploughsoil

5.2.22 A unit of modern topsoil or ploughsoil was recorded as the uppermost unit in all boreholes, generally comprising a blocky, poorly consolidated sandy or silty clay with abundant root material and occasional clasts of flint and chalk, and rare ceramic building material (CBM) and coal. This unit was generally 0.3–0.5 m thick.

5.3 Discussion

- 5.3.1 The geoarchaeological borehole survey was undertaken to provide further information on the archaeological and geoarchaeological resource that may be impacted by the proposed scheme, and facilitate an informed decision regarding the requirement for, and methods of, any further archaeological and geoarchaeological work.
- 5.3.2 The sequence of superficial geological deposits overlying the weathered mudstone bedrock across the scheme comprises Pleistocene glacial deposits, which in most of the area is overlain by Holocene alluvium. Pleistocene Head and/or Holocene colluvium were identified in three boreholes, whilst to the east of the scheme (Field 124) deposits associated with a suspected moated enclosure were identified. The sequence across the scheme is capped by topsoil/ploughsoil, with occasional deposits of made ground, likely representing modern ground raising or landscaping.
- 5.3.3 Across the scheme the till is of unknown Pleistocene date, possibly being Wolstonian in age. Given that the scheme is located approximately 30 km south and 40 km west of the mapped extent of the Late Devensian British-Irish Ice Sheet (BIIS) (Clark *et al.* 2018; BGS Geoindex 2023), it is assumed to relate to an earlier glacial episode between the Anglian (MIS 12, 478–424 Ka) and Late Devensian (MIS 2; 26–11.7 Ka) glaciations.



- 5.3.4 Tills are poorly sorted sediments deposited directly by ice sheets and are considered to have a limited archaeological and geoarchaeological potential. Although they may seal and preserve underlying stratigraphy containing environmental remains and artefacts, such deposits were not encountered during the borehole survey.
- 5.3.5 The scheme is mapped close to the margins of a high stage area of Proglacial Lake Humber (Fairburn and Bateman 2015). Proglacial Lake Humber, which formed to the south of the Vale of York BIIS ice lobe and to the west of the North Sea BIIS ice lobe, was created when drainage from the ice sheet was blocked by ice. It was relatively short-lived, with multiple lake level stands between 40 and 5 m OD related to the switching of lake outlets from the Lincolnshire Gap to the Humber Gap, and to oscillations of the BIIS (Fairburn and Bateman 2015). However, no glaciolacustrine deposits were identified within the boreholes, although it is possible that the stream valleys in which the boreholes were focused have incised into and removed such deposits in these areas.
- 5.3.6 Clayey sands and gravels were recorded in three boreholes located towards the east of the scheme on the margins of a stream valley to the west of Glenworth (WA-P24, WA-P30 and WA-P35, Fields 75, 126 and 127). These were recorded either overlying till or as the basal unit. The deposit environment and date of these deposits is currently unclear, but they are considered likely to represent slope-wash sediments of either Pleistocene Head or Holocene colluvium. Head is defined as a poorly sorted periglacial slope deposit that represents material reworked downslope through solifluction processes (alternate freeze-thawing). Head deposits are therefore most widely recorded at the base of slopes and along river valleys.
- 5.3.7 Colluvium represents unconsolidated material which has been deposited downslope by either rainwash, sheetwash and/or slow continuous downslope creep. Colluviation is likely in areas of topographic relief where soil instability has been brought on by activities such as clearance of woodland, agricultural activity and soil degradation, leading to downslope movement of sediment.
- 5.3.8 The palaeoenvironmental potential of both head and colluvium is generally low, although they may mask or contain deposits of higher geoarchaeological potential (e.g., buried land surfaces).
- 5.3.9 The till within the boreholes is overlain in most cases by Holocene alluvium, associated with overbank flooding in the stream valleys which cut through the till; this alluvium was the target of the borehole survey. Two catchments are evident in the pattern of drainage within the scheme; towards the north of the principal site, stream valleys drain north towards the River Trent, whilst in the southern half of the principal site these stream valleys are tributaries to or formed by the River Till, itself a tributary of the River Witham.
- 5.3.10 The date and evolution of these stream valleys is uncertain. They post-date the accumulation of the till, with initial incision of their channels potentially occurring either during the Late Devensian or Early Holocene, followed by likely relatively minor migration of these channels across narrow floodplain corridors during the Holocene. The alluvium here is entirely minerogenic (comprised of sands, silts and clays), with no distinct organic alluvium or peat units recorded. Similarly, no distinct evidence for former buried channels (palaeochannels) were recorded in either catchments. Towards the south of the scheme the River Till has incised to bedrock, with only a thin remnant of till evident underlying the north-eastern side of the floodplain; the stream valleys elsewhere overlie a reasonable thickness (>2–3 m) of till, in places was not bottomed.



- 5.3.11 The alluvium within the scheme, in both the principal site and the cable route corridor, is considered to be of low geoarchaeological potential.
- 5.3.12 Nine boreholes located along a broadly north–south transect were drilled in Field 124, targeting a suspected moat depicted on historic Ordnance Survey mapping and subsequently recorded during a geophysical survey (Magnitude Surveys 2023). The suspected moat was also investigated in archaeological evaluation trenches 2606, 2610 and 2611 (Fig. 70), which recorded sediments provisionally interpreted as relating to either fills of the moat or associated ditches.
- 5.3.13 These deposits were entirely minerogenic and of low geoarchaeological potential in all but borehole WA-P37 (Field 124), in which an organic basal fill was recorded between 1.60 m and 1.95 m bgl. This unit is considered to be of moderate to high geoarchaeological potential on the basis of its potential to preserve palaeoenvironmental remains, and material suitable for scientific dating, associated with the suspected moat.

6 ARCHAEOLOGICAL TRIAL TRENCH SUMMARY

6.1 Introduction

- 6.1.1 Across the principal site, 427 of the 2628 excavated trial trenches contained archaeological features and deposits.
- 6.1.2 The uncovered features, principally comprising ditches, gullies, pits, postholes, furrows and structures, represent a main focus of settlement in the Late Iron Age/early Romano-British period, with some medieval and post-medieval activity including remnants of ridge and furrow and a moated site, though numerous features remain undated or of uncertain date. There is also some evidence of earlier activity indicated by Beaker pottery and worked flint tools and knapping waste, dating to the Late Neolithic/Early Bronze Age, recovered from the base of the Lincoln Cliff, and small quantities of worked flint elsewhere, largely found residually in later features. A large number of backfilled field boundaries were identified, largely correlating with the 19th-century mapping, and attest to the expansion of fields to accommodate modern, mechanised farming. Remains associated with the former RAF Sturgate were also recorded in the south-west of the site.
- 6.1.3 The following section presents a summary of the key results of the evaluation with archaeological features and deposits discussed by period. Concentrations of archaeology are listed in Table 1.
- 6.1.4 Detailed descriptions of individual contexts are provided in the preceding reports (Wessex Archaeology 2023b–k). Figures 3–72 show key areas of archaeological features, together with the preceding geophysical survey results and aerial assessment (Magnitude Surveys 2023; Deegan 2023), and a selection of images from the evaluation are provided in Figures 73–82.



 Table 1
 Concentrations of dated archaeological features across the principal site

Date	Type of Archaeology	Field(s)	Trenches	Geophysical survey area	Report Ref	Figure(s)
LNeo- EBA, RB	Settlement and enclosures	131, 132, 137	1852,1855, 1861, 1977–1979, 1983, 1987, 1990, 1996– 2003	AAA5	Wessex Archaeology 2023d	24–25, 62–64
IA-RB	Settlement and enclosures	62	1455–1460, 1469	AAA2	Wessex Archaeology 2023k	6, 7, 12, 45
IA-RB	Settlement and enclosures	60, 68	625–627, 635, 642, 643, 647, 649, 672– 678	AAA10	Wessex Archaeology 2023f	21, 22, 29, 30, 57, 58, 61
LIA-RB	Enclosures	3	23–25	AAA1	Wessex Archaeology 2023j	3, 41, 42
LIA-RB	Enclosures	3	29, 31–33, 35-36	AAA1	Wessex Archaeology 2023j	3, 41, 42
LIA-RB	Enclosures	4	50–52	AAA1	Wessex Archaeology 2023j	3, 9, 40
LIA-RB	Settlement and enclosures	87, 98, 99, 100	1635–1640, 1643– 1644, 1652–1654, 1671–1673, 1709, 1762–1771, 1811- 1813	AAA3	Wessex Archaeology 2023k	7, 8, 13, 46–49
LIA-RB	Settlement and enclosures	94, 115	2165, 2172–2173, 2175, 2231, 2243– 2251	AAA8	Wessex Archaeology 2023g	31, 35– 36, 38– 39, 68–69
LIA-RB	Enclosures	116	2259–2260, 2282, 2284–2287	AAA9	Wessex Archaeology 2023g	38–39, 71–72
LIA-RB	Enclosures	139, 140	2627, 2634	AAA11	Wessex Archaeology 2023j	28, 55
RB	Enclosures	45, 47	452, 486, 489, 511, 513–515	AAA11	Wessex Archaeology 2023f	20, 28, 29, 46, 48, 56
RB	Settlement and enclosures	49, 54	561, 562, 563, 589– 592, 599, 605	AAA11	Wessex Archaeology 2023d	28–30, 50, 55, 59
RB	Settlement and enclosures	60	618–626	AAA10	Wessex Archaeology 2023f	21, 29– 30, 58, 61
RB	Enclosures	102, 106	908, 979–981, 993	AAA4	Wessex Archaeology 2023f	17-18, 60
RB	Settlement and enclosures	31	1021–1028	AAA12	Wessex Archaeology 2023f	26–27, 50
RB	Enclosures	55–56	1309–1310, 1312, 1317–1319, 1321, 1324	AAA2	Wessex Archaeology 2023b	5–6, 43– 44
RB	Settlement and enclosures	87	1641–1642	AAA3	Wessex Archaeology 2023k	7, 13, 46– 47



Date	Type of Archaeology	Field(s)	Trenches	Geophysical survey area	Report Ref	Figure(s)
RB	Enclosures	111–112	1887, 1914–1917, 1920	AAA6	Wessex Archaeology 2023d	18, 22, 31, 61
RB	Settlement and enclosures	116	2273, 2288–2292	AAA9	Wessex Archaeology 2023g	38-39, 71- 72
RB	Enclosures	123	2537, 2547, 2549– 2550, and 2577– 2581	AAA7	Wessex Archaeology 2023h	35–36, 39, 67
Med- Post Med	Moat	124	2602, 2606, 2610– 2611	AAA8	Wessex Archaeology 2023h	36, 70
Modern	RAF Sturgate	33, 35, 39, 138	1047–1049, 1052– 1053, 1059–1075, 1077, 1090–1092, 1095–1097, 1100, 1120, 1125, 2625	n/a	Wessex Archaeology 2023j	26–28, 51–54

6.2 Soil sequence and natural deposits

- 6.2.1 The natural soil sequence is relatively uniform across the principal site. The geological substrate was most commonly recorded as a greyish brown sandy clay with areas of reddish brown sandier clays and bluish grey silty clays. There were also localised areas of gravels. The natural substrate was typically encountered between 0.2–0.75 m bgl and in the vast majority of trenches at between 0.2–0.67 m.
- 6.2.2 Subsoil was recorded sporadically across the principal site and seems largely present or absent on the basis of former agricultural regimes. The variations and subtleties are discussed more fully in the constituent reports (Wessex Archaeology 2023b–k). However, where present it was most typically a greyish brown silty clay with a thickness of less than 0.4 m.
- 6.2.3 The modern ploughsoil, ubiquitous across all areas of excavation, was typically between 0.15–0.55 m in depth and consisted of a greyish brown silty clay with reddish or yellowish sandy patches in places corresponding with the geology. Gravel inclusions were common throughout.

6.3 Prehistoric (9500–100 BC)

Background activity

- 6.3.1 An assemblage of 94 pieces of worked flint was recovered across the principal site. The bulk of these, 62 pieces, or 67% of the assemblage, came from a single pit in Field 132 (see below). The remaining flints were found in quantities of eight or less pieces per field, and these all represent residual material collected from features or deposits either securely, or very probably, dated to the Late Iron Age/Romano-British period.
- 6.3.2 The most securely identified worked flint dates to the Early Neolithic and Late Neolithic/Early Bronze Age periods, with some pieces possibly dating to the Late Mesolithic. There is very little evidence for these periods within the limits of the principal site, and it is relatively rare within the broader region (see Section 8.3 below).



Field 132

6.3.3 The earliest feature identified on the site was a large, deep pit located close to the base of the Lincoln Cliff in Field 132 (trench 2003; Figs 25, 63 and 73). Beaker pottery, worked flint tools and knapping waste, recovered from the pit, were dated to the Late Neolithic/Early Bronze Age. The artefacts, in addition to charred plant remains and charcoal, came from dark backfilled deposits that probably represent dumped material from an associated nearby settlement. Elsewhere in the vicinity, broadly dated prehistoric worked flint was collected from colluvial deposits and residually from later features. Late Neolithic to Early Bronze Age activity is poorly evidenced across the county. The nearest examples being 14 km north of the principal site at Manton Warren (Riley 1957) and to the west of the River Trent at Rampton (Knight 2000), some 15 km to the south-west, as such the pit is of some significance.

6.4 Late Iron Age to Romano-British (100 BC-AD 410)

6.4.1 Twenty areas of activity across the principal site were dated to the Late Iron Age and Romano-British period (Table 1). These form some associations: a swathe of four sites running for 1.7 km from Harpswell Low Farm, south-west towards Common Lane (Fields 55, 56, 62, 87, 98–100), and a second, covering 2.8 km, from the base of the Lincoln Cliff south-east beyond Glentworth Grange towards the southern site limit and encompassing six settlement and enclosure systems (Fields 94, 111, 112, 115, 116, 123, 131, 132, 137). A further three concentrations form a north-east to south-west alignment in the central part of the site east of Billyards Farm (Fields 49, 54, 60, 68). In addition, one enclosure complex was identified in the central part of the principal site (Fields 102 and 106), three in the north-west (Fields 3 and 4) and three in the west (Fields 31, 45, 47, 139 and 140).

Field 3

- 6.4.2 Within Field 3, archaeological features were identified and investigated in trenches 23–25, 29, 31–33, 35–36 (Figs 3, 9, 41, 42, 74). The geophysical survey appeared to show two separate areas of activity (AAA1; Magnitude Surveys 2023): a small group of rectilinear anomalies mapped towards the north of the field were targeted by trenches 24 and 25, while further south a second group of anomalies forming a larger subdivided enclosure, with additional curvilinear enclosures, were targeted by trenches 29, 31–33 and 35–36. Relatively good correlations were evident between the archaeological features and geophysical anomalies, but in some instances particularly the curvilinear enclosures it was less clear (e.g., trench 27).
- 6.4.3 Towards the north of Field 3, four ditches in trenches 24 and 25 correlated well with the geophysical anomalies. A fifth ditch and three gullies were also identified but did not correlate with any geophysical anomalies.
- 6.4.4 Beyond the northerly group of features indicated by the geophysical survey, two small pits and a gully were investigated in trenches 23 and 24. The three features were undated, but their proximity to areas of Late Iron Age to Romano-British activity could indicate they are of a similar chronology.
- 6.4.5 The larger subdivided enclosure was identified in trenches 29, 31–33; its extent remains uncertain, but the northern part of the enclosure appears to measure 50 m by 34 m. The northern and western sides were represented by ditches in trenches 29 and 32, and the central subdivision crossed trench 31. Additional ditches in trenches 31 and 32 may also be associated, perhaps forming parts of a smaller enclosure.



- 6.4.6 Further south, three broadly north—south ditches were investigated in trenches 33 and 36. All three ditches correspond to geophysical anomalies but little can be inferred as the anomalies generally formed short lengths that do not appear to form parts of a coherent system. Dating from these features indicates development from the 1st century BC to the 4th century AD.
- 6.4.7 Additional features, gullies and a shallow ditch, with no corresponding geophysical features, were excavated in trenches 32, 33 and 36. As with the larger ditches they date from the Late Iron Age to Romano-British period. Relationships were established between three of these features and the larger enclosure ditches.
- 6.4.8 Artefacts recovered from the excavated features span the Late Iron Age to Romano-British periods and comprise pottery (1.58 kg), animal bone (1.36 kg), a small number of iron objects and a fragment from a rotary quern stone.

Field 4

- 6.4.9 Within Field 4, a cluster of archaeological features were investigated in trenches 50–52 (Figs 3, 9 and 40). The geophysical data indicates the southern part of the cluster forms a north-west to south-east orientated enclosure with a curved north-western end (AAA1; Magnitude Surveys 2023). This southern enclosure was represented by five ditches in trenches 51 and 52. To the north-east are two further rectilinear enclosures along with curvilinear and linear anomalies. The presence of these features was confirmed by two ditches in trench 50 which appear to form the northern and western sides of the enclosure, with the western and northern boundaries represented by ditches in trench 52. There was generally close concordance between archaeological features and geophysical anomalies, and additional small features, such as pits and gullies, were also apparent, suggesting further complexity.
- 6.4.10 Ditches which produced Romano-British pottery, but with no corresponding geophysical anomalies, were recorded in trench in 52; one ditch also contained an Early Neolithic leaf-shaped arrowhead, and likely intrusive sherds of medieval pottery. Two occupation layers and two pits were also recorded in trench 52. Two gullies (in trenches 50 and 51) were also possibly contemporary.
- 6.4.11 Artefacts (4.4 kg) include pottery, animal bone and smaller amounts of CBM, fired clay and metalwork, amongst which was a probable 3rd century AD copper alloy coin recovered from the topsoil of trench 52. The pottery spans a wide range of periods and includes material of Late Iron Age/early Romano-British to medieval date. The principal phase of activity probably occurred during the Late Iron Age and Romano-British periods, with a focus towards the mid–late Romano-British period. It seems likely that the Neolithic and medieval finds are either residual or intrusive.

Field 31

- 6.4.12 Trenches (1021–1028) in Field 31 uncovered a series of features, predominantly ditches, gullies, and pits (Figs 26 and 50). The features largely correlate with the geophysical anomalies although there were some slight offsets; there are also instances where archaeological features had no corresponding anomalies, and vice versa (AAA12; Magnitude Surveys 2023).
- 6.4.13 A complex of ditches, gullies and pits were identified in trenches 1021–25, with outlying features recorded in trenches 1026–28. Ditches and gullies in trenches 1021–25 had a



- regular arrangement, generally orientated broadly north–south or east–west, with possible enclosures and curvilinear gullies lying between them. Additional ditches aligned north-east to south-west suggest more than one phase of activity.
- 6.4.14 A sequence of east–west ditches appear to form an ordered pattern of land divisions, spaced 10–26 m apart. Seven larger ditches may have formed main boundaries, with smaller ditches and gullies representing internal divisions. A second phase of activity is suggested by ditches and gullies aligned broadly north-east to south-west. Four ditches and gullies may belong to this period of activity. Dispersed amongst the ditches were several discrete features, including eight pits.
- 6.4.15 An area of stone was also investigated in trench 1024. It was situated to the south and east of the intersection between two Romano-British ditches and was formed of limestone that appeared to be bedded and tilted, with weathering on its edges. It seems likely that the stone is a natural feature, perhaps a glacial erratic.
- 6.4.16 Artefacts (1.9 kg) recovered from the features comprise animal bone, CBM, fired clay, shell and pottery (750 g), which is of predominantly middle–late Roman date although a significant amount of early or middle Roman wares were recovered from features in trench 1025.

Fields 45 and 47

- 6.4.17 Within Fields 45 and 47 the geophysical survey had identified a small enclosure complex, with a prevailing north-east to south-west orientation possibly of the same date as the enclosure identified to the south-west in Fields 139 and 140 (AAA11; Magnitude Surveys 2023). Corresponding features (mainly ditches and pits) were investigated across trenches towards the south of Fields 45 and 47 (trenches 452, 486, 489, 511, 513–515; Figs 28 and 56).
- 6.4.18 The ditches displayed various profiles and depths suggesting different functions for the enclosures and boundaries. Larger ditches may represent principal boundaries; four, all orientated north-west to south-east, were investigated in trenches 486, 489 and 511. The ditch in 486 had a V-shaped recut. Three pits were found to be associated with the enclosure and a further three ditches possibly represent field boundaries extending beyond the main area of settlement.
- 6.4.19 Artefacts (3.4 kg) recovered from the features comprise animal bone, CBM, fired clay, flint, shell, an iron rod, modern glass and pottery (1.9 kg), predominantly of middle–late Roman date.

Field 49 and 54

- 6.4.20 Between the south-eastern and south-western corners of Fields 49 and 54 the geophysical survey identified a small enclosure complex comprising linear, curvilinear and rectilinear anomalies. A second small group of linear and curvilinear anomalies was located 30 m to the north (AAA11; Magnitude Surveys 2023). Trenches 561, 562, 563, 589–592, 599, 605 targeted these anomalies and recorded ditches (44), gullies (17), pits (15) and postholes (four; Figs 29 and 59).
- 6.4.21 Trenches 561, 562, 563, 589–592 targeted the southern group of anomalies. These are close to the site boundary and possibly continue to the south. The ditches had close correlations with the geophysical anomalies although two ditches in trenches 562 and 563



had no corresponding anomaly. Multiple phases were indicated by the number of features, their tight spacing and sequences of intercutting ditches. The boundaries shared common orientations, broadly east—west by north—south, across the complex. The nature of the enclosure group was demonstrated in trenches 561 and 590 where clusters of closely spaced and intercutting features were investigated, however the number and complexity of features, as well as differences in their alignments, hinders the ability to confirm overall sequences.

- 6.4.22 Two ditches, recorded in trench 589, broadly align with a square enclosure identified by geophysical survey, and a slight curve in the southern edge of one of the ditches may suggest a corner beyond the eastern edge of the trench. However, the projected southern return of the putative enclosure was not identified. Likewise, ditches in trenches 561–563 share similar form and may be components of a rectilinear enclosure, but this is not certain.
- 6.4.23 Aside from the ditches and gullies, pits and postholes were also excavated across the enclosure complex. Large stone inclusions in two pits in trench 589 were comparable to the stone packing of a posthole in the same trench. Although uncertain, these features highlight the potential for structural remains within the enclosure complex.
- 6.4.24 Trenches 599 and 605 targeted the northern group of anomalies; across trenches 599 and 605, five ditches, two pits, and a gully were excavated. Two ditches in trench 599 possibly represent a rectilinear enclosure, while those in trench 605 are perhaps parts of two separate curvilinear enclosures.
- 6.4.25 Approximately 120 m to the west, a north-east to south-west ditch crossed the north-eastern end of trench 558 and corresponds closely with a weak linear geophysical anomaly. The ditch supports the results of the geophysical survey, which are suggestive of a rectilinear enclosure, possibly an outlying feature of the enclosure complex investigated to the southwest.
- 6.4.26 Considered together the features formed a clear area of settlement; the various features produced over 11 kg of artefacts, predominantly middle–late Roman pottery and animal bone.

Fields 55-56

- 6.4.27 Situated to the east of Harpswell Low Farm, Fields 55–56 (trenches 1309–1310, 1312, 1317–1319, 1321, 1324; Figs 6, 43–44, 78) contained a series of ditches, gullies, pits, and postholes. These features largely correspond with the results of the geophysical survey, which indicated a group of rectilinear field boundaries and curvilinear anomalies towards the south of Field 55 (AAA2; Magnitude Surveys 2023). They lie 330 m to the west of a complex of enclosures in Field 62 (see below).
- 6.4.28 Amongst the features was a north-east to south-west boundary some 5.5 m wide, comprising at least three intercutting ditches. Roman pottery was recovered from the majority of the constituent contexts. A collection of pits and postholes were also found close to this boundary in trench 1310. Lying approximately 30 m to the north of the boundary, a ditch was recorded in three trenches (1309, 1312 and 1321) and broadly corresponds to two slightly curving linear geophysical anomalies orientated north-east to south-west. They were mapped for 107 m and appear to link two possible rectilinear enclosures. Two gullies were recorded 10 m apart in trench 1321 and may be associated with the ditched boundary. Although uncertain, given their similar forms, the two gullies may be associated, possibly forming part of a small enclosure, or perhaps a ring ditch/drip gully. Features of Romano-



- British date west and south of these features may indicate that the enclosure system continued beyond the area indicated by the geophysical survey.
- 6.4.29 The features produced a range of artefacts (6.7 kg): pottery (2.9 kg), of predominantly middle–late Romano-British date, animal bone (3 kg), along with fragments of a late 3rd to 4th-century AD copper alloy bracelet/armlet (ON 132101).

Field 60

- 6.4.30 At the centre of Field 60 a series of enclosures and boundaries were investigated across seven trenches (618–624; Figs 21 and 58). These features are 60 m south of the settlement and enclosure system recorded in Field 68, and are likely partially contemporary.
- 6.4.31 Ditches were the most common feature type (49) and correspond well with geophysical anomalies (AAA10; Magnitude Surveys 2023). They followed two main axes, with broad north-west to south-east or north-east to south-west orientations, forming an overall L-shaped arrangement of enclosures. These were positioned around the south-westerly side of a topographic high point, located to the north. Whilst ditches were predominant, gullies (15), pits (2), a crop-drying oven and a surface were also recorded.
- 6.4.32 Ditches that correspond to a series of enclosures at the north-western side of the complex were investigated in trenches 619, 621–22 and 624. These seem to form subrectangular enclosures with curved north-western ends. Longer rectangular enclosures were indicated by the geophysical survey across the south-eastern side of the complex, the longest measuring approximately 125 m. Examples of these boundaries were investigated in trenches 618, 621 and 623. Parallel boundaries, forming southerly extensions of the enclosure system, were found in trenches 618, 620 and 621, and demonstrate the regular arrangement across the area. Towards the southern edge of the complex, parts of a large rectilinear enclosure were recorded in trenches 618 and 620. At the eastern end of the enclosure a similarly sized ditch lay 12 m to the south and accords well with a small square-shaped compound, approximately 13 m by 12 m, shown by the geophysical data. Relatively few pits and postholes were identified, with the only examples investigated in trench 618.
- 6.4.33 A wide variety of artefacts (36.3 kg) were recovered across the area including middle to late Romano-British pottery (16.6 kg), animal bone (12.4 kg), CBM, fired clay and single pieces of cement, glass, shale and iron, as well as two fragments of human bone (refitting fragments of cranium/skull).

Field 62

6.4.34 Field 62 contained a settlement complex, located 330 m east of the enclosure system recorded in Fields 55–56 (Figs 6 and 45). The geophysical survey had described it as two curvilinear enclosures that appear to have been truncated by several others of rectilinear form. Trenches 1455–1460 and 1469 were positioned to target these anomalies (AAA2; Magnitude Surveys 2023). The trenching results predominately recorded ditches and gullies, although smaller numbers of pits and a hedgerow were also present; good correlations were evident between the features and geophysical anomalies. The ditches and gullies formed a series of enclosures: a central rectilinear enclosure (30 m by 21 m; trench 60), a larger enclosure with a curved western edge (trenches 1458 and 1459), and a D-shaped enclosure (trenches 1455 and 1456), with a smaller number of ditches orientated broadly north to south (trenches 1457, 1458 and 1460). In addition to these principal phases of land division, smaller ditches and gullies were also examined.



- 6.4.35 The D-shaped enclosure alone provides clear stratigraphic relationships to other boundaries within the settlement complex. It truncates an earlier broadly north-east to south-west linear ditch twice in trench 1456. Some of the ditches had also been recut. Pottery recovered from the enclosures was mostly dated Late Iron Age to early Romano-British, with the D-shaped enclosure producing material of a later middle to late Romano-British date.
- 6.4.36 Artefacts predominately dating to the Romano-British period were recovered from the excavated features and comprise pottery (9 kg), animal bone (5.1 kg) and smaller amounts of fired clay, worked flint and shell. Craft items were also found in the form of a spindle whorl, a stone pounder and a whetstone.

Field 68 and 60

- 6.4.37 A complex of enclosures and settlement activity was investigated at the western edge of Field 68, with parts continuing into Field 60 (trenches 625–627, 635, 642, 643, 647, 649, 672–678; Figs 21, 30, 57, 58, 75–77). These features are 60 m north of the enclosure system recorded in Field 60. The geophysical and aerial imagery surveys indicate the complex covers a broadly rectangular area measuring approximately 205 m by 170 m. Results from the trenching provide additional information on the date and complexity of the settlement and correlate well with the earlier surveys, which successfully identified the enclosures and the settlement extent. The geophysical survey was less successful in identifying more isolated features, such as the crop-drying ovens (trenches 635, 649 and 678) and conveying the full complexity of the settlement (AAA10; Magnitude Surveys 2023).
- 6.4.38 The settlement complex is situated to the east of a high point in the local topography, overlooking lower lying ground to the south and east. Ditches and gullies were the most common feature type, with pits, postholes, crop-drying ovens and dumps of material also recorded. The ditches and gullies formed a series of regular cell-like enclosures and fields orientated north-east to south-west and north-west to south-east, with the principal enclosures and boundaries represented largely by wider, deeper ditches and smaller shallow examples forming internal divisions.
- 6.4.39 The features are, in places, complex and intercutting with up to four stratigraphic phases represented (trench 675; Figs 76–77). Pits and postholes were found across the settlement area, although they tended to be in smaller numbers than enclosures and boundary features. Larger numbers of pits and postholes were found in trenches 673 and 677, indicating smaller discrete features are preserved, but are perhaps concentrated in certain areas.
- 6.4.40 A total of three crop-drying ovens were identified, one each in trenches 635 (Fig. 75), 649 and 678, all situated around the southern and eastern edge of the settlement complex. Of these, two (trenches 649 and 678) were truncated, with little remaining of their original structures. A third more complete example was found in trench 635; the portion of the oven exposed within trench 635 is relatively well preserved. Crop-drying ovens are relatively common in the north of England, similar examples have been recorded within 2.5 km of the site, one to the north near Willoughton (Cooke and Seager Smith 1998), and a second to the west near Sturton Le Steeple (Elliott 2004). Other examples are known from further afield in Lincolnshire near New Waltham (Tuck 2023) and in South Yorkshire at Thurnscoe (Neal and Fraser 2004); a more complex example was recorded at Sleaford (Elsdon 1997). The ovens had been sited beyond the main area of settlement by as much as 60 m and occupied a contour (approximately 26.5 m OD) to the south of higher ground further northwest. Perhaps positioned to take advantage of prevailing wind directions, as well as being



- closer to the surrounding fields, they may also have been sited at a safe distance from the settlement given the risk of fire when drying crops.
- 6.4.41 Artefacts recovered indicate a main phase of activity during the mid–late Romano-British period, although smaller amounts of Middle Iron Age to early Romano-British and early to middle Romano-British pottery possibly suggest earlier origins for the settlement. A total of 44.7 kg of finds came from features across the settlement area, with pottery (22 kg) and animal bone (17 kg) forming the bulk of the assemblage.

Field 87 (north-west)

6.4.42 In the north-western corner of Field 87 two trenches (1641 and 1642) were positioned across a series of features on the southern side of a probable settlement complex identified by geophysical survey (Figs 7, 13 and 46). The complex appears, from the geophysical survey, to extend across approximately 2 ha and continues into an unexcavated field to the north immediately south of Harpswell Grange (AAA3; Magnitude Surveys 2023). Within trenches 1641 and 1642, eight ditches and four gullies were identified and investigated. Their positions largely correspond to geophysical anomalies, suggesting close associations between the two sets of data, although some discrepancies are apparent. The ditches and gillies appear to be constituents of a series of abutting enclosures with internal divisions and a possible trackway. A total of 3.8 kg of finds were recovered including middle to late Romano-British pottery (2.1 kg), animal bone (1.5 kg), a copper alloy coin (dated AD 343–48) and a fragment of shale bracelet/armlet.

Fields 87, 98, 99 and 100

- A large Romano-British settlement complex was located within Fields 87 and 98, 150 m south-east of the aforementioned features in trenches 1641 and 1642 (see Section 6.4.42). Parts of the complex in Fields 87 and 98 are known from cropmark records in the Lincolnshire HER (MLI53952) and are visible on aerial photographs of the area (Deegan 2023). The geophysical survey mapped a range of linear and rectilinear anomalies that appear to form abutting and overlapping enclosures (AAA3; Magnitude Surveys 2023). Towards the southern edge of the group a penannular anomaly was identified in Field 98. At the southern extent a large subrectangular enclosure spans the south-western portion of Field 99, with a continuation into the north of Field 100. Overall, the settlement seemingly covers an area of approximately 10 ha, with additional field boundaries apparent across much of Field 98 (Figs 7–8, 13 and 46–49).
- 6.4.44 Trenches 1635–1640, 1643–1644, 1652–1654, 1671–1673, 1709, 1762–1771, 1811–1813 were positioned to target the geophysical anomalies, whilst field ditches were targeted in various trenches across Field 98 (see Section 6.4.46). Generally, the trenching results match those of the geophysical survey. However, in certain trenches (e.g., 1636 and 1699) no corresponding features were apparent, whilst in others the similarity of the feature fills to the surrounding parent material hampered their identification as archaeological features (e.g., trenches 1654 and 1719).
- 6.4.45 Ditches (45) and gullies (19) were the most common feature type, whilst only six pits were recorded. The ditches and gullies were orientated either north-west to south-east or north-east to south-west, following the alignment of the overall settlement, as defined by the geophysical survey. The northern extent of the complex is dominated by a large rectangular enclosure, 130 m by 70 m. Its long axis is orientated north-west to south-east, with perpendicular anomalies forming internal boundaries or subdivisions. This enclosure was targeted by five trenches, with ditches confidently identified in three (trenches 1635, 1637).



and 1638). Internal subdivisions, both perpendicular and parallel to the main enclosure, crossed trenches 1635, 1637 and 1639. These included smaller cell-like enclosures and larger blocks. Further enclosures were investigated to the east and south, mostly following the overall orientation of the settlement, suggesting a consistent chronology for the features. To the east, the ditches again formed both smaller enclosures and larger divisions that continue into Field 98 to the east. To the south they represent the western edge of a group of enclosures visible as both cropmarks and in the geophysical data.

- 6.4.46 The general pattern of enclosures continued to the east within Field 98. As with Field 87, a series of ditches, orientated north-east to south-west or north-west to south-east, formed parts of enclosures identified by the geophysical survey. The ditches of a probably contemporary field system were investigated across Field 98, these maintaining the broad alignment established by the enclosure complex. Eight possible field ditches were identified, with the most distant example located 270 m to the north-east in trench 1687. Trench 1671 targeted a penannular anomaly visible in the geophysical data. Within the trench a cluster of four features broadly correspond to the southerly terminal of the penannular anomaly, however no features correlating to its western side were identified. At the southern extent of the settlement, trenches 1762–1764 in Field 99 identified the presence of the southern part of a rectilinear enclosure with some smaller internal, curvilinear ditches. Those identified correlate with geophysical anomalies and are only 20 m north of another complex of Romano-British settlement remains.
- 6.4.47 The southernmost enclosure in the complex spans the south-western portion of Field 99, with a continuation into the north of Field 100. It was targeted by trenches 1764–1771 and 1811–1813. Overall, the settlement appears, from the geophysical survey data, to have a rectangular shape, enclosed by a boundary ditch, and measured 170 m by 130 m, an area of approximately 2 ha. Alongside ditches, gullies, pits and postholes, tentative evidence of a possible structure was identified towards the centre of the settlement (trench 1768). This comprised a linear arrangement of stone associated with a possible posthole; a dump of stone within a ditch in the same trench may be related.
- Datable material from the settlement and associated field ditches suggests that the northern portion of the settlement probably originated in the Late Iron Age—early Romano-British period, with the southern portion established during the mid-1st to early 2nd centuries AD. In both cases activity continued into the 3rd to 4th centuries AD. In total, approximately 30.8 kg of finds were collected from the features: animal bone (15.2 kg) and pottery (13.1 kg) form the bulk of the assemblage, along with CBM, fired clay, slag, stone, shell and undiagnostic iron and copper alloy objects. Additionally, two joining fragments of human skull were recovered from a ditch in trench 1170, suggested to have formed the settlement boundary.

Fields 94 and 115

- 6.4.49 A concentration of archaeological features were exposed in the central and southern portion of Field 115, with a slight 'overspill' south-west into Field 94 (trenches 2165, 2172–2173, 2175, 2231 and 2243–2251; Figs 35–36, 68–69 and 79). The exposed features correspond with a possible settlement detected by the geophysical survey (AAA8; Magnitude Surveys 2023).
- 6.4.50 The settlement is, overall, rectangular in plan, aligned north-east to south-west with small offshoots to the east (trenches 2243 and 2247) and south (trenches, 2165, 2172–2173 and 2175). The settlement comprises a block of small cell-like enclosures and divisions, generally of rectangular form. It occupies an area of around 2.5 ha.



- 6.4.51 Approximately 70 separate features were recorded, these predominantly ditches, with smaller numbers of gullies and discrete features. Whilst most features only contained a single fill there is some evidence of site zoning and phasing. Dating evidence points to the Romano-British period, although around 10% (by weight) of the pottery is of a broad transitional Late Iron Age—early Romano-British date, so the settlement may well have pre-Conquest origins. Of the nine features that produced transitional pottery, three also produced Romano-British wares, suggesting that some of the earlier features have been recut and their assemblages mixed with material deposited at a later date, or the earlier material was residual. Trenches 2246 and 2248–2249, located to the north and south of the areas respectively, proved to be finds 'hotspots' and may indicate some multiple inhabited spaces within the settlement, each with its own zone of deposition, rather than a single focus for the use and discard of material. There was generally a close level of correspondence between the results of the evaluation and the geophysical survey.
- 6.4.52 Around 20 kg of finds were recovered from these features: animal bone accounts for nearly half of this total (9.5 kg), followed by a slightly smaller amount of pottery (8.6 kg). Other finds types, including CBM, fired clay and iron nails, formed a much smaller proportion of the assemblage. A piece of human skull and a complete left third metacarpal, also human, were recovered from a ditch in trench 2244.

Fields 102 and 106

- 6.4.53 At the south-west corner of Field 106 and extending into Field 102 (trenches 908, 979–981 and 993) a small group of archaeological features were identified (Figs 18 and 60). These correlated with possible enclosures and linear and curvilinear anomalies defined by the geophysical survey (AAA4; Magnitude Surveys 2023), although in places no corresponding feature was identified (e.g., trench 993).
- 6.4.54 Seven pits, four ditches and a gully were investigated and recorded. The ditches and gullies formed a series of field boundaries; those in Field 106 were orientated broadly east—west, while a ditch in Field 102 was aligned north-west to south-east. Four pits lay between the east—west field boundaries at the south of trench 980.
- 6.4.55 Approximately 3.5 kg of artefacts was recovered; the pottery includes sherds from across the Romano-British period, with a focus towards the 1st to 2nd centuries AD. Smaller amounts of animal bone and fired clay were also recovered from the features.

Fields 111-112

- 6.4.56 The remains of Romano-British ditched enclosures were exposed in the western part of Field 112 (trenches 1887, 1914–1917 and 1920) with a slight 'overspill' into the southern part of Field 111 (trench 1887; Figs 23 and 61). They correlate with geophysical survey data and results from a previous watching brief (AAA6; Magnitude Surveys 2023; Pre-Construct Archaeology 2003). These enclosures are situated approximately 1 km south-west of those identified at the foot of the Lincoln Cliff (Fields 131–132 and 137).
- 6.4.57 The recorded remains of approximately 30 separate features chiefly represent ditches defining small (typically 16 x 12 m) rectangular enclosures arranged in a fairly compact 'cell-like' coaxial pattern across approximately 0.85 ha. A total of 25 ditches, five gullies, four pits and a posthole were recorded.
- 6.4.58 Although many of the features were discrete, there was some intercutting noted in all trenches except trench 1917. This often amounted to simple renewal of boundaries, but



where pits cut ditches, or ditches cut each other on differing alignments, greater complexity and time-depth within the occupation sequence may have been revealed. This is corroborated by the pottery dating evidence, with pottery (12.4 kg) from across the Romano-British period present, although types of middle to late Roman date predominate. Animal bone (6 kg), with small amounts of shell, iron, fired clay and CBM were also present. Some of these features, in particular those in trenches 1915 and 1920, contained notably dark fills, which were potentially charcoal-enriched through nearby settlement activity.

Field 116 (north)

- 6.4.59 Two archaeological concentrations were identified within Field 116, south of Glentworth Grange, by the geophysical survey (AAA9; Magnitude Surveys 2023). The northern of the two was suggested to represent an enclosure complex comprising abutting curvilinear cells with possible internal divisions, pits and hearths (Figs 38 and 71–72).
- 6.4.60 Trenches 2259–2264, 2282 and 2284–2287 targeted the enclosure system; archaeological remains were recorded in all except 2282 and 2284. Ditches were the most common features, followed by gullies, with a small number of pits and ditch/gully terminals also recorded. The enclosure complex was somewhat variable, the southern portion appearing to have formed three sides of a large subrectangular enclosure with relatively few internal divisions; there is no internal northern boundary but instead a more complex, if somewhat irregular, arrangement of cells was identified. There are few obvious continuations of these within the trenches, although a sub-square enclosure (to the west of the complex) appears to have been recorded twice, in trench 2284 and the southern end of 2287, and a sub-rectangular enclosure (to the east of the complex) was picked up multiple times in trench 2285.
- 6.4.61 Roman pottery again dominated the ceramic assemblage, although transitional wares (Late Iron Age–early Roman) were also present. Transitional wares formed a notable proportion of the assemblage (around a third by weight), boosting confidence in a pre-Conquest date for the establishment of this settlement. Of the 11 features that produced transitional pottery, three also produced Roman wares, suggesting some recutting of features or mixing of assemblages. The dating evidence suggests this settlement was contemporary with the settlement located in Fields 94 and 115 (see Section 6.4.49).
- 6.4.62 The artefactual assemblage weighs approximately 26 kg. It is dominated by a quernstone (17 kg) from trench 2287, followed by animal bone (4.5 kg) and then pottery (3.2 kg), with miscellaneous finds categories (flint, CBM, fired clay etc) making up the remainder.

Field 116 (south)

- 6.4.63 A second archaeological concentration was identified within Field 116, 140 m south of the enclosure complex discussed above. The geophysical survey indicated a small settlement with a possible double-ditched trackway (AAA9; Magnitude Surveys 2023). Trenches 2273, 2288–2292 targeted the geophysical anomalies and all had positive results (Figs 38 and 72).
- 6.4.64 The features broadly match the results of the geophysical survey although in places no corresponding feature was identified and vice versa. The complex is formed of a series of small, incomplete enclosures broadly arranged north to south with some continuation southwards. Ditches were again predominant, with smaller numbers of gullies and five pits recorded. Darker fills were occasionally present, especially in the northern part of the complex (trenches 2288–2291), which could suggest a focus of settlement activity. Notably,



two slots in the ditch which defined the southern edge of the southernmost enclosure (trench 2292) revealed concentrations of stone rubble. Many of the stones were found lying on their edge, suggesting they had entered the ditch through a high-energy action (e.g., they were thrown in) or had been deliberately placed in an upright position. The purpose is unclear but with the stones so-arranged this was clearly not a load-bearing arrangement such as a wall.

- 6.4.65 The investigations cast doubt on the geophysical identification of a double-ditched trackway at the southern end of the settlement. All three interventions across the western side of the putative trackway recovered post-medieval or modern material, and no evidence of the eastern side was found (although only one or perhaps two trenches 2288 and 2292 would have exposed the feature). The evidence suggests the 'trackway' is at least partly formed of the surviving below-ground elements of a post-medieval field boundary, an interpretation supported by the historical mapping and aerial imaging evidence. That an ancient trackway may have been succeeded by a more recent agricultural boundary remains, however, a possibility.
- 6.4.66 Approximately 3.5 kg of artefacts, were recovered, including pottery (1.9 kg), animal bone (1.3 kg), CBM, fired clay, glass and two iron objects. The relatively small amount of artefacts suggests a shorter or less intense period of occupation, and coincides with the less dense and more ephemeral character of its footprint, as seen in the geophysical survey results, when compared with the complexes to the north. By weight, the finds assemblage breaks down into around 50% pottery and 30% animal bone, with miscellaneous finds types making up the remainder.

Field 123

- 6.4.67 Field 123 contained a group of linear and curvilinear anomalies defined as AAA 7 in the geophysical survey, thought to represent a north–south aligned enclosure complex (Magnitude Surveys 2023). Trenches 2537, 2547, 2549–2550, and 2577–2581 (Figs 36 and 67) investigated the enclosure system, and features generally correlated well with the anomalies, although some discrepancies were apparent.
- 6.4.68 Ditches in trenches 2577, 2580 and 2581 correlated with a 60 x 60 m enclosure apparent in the geophysical survey results. The constituent ditches were aligned approximately north–south and east–west. Ditches and gullies that corresponded to potential internal divisions or further field boundaries/enclosures were also uncovered in trenches 2579–2581.
- 6.4.69 In addition to the above features, there were ditches, pits and gullies present that did not correlate with the geophysical survey results, but contained material that dated to the Romano-British period. These were uncovered in trenches 2537, 2577 and 2581. There were also several features (pits, gullies and ditches) that did not correlate with the geophysical survey results or contain any datable material, however, based on their location, are likely to be associated with the Romano-British enclosure system.
- 6.4.70 Finds of Romano-British pottery (3.2 kg) and animal bone (1.8 kg) were recovered from the features in addition to a small amount of fired clay. The pottery spans the entire Romano-British period indicating the settlement may have had some longevity.



Fields 131,132 and 137

- 6.4.71 At the foot of the Lincoln Cliff (Fields 131, 132 and 137; trenches 1852, 1855, 1861, 1977–1979, 1983, 1987, 1990, 1996–2003; Figs 24–25 and 62–64) Romano-British activity was recorded. The features are located in the same area as a Late Neolithic/Early Bronze Age pit and residual prehistoric pottery, highlighting the potential for earlier activity or settlement. Across the fields a series of Romano-British enclosures and probable settlement were identified, and again correlate with an area of archaeological potential detected by the geophysical survey (AAA5; Magnitude Surveys 2023). Pottery from both areas suggests activity throughout the Romano-British period, with a focus during the 2nd to 3rd centuries AD. The features are approximately 1 km to the north-east of a group of enclosures in Field 112
- 6.4.72 Across the trenches, 25 ditches or gullies were recorded which formed elements of a probable settlement complex comprising a series of enclosures. There was occasional correspondence between these features and of anomalies detected by the geophysical survey. On the whole, it is not possible to discern the same feature continuing from one trench into another. The exceptions are ditches in trenches 2001 and 2002 which (respectively) define the western and southern sides of a possible rectangular enclosure measuring at least 72 x 47 m.
- 6.4.73 Finds were relatively sparse across Fields 131,132 and 137 (approximately 4 kg) and were dominated by animal bone (3 kg), with only small amounts of pottery (131 g), fired clay and worked flint recovered. Nevertheless, some of these features, in particular those in trench 1996, contained notably dark fills, potentially charcoal-enriched through nearby settlement activity.

Fields 139-140

- 6.4.74 A cluster of features were investigated in trenches 2627 and 2634 (Fields 139 and 140; Figs 28 and 55) and correspond with a group of geophysical anomalies mapped as various overlapping rectilinear and curvilinear enclosures across a 120 m by 70 m area at the northern end of the fields (AAA11; Magnitude Surveys 2023). The trenching results identified predominantly ditches and gullies, with pits and postholes also present.
- 6.4.75 Trench 2627 was positioned towards the western side of the group of geophysical anomalies and exposed four ditches and a curvilinear gully. The four ditches formed a 7.25 m wide spread of features, crossing the trench from east to west. Despite their edges being conjoined, the only relationship recorded was between the two southernmost ditches. A small, undated, curvilinear gully lay 2 m to the south of the four ditches; it was very shallow (0.09 m deep) and although hard to define in plan, its course was mapped for 4.8 m.
- 6.4.76 A greater density of features were recorded in trench 2634, these comprising a series of ditches as well as pits, gullies and postholes. At the northern end of the trench a sequence of at least six intercutting ditches was investigated, all dating to the Late Iron Age or Romano-British periods and perhaps indicating a periodic reorganisation of the enclosures during the Romano-British period. A further four gullies, three ditches, three pits and two postholes were also identified.
- 6.4.77 A range of artefacts were collected from the features, totalling 16.8 kg, with pottery (11.19 kg) and animal bone (5.2 kg) providing the bulk of the assemblage. The pottery spans the Late Iron Age and Romano-British periods, with a focus towards the 2nd to 4th centuries AD.



6.5 Medieval (AD 1066–1500)

Field 87

6.5.1 A single pit was identified in trench 1644 (Figs 7, 13 and 47) situated towards the south-western side of the Romano-British settlement complex, but dating to the 11th to early 13th century AD. The pit truncated the western edge of a Romano-British ditch; its fill produced 17 sherds (441 g) of 11th- to early 13th-century pottery as well as residual sherds of Romano-British pottery (18 sherds, 290 g), probably derived from the ditch.

Field 124

- 6.5.2 Evidence of medieval activity was uncovered in the south-west corner of Field 124 (Figs 39, 70 and 80–81). A possible moated site, recorded in the Lincolnshire HER (MLI50291) as a potential medieval park keeper's lodge, had been mapped using non-intrusive techniques: historic mapping, geophysical and LiDAR surveys (AAA8; Magnitude Surveys 2023; Deegan 2023). These survey results showed a rectangular ditched enclosure with associated features to the east fed by a water channel to the north. Trenches 2606 and 2610–2611 were placed to investigate the moat, moat platform, and associated features.
- 6.5.3 The moat itself was exposed in trenches 2606 and 2610. The eastern extent was seen in trench 2606; aligned north-west to south-east the moat was approximately 23 m wide and over 1.2 m deep. The full profile was not excavated due to its size, however, the distance between its western and eastern extents (within trench 2606) suggests that the moat was double ditched in this section, which correlates with geophysical and LiDAR survey results (Fig. 80).
- 6.5.4 Finds were only recovered from one fill towards the base of the western ditch: six fragments of animal bone (304 g), stone rubble and a fragment of Romano-British imbrex tile (249 g). Environmental samples taken from waterlogged deposits within the eastern ditch were rich in plant and invertebrate remains. These comprised small wood fragments as well as the seeds and fruits of aquatic and disturbed ground taxa, including sedges, water plantains, rushes, pondweeds, nettle, buttercups, henbane, thistle, and brambles.
- 6.5.5 The demolished remains of two stone walls or revetment foundations, similar in construction and size, were recorded on parallel alignments to the moat ditches. The western foundation was located around 3 m west of western moat ditch, potentially forming an internal boundary or barrier (Fig. 81). It is possible that the other wall also formed a barrier to the outer moat ditch. No dating was recovered from the foundations, however, the eastern foundation was overlaid by a silty clay layer, from which eight pieces of animal bone (152 g), a fragment of medieval iron horseshoe (72 g), a sherd of medieval pottery (4 g), and a medieval whetstone (131 g) were recovered.
- 6.5.6 The southern arm of the moat was recorded in trench 2610. There is no evidence of a second ditch in this section of moat, however, it is possible that it is present outside the extent of the evaluation trench. Like the eastern arm of the moat, this ditch was filled with several deposits of silty clay; animal bone (179 g) and a fragment of Romano-British tile/brick (39 g) was recovered, and two medieval peg tiles (382 g) were found within the ditch's primary fill, providing a *terminus post quem* to the overlying moat fills. Environmental evidence from the waterlogged deposits is rich in plant remains and has the potential to provide a good picture of the surrounding environment during the late medieval period.
- 6.5.7 At the south-east corner of the moat was a north-east to south-west aligned ditch that correlated well with a ditch shown in the LiDAR and geophysical survey results, this feeding



into the moat. Two fragments (149 g) of animal bone and a sherd (36 g) of post-medieval pottery were recovered. Environmental samples taken from the ditch contained moderate amounts of wood charcoal, cereal and wheat grains of possible free-threshing varieties, and a hawthorn stone.

- 6.5.8 Several ground levelling/raising deposits or occupation layers were recorded within the area bounded by the moat. It is unclear whether all the layers were formed during the original use of the space; it is possible that the upper layers were formed once the moated site had gone out of use and were the result of post-medieval/modern levelling. The layers were seen in trenches 2606 and 2610 and mainly comprised silty clay with stone rubble and CBM, or sandy clay. One layer was a burnt deposit of ash and charcoal. Finds were recovered from four layers: an iron nail, 14 sherds of late medieval pottery, 10 fragments of animal bone, 15 pieces of CBM, a lump of fired clay, and a sherd of Romano-British pottery.
- 6.5.9 Two potential stone structures were investigated at the north end of trench 2610, both internal to the moat ditch. One comprised the probable robbed out remains of a stone wall, constructed with mid-sized, angular stones. The remains of a stone wall or surface, which has been robbed out or demolished, was also recorded towards the southern end of the trench. This second, stratigraphically later, stone structure potentially indicates there was more than one phase of occupation and/or construction within the moated site. No finds associated with either structure were recovered.
- 6.5.10 Features nearby included a pit and a ditch terminal in trench 2602, 30 m to the north, and could be associated with the moated site.

6.6 Medieval to post-medieval (AD 1066–1800)

Ridge and Furrow

6.6.1 Remnant ridge and furrow was recorded across the site. The aerial photograph, LiDAR and geophysical surveys had previously highlighted the potential for ridge of furrow across approximately half the site (Deegan 2023; Magnitude Surveys 2023). Within the excavated fields, it survives visibly in the field topography solely in Field 55. Below ground, however, there is evidence of furrows in Fields 3, 14, 28, 31–32, 36, 37, 38, 40–41, 50, 54, 59, 60, 62, 64–65 68, 78, 87, 98–100, 105, 108, 116 and 132.

Field 123

In the centre of Field 123 is the recorded location of a medieval deer park pale (MLI54002) associated with the nearby Glentworth Hall. A field boundary, on the same orientation, is shown at the eastern end of the pale on the 1884 First Edition Ordnance Survey map, while a footpath or unfenced road is illustrated to the west. LiDAR survey has identified earthwork remains of an east—west bank at the pale's location (Deegan 2023), whilst the geophysical survey results indicate the presence of a possible agricultural drain (Magnitude Surveys 2023). Trenches 2538, 2541–2543, 2558 and 2574 targeted the park pale, and a ditch was uncovered in trenches 2543, 2558 and 2574 (Figs 36 and 67), corresponding with the field boundary shown on the 1884 OS map. An undated ditch recorded in trench 2556, just south of the deer park pale, is possibly associated and was suggested by the LiDAR data to relate to medieval or post-medieval field boundaries (Deegan 2023).



6.7 Post-medieval to modern (1800–Present)

Field 108

6.7.1 An undated enclosure in Field 108, known from records in the Lincolnshire HER (MLI53953) and from geophysical and aerial imagery surveys, was investigated in trench 1805 (Fig. 18). Here, a ditch and wall correlate almost exactly with the mapped enclosure; finds (animal bone, fragments of modern glass bottles, post-medieval CBM, as well as various pieces of iron (nails, wire and an object)) and waterlogged plant remains from environmental samples from the ditch indicate a post-medieval/modern date, perhaps suggesting it was associated with the post-medieval house and gardens of Harpswell Hall to the east.

Agricultural features

- 6.7.2 Backfilled field boundaries were recorded by the earlier surveys (Deegan 2023; Magnitude Surveys 2023) and are depicted on 19th-century mapping. The evaluation trenching identified ditches in at least a quarter of the fields with an obvious prevalence where large fields have been created over the last century (e.g., Fields 80 and 81), rather than where smaller, traditional fields have survived (e.g., Fields 14–26).
- 6.7.3 At least ten backfilled ponds or suspected ponds were also recorded, with the majority illustrated on historic mapping. A brick-lined soakaway was recorded in Field 50 as well as an undated metalled surface of suspected post-medieval date (Wessex Archaeology 2023b–k).

6.8 RAF Sturgate (1943–Present)

Fields 33, 35, 39 and 138

- Parts of the former RAF Sturgate airfield were known to have extended across Fields 33, 35, 39 and 138 (Figs 26–28, 51–54 and 82). Earlier non-intrusive surveys (Deegan 2023; Magnitude Surveys 2023) had highlighted the potential for parts of the runway, perimeter track, areas of hardstanding and a few small structures to survive. Aerial photographs also identified linear disturbances alongside the runway that may have formed part of the airfield's Fog Investigation and Dispersal Operation (Deegan 2023).
- 6.8.2 Evidence associated with the former airfield, comprising made ground, demolition layers, redeposited natural and a small number of structures, was recorded in Fields 33, 35, 39 and 138. These deposits were found widely across the area of the former airfield and relate to levelling and consolidation of the ground, as well as the potential demolition and removal of airfield infrastructure and below ground level structures such as drains. Made ground or levelling deposits varied across the area and comprised: yellow sandy clay with abundant rounded gravel inclusions (e.g., trenches 1090–93), light red silty clay with common stone, concrete and brick inclusions (e.g., 1048 and 1067) and dark grey brown silty clay with moderate to common stone and brick inclusions (e.g., 1066–67). These deposits had probably been used during the construction of the airfield to level and consolidate the area, particularly below the runway.
- 6.8.3 Structural evidence was limited to concrete foundation pads (trenches 1100, 1125; Fig. 82), a brick-lined tank (trench 1125) and several drains (trench 1095–1097, 2625) located at the eastern end of trench 2625. The ceramic drains were encased in concrete, and as they lay below the perimeter track of the runway the concrete was probably used to reinforce the drain.



6.9 Uncertain date

Fields 53 and 56

6.9.1 Two undated features, a pit in trench 586 (Field 53; Fig. 29) and a ditch in trench 1324 (Field 56; Figs 6 and 44), contained charred plant remains, in both cases material that is typically associated with prehistoric activity (hazel nutshell fragments). However, in this instance the features are located between foci of Romano-British activity, the ditch in close proximity to the Romano-British enclosure system within Fields 55–56, the pit somewhat isolated and possibly therefore of a later date.

Field 123

- 6.9.2 In the east of Field 123 two parallel, curvilinear, anomalies, spaced around 12 m apart on a north–south alignment, were recorded as a possible trackway in the geophysical survey. Trenches 2544, 2546, 2559 and 2570 targeted these anomalies (Fig. 36).
- 6.9.3 Only two ditches (trenches 2544 and 2546) were uncovered that could possibly relate to the potential trackway. However, they did not correlate fully with the geophysical anomalies, and were located between the two. A fragment of undated ceramic (22 g) was recovered from the ditch in trench 2546. It is possible that the ditches formed a field boundary, rather than a trackway. In nearby trench 2559 a deep subsoil was uncovered, which may have been the natural infilling of a hollow or hollow way.

Fields 133-134

The B1398, or 'Middle Street', forms the western boundary of the principal site and Fields 133 and 134 (Figs 25 and 65–66). The geophysical survey detected archaeological activity adjacent to its course, chiefly comprising a long (if intermittent) ditch over 400 m in length lying essentially parallel to the road (and 20–40 m from it); this was flanked by a second shorter anomaly 20 m to the east and a coaxial arrangement of subsidiary ditches (Magnitude Surveys 2023). The western, more substantial ditch was identified in five trenches (2007, 2014, 2019, 2033 and 2034), the eastern ditch in three trenches (2033, 2034 and possibly 2027), and possible associated features were recorded in trenches 2022, 2030 and 2031. It is possible that the parallel ditches are indicative of a trackway but with the exception of one flint flake all of the features were archaeologically sterile, and the function and date of the features remain uncertain.

6.10 Negative Results

6.10.1 Around 2201 (84%) of the trenches within the principal site were blank (Table 2).



 Table 2
 Percentage of blank trenches by Field

Field	No. Trenches	% blank trenches	Field	No. Trenches	% blank trenches	Field	No. Trenches	% blank trenches
1	9	78	49	26	85	98	57	61
2	13	77	50	142	94	99	18	22
3	22	45	51	39	97	100	18	89
4	16	81	52	13	100	101	29	93
5	16	100	53	9	89	102	13	92
6	7	100	54	29	79	103	8	100
7	10	100	55	13	46	104	38	84
8	12	100	56	19	95	105	12	75
9	21	100	57	24	88	106	15	80
10	38	100	58	34	91	107	15	87
14	17	88	59	42	93	108	16	88
16	Des	coped	60	25	32	109	12	100
17	9	100	61	14	93	110	26	88
18	12	83	62	35	74	111	48	98
19	4	100	64	43	77	112	26	77
20	22	100	65	37	86	113	32	94
21	17	100	66	11	100	114	22	95
22	17	100	67	24	100	115	31	61
23	17	100	68	37	62	116	41	51
24	15	100	72	22	95	117	16	100
25	34	100	73	11	100	118	9	89
26	6	100	74	14	86	119	24	100
27	4	75	75	10	70	120	2	100
28	30	83	76	9	67	121	7	100
29	10	100	77	27	85	122	17	100
30	8	100	78	22	50	123	47	66
31	11	18	79	16	69	124	37	70
32	8	38	80	67	97	125	12	100
33	2	100	81	6	100	126	6	100
35	53	81	83	3	100	127	Desc	oped
36	16	81	84	14	64	128	25	96
37	6	0	85	10	100	131	15	73
38	9	11	87	30	67	132	24	42
39	34	71	88	40	98	133	7	86
40	9	89	89	24	100	134	24	63
41	15	60	90	45	96	136	8	63
42	1	0	91	69	96	137	17	82
43	25	96	92	17	100	138	9	100
44	8	100	93	6	100	139	8	88
45	5	20	94	60	87	140	5	80
46	14	86	95	17	100	141		100
47	21	57	96	3				
48	15	100	97	25	92	Total:	2628	84



7 FINDS SUMMARY

7.1 Introduction

7.1.1 The finds assemblage, totalling 320.132 kg, was recovered by hand during the course of excavation and extracted from the residues of environmental samples The majority of finds are of Late Iron Age or Romano-British date. With the exception of the metalwork, all the finds have been cleaned and quantified by material type within each context. This data has been recorded using a timestamped digital database, which forms part of the project archive, and is summarised in Table 3. Reporting conforms to ClfA's *Toolkit for Specialist Reporting:* Type 2, Appraisal level (ClfA 2022a), which aims to characterise the assemblage, with specific reference to dating where possible.

Table 3 Finds by material type (number of pieces/weight in grammes)

Material	Count	Weight (g)
Animal bone	10,969	107,106
Burnt flint	182	112
Cement	2	82
Ceramic building material	254	22,282
Clay pipe	1	2
Copper alloy	14	157
Fired clay	454	6036
Flint	94	N/A
Glass	29	430
Human bone	7	85
Iron	131	7152
Other metal	1	5
Pottery	8691	136,096
Shale	5	11
Shell	83	1323
Slag	87	3996
Stone	13	35,242
Worked bone	1	15
Total	21,018	320,132

7.2 Pottery

7.2.1 A total of 8691 fragments (136,096 g) of pottery was recovered by hand and from the sieved residues of bulk soil samples. Approximately 95 % of the sherds (8241 sherds; 93% by weight (126,128 g)) came from areas of high archaeological activity identified in both the geophysical survey and the excavated trenches. The overall quantities from these areas are summarised in Table 4, which shows that the largest concentrations derived from the Romano-British settlements and enclosures within Fields 87, 98–100 (AAA3), 60 and 68 (AAA10) and 45, 47, 49, 54, 139–140 (AAA11). The remaining 5% of sherds came from more isolated features and deposits in trenches widely distributed across the rest of the scheme.



 Table 4
 Quantities of pottery

Area of Archaeological Activity	Trenches	Field	Fragments	Wt. (g)
1	23-5	3	11	500
	29, 31–3, 35–6	3	90	1082
	50–2	4	145	272
		Sub Total	246	1854g
2	1309–10, 1312, 1317–19, 1321, 1324	55 and 56	107	2956
	1455–60, 1469	62	396	5958
		Sub Total	503	8914g
3	1641–2	87	97	2,113
	1635–40, 1644, 1652–54, 1657, 1671–3, 1709, 1762–71	87, 98-100	919	13,073
		Sub Total	1016	15,186g
4	908–9, 979–81	102 and 106	155	2822
		Sub Total	155	2822g
5	1855, 1861, 1967, 1977– 79, 1983, 1987, 1990, 1996–2003	131, 132 and 137	275	3055
	2006–7, 2010, 2014–23, 2030–34	133 and 134	-	-
		Sub Total	275	3055g
6	1887, 1914–17, 1920	111 and 112	749	12,172
		Sub Total	749	12,172g
7	2537, 2547, 2549–50, 2577–81	123	296	3227
		Sub Total	296	3227g
8	2165, 2172–3, 2175, 2231, 2243–51	94	459	8559
	2602, 2606, 2610–11	124	45	930
		Sub Total	504	9489g
9	2253, 2354, 2258, 2260, 2282, 2284–87	116	94	2117
	2273, 2288–92	116	89	1930
		Sub Total	183	4047g
10	618–24	60	1247	16,480
	642–3, 647, 649, 672–8	60 and 68	1496	21, 414
		Sub Total	2743	37,894g
11	452, 486, 489, 511, 513–15	45 and 47	107	2184
	561–3, 589–92, 599, 605	49 and 54	467	6620
	2627, 2634	139 and 140	545	11,193
		Sub Total	1119	19,997
12	1021–29	31	452	7471
		Sub Total	452	7471g
Total AAAs	-	-	8241	126,128g
Other areas	-	-	450	9968
Overall Total			8691	136,096



- 7.2.2 Most of the pottery survives in a crisp, fresh condition that enabled any refitting sherds to be joined. Such joins were generally made between sherds from the same feature but in a few cases, refits were made between sherds from different features, suggesting they were filling at the same time. A number of vessels could be partially reconstructed, and a single Nene Valley castor box lid from Field 68 was almost complete, indicating the very good preservation conditions across the principal site. This is reflected by the mean sherd weight of 15.4 g and the small number of pieces (just 129) exhibiting either abrasion or surface weathering.
- 7.2.3 The assemblage spans a wide chronological range, extending from the Late Neolithic/Early Bronze Age to the post-medieval/modern periods, although it is predominantly of Late Iron Age and Romano-British date. The full range of fabrics present are summarised by broad chronological period in Appendix 2, although it should be noted that unstratified or poorly stratified (e.g., from the topsoil) pieces were not assigned a fabric type at the assessment stage. For the assessment, the prehistoric, Late Iron Age and Romano-British assemblages were cross-referenced with the local corpora by Riley (1957), Knight (2000), Darling and Precious (2014), Field and Palmer-Brown (1991) and May (1996a), while Young et al. (2005) was utilised for the post-Roman pottery.

Prehistoric

- 7.2.4 The earliest pottery dates to the Late Neolithic/Early Bronze Age and comprises 19 sherds (17 g) of fine Beaker in a grog and flint-tempered fabric found within pit 200306, in Field 132 (AAA5). The location of an early prehistoric pit at the base of the Lincoln Cliff is an important addition to the prehistory of Lincolnshire, as the nearest sites where Beaker pottery have been found are some 15 km away, at Manton Warren (Riley 1957) and Rampton Quarry (Notts; Knight 2000). Elsewhere, larger collections of Beaker pottery have been found at Risby Warren (Riley 1957), whilst the criss-cross motif seen on some of the sherds from pit 200306 is shared with a Northern British/Dutch Beaker from Salmonby (Clarke 1970, corpus no. 478, fig. 448).
- 7.2.5 Three further fragments, in grog- and shell- tempered fabrics, were also assigned a broad prehistoric date. There were found residually within Romano-British ditch 61908 (shell) in Field 60 and similarly dated pit 102403 (grog) in Field 31.

Late Iron Age and Romano-British

- 7.2.6 Sherds from this period, spanning the mid-1st century BC to the 4th century AD, formed the overwhelming bulk of the assemblage (Appendix 1). Evidence for Late Iron Age/preconquest (mid-1st century BC-mid 1st century AD) occupation mainly came from ditches within Fields 3–4 (AAA1), 94 (AAA8), 116 (AAA9) and 139–40 (AAA11). These features contained small groups of pottery predominantly in the shell- and grog- tempered fabrics. The assemblage is comparable to the forms and styles encountered at Dragonby (May and Elsdon 1996), Old Sleaford (Leary 1997) and Fiskerton (Elsdon and Knight 2003). Although the total number of sherds considered to belong within this period is relatively small (317 pieces, 5135 g), they provide evidence to suggest that small, sporadic settlements were evolving close to the base of the Lincoln Cliff.
- 7.2.7 The development of these settlements into larger more nucleated areas within the landscape is supported by the continued occurrence of pottery in Fields 3–4, 94, 116 and 139–40 (AAAs 1, 8, 9 and 11) into the mid–late Roman period. New settlements and enclosures were also established in Fields 31, 45, 47, 49, 54–6, 60, 62, 68, 87, 98–100, 102, 106, 111–12, 116, 123, 131–34, 137 and 139–40 during the Roman period.



- 7.2.8 Mid–late 1st to early 2nd century pottery came from ditches within Fields 3, 4, 31, 54, 60, 68, 87, 99, 106, 112, 123 and 132, and from a single pit in Field 115. Local shell-tempered and greyware fabrics predominate in these assemblages, occurring alongside small quantities of locally produced finewares usually encountered in later Legionary contexts in Lincoln (Precious 2014a), as well as imported finewares from north-east and southern Gaulish markets.
- 7.2.9 The local shell-tempered and sandy greyware fabrics continue to dominate the pottery assemblage throughout the Roman period (Appendix 2), The greyware forms begin in the mid/late 1st century AD with copies of Gallo-Belgic vessels made in the kilns surrounding Lincoln, and by the 2nd century AD carinated vessel types were being obtained from the kilns of the Trent Valley (Field and Palmer-Brown 1991). By the later Roman period, everted rim cooking pots/jars, dishes and bowl forms (Precious 2014b) were arriving from the Trent Valley, with a smaller component from the Market Rasen kilns, approximately 15 km to the east.
- 7.2.10 The shell-tempered wares were originally supplied from south Lincolnshire, in particular by kilns in the Bourne area (Precious 2014c, 96), although this industry expanded into the Greetham area of Rutland in the later Roman period. During the mid-3rd to 4th centuries shell-tempered wares, classed as Dales ware (Loughlin 1977), were also being produced in north Lincolnshire, while some of the vessel forms copy those more commonly encountered in the Trent Valley greyware fabrics and so may be from a similar source.
- 7.2.11 Black-Burnished wares from Lincoln (Precious 2014b, 112) and the Rossington Bridge area of Doncaster (Buckland et al. 2022, 44–147) also made a limited impact on pottery supply to the area from the late 2nd century onwards. A small number of 2nd to early 4th century AD sherds from Fields 60, 68 and 99 came from the Wareham/Poole Harbour region of Dorset.
- 7.2.12 The oxidised wares (Appendix 2) potentially derive from the Swanpool industry, which was producing flagons, beakers, jars, bowls and dishes from the mid-3rd century. Undiagnostic sherds in these fabrics were recovered from Fields 45, 54, 106, 98, 112, 115 and 140, while greater quantities, including featured sherds, came from Fields 31, 60, 68, 87, 99 and 116. Two oxidised body sherds in a Lincoln tile fabric (Precious 2014a, 64–71), from Fields 68 and 116, are likely to come from large storage-type vessels. This fabric was probably produced in the St Marks area of Wigford, where it dominates the local assemblage, and to date, it has only been encountered within Lincoln itself. Its presence outside the city, then, is of note.
- 7.2.13 A small number of specialist wares include mortaria from the Mancetter-Hartshill kilns in Warwickshire (Fields 68, 115 and 131), along with vessels from local suppliers in South Carlton (Fields 3 and 62) and Swanpool (Fields 54, 60, 87, 99, 115–16). Fragments from three local greyware cheese presses, possibly from Swanpool, were encountered in Fields 4, 54 and 99, and can be attributed a late Roman date (Precious 2014b, 159).
- 7.2.14 Local finewares include colour-coated bowl and beaker forms from the Swanpool and South Carlton kilns near Lincoln. Others may derive from the regional kilns of the Nene Valley near Peterborough, although recently, identical copies of these wares have been encountered in kilns in the northern suburbs of Lincoln (Rowlandson *et al.* 2022), so these sherds too, could be of local origin. Sherds from a single 3rd or 4th century colour-coated ware vessel from the Oxfordshire industry were also found in Field 60.



- 7.2.15 The Parisian and Parisian-type wares probably derived from several sources, including Rossington Bridge in South Yorkshire, Dragonby/Roxby in North Lincolnshire and Market Rasen, the latter also producing fine reduced wares. The small number of sherds found in Fields 31, 54, 60, 68 and 140 all date from the 3rd century into the mid/late 4th century AD, but at least three partially reconstructable beakers, one copying a North Wiltshire colour-coated ware form, came from Field 140 (AAA11).
- 7.2.16 Imported wares comprise samian cups and dishes and black-slipped ware beakers from Central Gaulish sources (Appendix 2). Most occur as single, highly fragmented sherds, with the largest group from a single field being some 17 sherds from a variety of dish and cup types from Field 68 (AAA10). Reconstructable forms include a samian form 23 dish, from Field 132 (AAA5), and a black-slipped beaker from Field 99 (AAA3).
- 7.2.17 Body sherds from southern Spanish amphorae were recovered as single sherds from a variety of ditches within Fields 31, 54, 60, 62, 68, 116 and 139 (AAAs 2, 9, 10, 11 and 12). The Dressel 20 amphorae, manufactured along the Guadalquivir valley in Baetica, would have contained olive oil, while other vessels similar to the Camulodunum 186 types were manufactured along the southern Iberian coast and once contained either olive oil, wine or *garrum* (fish sauce).
- 7.2.18 Very little re-use or alteration was made to the Romano-British assemblage, with only a Swanpool mortaria rim sherd from Field 54 exhibiting a series of elongated 'X' incisions on the flange, and a Dales ware jar base with a post-firing perforation from the same ditch. A deep groove cut after firing was evident on a Central Gaulish form 33 cup sherd (Field 131), while a spindle whorl had been made from a samian cup base, the latter found in ditch 61824 in Field 60 (AAA10). Another trimmed disc, formed from a greyware base, perhaps to function as a lid or stopper, came from the same field.
- 7.2.19 Two greyware base sherds from a ditch in trench 619 (Field 60) were heavily overfired and distorted. These, together with further burnt sherds, indicative of scorching from a nearby heat source, from Fields 68, 99 and 140, provide tentative hints of pottery production in the immediate vicinity.

Medieval

7.2.20 The medieval sherds (Appendix 2) were mostly concentrated within the moated site in Field 124 (AAA8; 41 of the 71 sherds belonging within this period), with a further 17 sherds from a single shell-tempered jar, which dates from the 11th century to the early 13th century AD, found in pit 164407 in Field 87 (AAA3). The remainder occurred as more or less incidental finds, widely scattered across the scheme, in Fields 4, 31, 62, 98, 106, 110 and 118. The majority of the pottery consisted of local Lincoln sandy and glazed wares, along with Lincoln and Potterhanworth shelly wares and glazed sherds from the kilns at Toynton All Saints, and further afield in Derbyshire and East Yorkshire.

Post-medieval or modern

7.2.21 These sherds too were found widely scattered across the scheme (Fields 37, 39, 47, 50, 51, 64, 68, 85, 98, 105 and 124), with never more than four pieces from a single deposit. They date from the 17th to late 19th/early 20th century, and most were derived from the interface of the ploughsoil with underlying features. The assemblage (Appendix 2) mostly consists of utilitarian coarsewares of local production, along with brown glazed and transfer-printed wares from either South Yorkshire or Staffordshire.



7.3 Ceramic building materials

7.3.1 A total of 254 pieces (22,282 g) of ceramic building material was recovered during the normal course of hand excavation. Approximately 61% of this material by fragment count came from the areas of high archaeological activity as defined by the results of the geophysical survey and evaluation trenching, with the remaining pieces found in isolated features and deposits in other parts of the scheme (Table 5). Most of the pieces are of Romano-British date. The largest assemblage of ceramic building material came from the settlement and enclosures in Fields 60 and 68 (AAA10), with lesser, but still significant, quantities from Fields 111–112 (AAA6) and 94 and 115 (AAA8).

Romano-British

- 7.3.2 The Romano-British material mainly consists of roofing and hypocaust tile fragments. The majority survive as fresh fragments, with some conjoining pieces, although a few are much more abraded. As part of the assessment, the ceramic building material was divided into broad brick/tile types based on Brodribb's (1987) tile typology, with any complete length/width/thickness measurements noted; fabric descriptions were not undertaken at this stage.
- 7.3.3 A small number of *tegula* and *imbrex* roofing tile fragments came from features in Fields 60 (AAA10) and 99. There was no significant concentrations of roofing tile, which were mainly collected from ditch fills. A modest quantity of Romano-British brick fragments were also recovered from Fields 47 and 49 (AAA11), 60 and 68 (AAA10), 55 (AAA2), 87 and 99 (AAA3), 112 (AAA6), 124 (AAA8) and 132 (AAA5), with some of these fields (e.g., 47, 49, 99 and 124) producing just single pieces. Only Fields 68 and 112 produced more than ten pieces, probably deriving from the smaller, thinner types of Roman brick (e.g., *bessalis*, *pedalis* or *lydion*). A small number (nine fragments) of combed box-flue or voussoir fragments were recovered from two ditches, a single pit and a construction cut of a cropdrying oven in Field 68.
- 7.3.4 The slightly greater quantities of building material recovered from Field 68 may suggest the remains of a substantial Romanised structure(s) with a tiled roof and a hypocaust heating system survive in this general vicinity, although clearly well beyond the limits of the current investigations. However, none of the areas contained the quantities expected from any nearby collapsed or demolished building, so it is possible that all this material was brought to the area for re-use in smaller structures such as ovens/hearths or even as hardcore.

Medieval-post-medieval

- 7.3.5 A small collection (23 fragments, 1770 g) of flat roofing tile were found mainly within the upper fills of ditches within Fields 4 (AAA1), 98 (AAA3), 105, 123 (AAA7) and 124 (AAA8). Visual scans of the tile fabrics indicate a late medieval or early post-medieval date (Young 2012, fabrics 13 and 14, appendix 3). One refitting flat tile from Field 124 exhibited a single suspension nib of a type common during the 15th to early 16th century (Young 2007, type 7X, appendix 3).
- 7.3.6 The late post-medieval to modern building material fragments recovered are heavily bias to relatively modern ceramic land drain fragments, most from ditches and gullies within Fields 4 (AAA1), 41, 54 (AAA11), 68 (AAA10), 112 (AAA6), 113 and 116 (AAA9). Occasional brick pieces came from Fields 76 and 116 (AAA9), along with pan-tile pieces from Fields 94 (AAA8) and 116 (AAA9).



 Table 5
 Quantities of ceramic building material

Area of Archaeological activity	Trenches	Field	Fragments	W t. (g)
1	50–2	4	4	148
		Sub Total	4	148
2	1309–10, 1312, 1317–19, 1321, 1324	55 and 56	4	497
		Sub Total	4	497
3	1641–2	87	2	159
	1635–40, 1644, 1652–54, 1657, 1671–3, 1709, 1762–71	87, 98-100	4	421
		Sub Total	6	580
5	1855, 1861, 1967, 1977–79, 1983, 1987, 1990, 1996–2003	131, 132 and 137	7	371
		Sub Total	7	371
6	1887, 1914–17, 1920	111 and 112	14	1871
		Sub Total	14	1871
8	2165, 2172–3, 2175, 2231, 2243–51	94	6	1029
	2602, 2606, 2610–11	124	19	2121
		Sub Total	25	3150
9	2253, 2354, 2258, 2260, 2282, 2284–87	116	5	291
	2273, 2288–92	116	11	378
		Sub total	16	669
10	618–24	60	25	1822
	642–3, 647, 649, 672–8	60 and 68	38	2302
		Sub Total	63	4124
11	452, 486, 489, 511, 513-15	45 and 47	1	104
	561–3, 589-92, 599, 605	49 and 54	7	386
	2627, 2634	139 and 140	5	127
		Sub total	13	617
12	1021–9	31	4	2g
		Sub Total	4	2g
Other Areas	444, 589–90, 592, 596, 736, 970, 1018, 1915–16, 1920, 1957, 2442, 2247–50, 2254, 2264, 2277, 2285, 2287–88, 2292, 2546, 2606, 2610	41, 54, 76, 105, 108, 110, 112, 113, 115, 116, 118, 124	98	10,253
		Sub Total	98	10,253
Overall Total			254	22,282



7.4 Fired clay

- 7.4.1 A total of 454 pieces of fired clay, weighting 6036 g was recovered by hand excavation and sieved residues of bulk soil samples. Approximately 79% of the assemblage (by fragment count) came from areas of high archaeological activity as defined by the results of the geophysical survey and evaluation trenching (Table 6). The largest assemblage of fired clay derived from settlement and enclosures in Fields 87, 98 and 99 (AAA3), Fields 102 and 106 (AAA4), and Field 60 (AAA10), with slightly lesser quantities within Fields 4 (AAA1), 112 (AAA6), 123 (AAA7), 94 (AAA8), 116 (AAA9), 45, 47, 49 and 54 (AAA11) and 21 (AAA12).
- 7.4.2 The fired clay (453 fragments) consisted of Romano-British material, along with a single piece of medieval/early post-medieval date, from Field 124 (AAA8).

Romano-British

- 7.4.3 The Romano-British assemblage largely survives as fresh fragments, with some conjoining pieces, but abraded/eroded items are also present. For this assessment the fired clay has been provisionally identified, with basic fabric descriptions, and any diagnostic fragments measured.
- 7.4.4 The overall assemblage mainly comprises undiagnostic fragments in three sandy fabric types with various coarse fillers. A small number of fragments exhibited features suggestive of use or function. A broken spindle whorl from Field 62 (AAA2) was recovered from ditch 145520 and exhibited exposure to heat that resulted in its partial shattering. A smooth corner fragment, possibly from a support bar or shelf, was recovered from a crop-drying oven (67805) in Field 68 (AAA10).
- 7.4.5 Several fragments exhibiting wattle impressions were recovered from two ditches in Fields 62 (AAA2) and 132 (AAA5). Vitrified fragments from either oven or hearth linings came from a number of ditches in Fields 99 (AAA3), 112 (AAA6), 132 (AAA5), 116 (AAA9) and 115 (AAA8).

Medieval or post-medieval

7.4.6 A single fragment of vitrified fired clay from either oven or hearth lining of medieval/early post-medieval, was recovered from Field 124 (trench 2610).



 Table 6
 Quantities of fired clay

Area of Archaeological activity	Trenches	Field	Fragments	Wt. (g)
1	50–2	4	17	121
<u>·</u>	144 -	Sub Total	17	121
2	1455–60, 1469	62	34	630
	1.00 00, 1.00	Sub Total	34	630
3	1641–42	87	5	20
	1635–40, 1644, 1652–54, 1657, 1671–73, 1709, 1762–71	87, 98–100	33	696
		Sub Total	38	716
4	908–9, 979–81	102 and 106	6	15
		Sub Total	6	15
5	1855, 1861, 1967, 1977–79, 1983, 1987, 1990, 1996– 2003	131, 132 and 137	8	1042
		Sub Total	8	1042
6	1887, 1914–17, 1920	111 and 112	13	163
		Sub Total	13	163
7	2537, 2547, 2549– 50, 2577–81	123	3	84
		Sub Total	3	84
8	2165, 2172–3, 2175, 2231, 2243–51	94	1	4
	2602, 2606, 2610– 11	124	2	23
		Sub Total	3	27
9	2253, 2354, 2258, 2260, 2282, 2284– 87	116	13	50
		Sub Total	13	50
10	618–24	60	73	353
	642–43, 647, 649, 672–78	60 and 68	77	1689
		Sub Total	150	2042
11	452, 486, 489, 511, 513–15	45 and 47	6	111
	561–3, 589–92, 599, 605	49 and 54	24	323
	2627, 2634	139 and 140	8	135
		Sub Total	38	569
12	1021–29	31	29	87
		Sub Total	29	87
Other Areas	586, 794, 1431, 1523, 2248, 2249 and 2251	53, 59, 64, 79, 115 and 123	102	490
Overall Total			454	6036



7.5 Worked flint

7.5.1 A small assemblage of worked flint (94 pieces) was recovered. This was distributed widely across the principal site and generally occurred at a low density. The greatest number was collected from fields at the eastern extreme of the investigation (Fields 132, 133 and 137), the majority of which was associated with a single pit of probable Late Neolithic/Early Bronze Age date (200306, Field 132). The remainder was found in quantities of eight or less pieces per field, and these all represent residual material collected from features or deposits either securely, or very probably, dated to the Late Iron Age/Romano-British period. The assemblage, quantified by object type per field, is summarised in Table 7.

Table 7 Summary of flint object type by Field

Field number	Flake Core	Flake	Blade	Bladelet	Micro-	Shatter	Scraper	Knife	Projectile	Misc.	Total
4	-	-	-	-	-	-	-	-	1	-	1
45	-	1	-	-	-	-	-	-	-	-	1
49	-	1	1	-	-	-	-	-	-	-	2
50	-	1	-	-	-	-	-	-	-	-	1
54	-	1	-	1	1	-	-	-	-	-	3
55	1	-	-	-	-	-	-	-	-	-	1
62	-	-	1	-	-	-	-	-	-	-	1
68	-	2	-	-	7	-	-	-	-	-	9
85	-	-	-	-	-	-	-	1	-	-	1
116	-	3	-	-	2	-	-	-	-	-	5
131	-	-	-	-	-	1	-	-	-	-	1
132	-	11	-	1	45	-	4	1	-	1	63
133	-	1	-	-	-	-	-	-	-	-	1
137	-	2	-	-	-	-	1	-	-	-	3
140	-	-	1	-	-	-	-	-	-	-	1
Total	1	23	3	2	55	1	5	2	1	1	94

- 7.5.2 The raw material consists entirely of flint with thin, abraded cortex typical of that procured from secondary sources. These are most likely to include local surface deposits of Quaternary river terrace gravels which also incorporate reworked, flint-bearing glacial till. Some pieces are clearly made from the distinctive white, opaque Wolds flint; the primary source of this material lies approximately 15 km to the east of the site, but this too would be available as a component of the terrace deposits.
- 7.5.3 A total of 62 pieces (67% of the assemblage) was recovered from pit 200306 in Field 132. Pottery from this feature dates it to the Late Neolithic/Early Bronze Age (Beaker) period, and the flint found alongside it supports this date. Six out of nine retouched tools recovered from the investigations were found in this pit, and these include four scrapers, which fit comfortably into the class of 'thumbnail' scarpers, a form typical of Beaker assemblages. The remainder, a simple semi-invasively flaked knife, and a fragment of another probable scraper are less diagnostic but do not obviously contradict this date.



- 7.5.4 The bulk of material in this pit consists of micro-debitage (77%), strongly implying *in situ* or proximate knapping, a suggestion supported by the presence of two refitting flakes. This includes ten retouch spalls which appear to derive from the production (or sharpening) of scrapers; this mirrors the dominance of scrapers amongst the retouched component, itself a feature typical of Beaker assemblages. The fact that retouched tools are well represented in contrast to the relative paucity of flakes, and the total absence of cores, might suggest that objects have been selected for meaningful deposition as opposed to simply being dumped as waste. In either case it seems very likely that the material from this feature represents a coherent, contemporary group.
- 7.5.5 The great majority of material collected from other areas of the principal site consists of essentially undiagnostic material (Table 7), including those pieces found in Fields 133 and 137, adjacent to Field 132. However, a leaf arrowhead (Green 1980: Type 4) recovered from ditch 5203 (Field 4) provides unequivocal evidence for Early Neolithic activity in the area, and several other objects may mirror this elsewhere in the investigation. Six pieces from the central southern area of the site (AAA11) include two blades (Field 49 and 140) which exhibit features indicating they are from a purposeful blade technology, and four pieces from fields loosely centred on AAA2 in the central northern part of the site include two similar blades (Fields 62 and 84), one retouched as a knife. These are all of a scale and form most typical of Late Mesolithic/Early Neolithic technology.

7.6 Burnt flint

7.6.1 Burnt, unworked flint, totalling 182 pieces (112 g), was recovered at a low density never exceeding 26 g per context; all of this was collected from environmental sample residues. Burnt flint is an intrinsically undiagnostic material type but is often taken as evidence of prehistoric activity. However, in this case none was collected from prehistoric features but instead was found concentrated in two broad clusters towards the central northern part of the site (Fields 62 and 87; AAA 2 and AAA3), and the south-east region (Fields 94 and 116; AAA9) of the investigation, both areas characterised by the presence of Romano-British settlements. It appears likely to have been produced inadvertently when sparse, geologically occurring flint was affected by domestic/industrial processes involving fire within these areas of settlement. The resultant surface detritus has subsequently been incorporated in ditch and pit fills of Romano-British or later date through the process of erosion.

7.7 Stone

- 7.7.1 Eighteen pieces of worked/utilised stone were recovered. These were distributed widely across the principal site, with no more than four pieces collected from any individual field. Two objects were found as unstratified pieces in an area dominated by medieval archaeology, but the remainder derive from features of Late Iron Age/Romano-British date.
- 7.7.2 Seven pieces were found in the central southern part of the principal site (Fields 60 and 68), centred on Romano-British enclosures/settlement forming AAA10. Two of these are flat fragments of a locally available sandstone, which show no sign of being worked, but are both burnt. It is likely that these are structural remnants from hearths or kilns and may derive from the disturbed remains of crop-drying ovens located in this area. A rotary quern fragment of Millstone Grit was also recovered from one of these crop-drying ovens (67805; Field 68). The source of this material is uncertain, but it is likely to have been imported from the region of the Pennines. A flattish pebble of indurated sandstone with a series of narrow grooves along one edge from Field 60 is a whetstone of very similar form to one recently



found in a Romano-British context in south-east Lincolnshire (Wessex Archaeology 2023o, 166).

- 7.7.3 Three features in Fields 60 and 68 (two ditches and a pit) also each produced a small piece of shale. All are flat, laminar fragments with no obvious sign of working but which possibly represent material collected for the production of decorative items, or objects of personal adornment. One example of such an object, a short length of a shale bracelet/armlet, was recovered from a ditch in Field 87 which is centred on AAA3, an area of Middle/Late Romano-British settlement. A further unmodified laminar fragment was collected as an unstratified piece. There are no known shale working factories in the region, but outcrops of this material are known throughout Lincolnshire, and it seems possible that it was both sourced and worked locally rather than being imported.
- 7.7.4 Two objects were recovered from the north-west limit of the investigation, centred on Late Iron Age/Romano-British enclosures constituting AAA1. A quern fragment of Millstone Grit was found in Field 3 and has a relatively small diameter more typical of the earlier phase of this period. A flattish piece of burnt sandstone which may have been utilised as a whetstone prior to use as a hearth-liner was collected from a pit in Field 4.
- 7.7.5 Two pieces were also found in the central southern part of the principal site, in fields associated with further Late Iron Age/Romano-British enclosures forming AAA11. A flat fragment of unworked sandstone used as structural packing material was found in a posthole in Field 140, and a perforated, laminar fragment of (locally available) limestone from a pit in Field 54 is very likely to be a roof tile.
- 7.7.6 A single stone object (ON 228701) was recovered from a ditch in Field 116, located to the south of Romano-British enclosures forming part of AAA9. This is a rotary quern stone made of Millstone Grit which has a distinctive 'beehive' form and retains features suggesting it is of a 'Yorkshire' sub-class, the most common type found in the region (Wright 1996). These are typical of the Late Iron Age but may survive as usable objects into the early Romano-British period. Similar examples have been found at both Dragonby (May 1996b) and Nettleton (Shaffrey 2013), sites a little further north in Lincolnshire.
- 7.7.7 Two pieces were found in ditches in Field 62, located to the east of Late Iron Age/Romano-British enclosures which form AAA2. An elongated cobble of sandstone exhibits wear consistent with use as a pestle or pounder, and a narrow bar of a fine-grained schist (?) with a sub-rectangular cross-section has a very smooth surface resulting from use as a whetstone; examples of this form were the most common Romano-British type found during excavations at Dragonby (May 1996b).
- 7.7.8 Two further whetstones were collected as unstratified finds in Field 124, which is centred on a possible moated enclosure of medieval/post-medieval date. Both are square-sectioned bars of a dense, fine-grained material which may be blue phyllite; this material is not locally available but could be imported from the Lake District or Scotland, or even as far afield as Scandinavia. One retains the partial remnant of a perforation to allow suspension from a belt or tool rack.

7.8 Worked bone

7.8.1 A single piece of worked bone came from one of the Romano-British ditches in Field 140 (AAA11). The proximal sheep/goat metatarsal has been modified and shaped, and although broken, formed a basic awl that was probably used in the production of woollen textiles.



7.8.2 Modifications were also noted to two other bones from Romano-British ditches in Field 116 (AAA9) and Field 123 (AAA7). Both are perforated, one a cattle navicular (ankle bone) and the other a cattle metacarpal, although the precise function of the items created is unclear.

7.9 Marine shell

- 7.9.1 The marine shell survives in good condition and mainly consists of broadly equal quantities of both left and right oyster valves, along with single examples in Field 68 (AAA10) of scallop and mussel shell (ditches in trenches 644 and 675).
- 7.9.2 Fields 60 and 68 (AAA10) provided most of the shell assemblage (Table 8), with Field 99 (AAA3), producing two right and 13 left valves and Field 60 (AAA3) five left and three right valves, with the remainder of the areas of archaeological interest (AAAs 2, 6, 9) producing two valves each.

Table 8 Quantities of marine shell

Area of Archaeological activity	Trenches	Field	Fragments	Wt. (g)
2	1455–60, 1469	62	1	7
		Sub Total	1	7
3	1635–40, 1644, 1652–54, 1657, 1671–73, 1709, 1762–71	87, 98–100	15	161
		Sub Total	15	161
6	1887, 1914–17, 1920	111 and 112	2	37
		Sub Total	2	37
9	2273, 2288–92	116	2	5
		Sub Total	2	5
10	618–24	60	8	136
	642–43, 647, 649, 672–78	60 and 68	40	718
		Sub Total	48	854
11	452, 486, 489, 511, 513–15	45 and 47	2	21
	561–63, 589–92, 599, 605	49 and 54	4	61
	2627, 2634	139 and 140	2	31
		Sub Total	8	113
12	1021–29	31	7	146
		Sub Total	7	146
Overall Total			83	1323

7.9.3 The small assemblage of marine shell indicates the disposal of both food preparation and consumption waste based on the number of left and right valves recovered. The increased number of shells from Fields 60 and 68 (AAA10) may suggest more features containing occupational waste were investigated, rather than a preference for marine food at this site, or a difference in social status.



7.10 Glass

7.10.1 A total of 29 glass fragments were recovered from Fields 47 (AAA11), 60 (AAA10), 50, 59, 64, 108 and 116 (AAA9). The earliest pieces came from the top of a mid–late Roman glass bottle (Field 60; AAA10) from a ditch in trench 619. The remainder of the vessel fragments derive from dark green wine bottles and pharmaceutical phials of late 18th- to early 19th-century date, along with colourless body and neck fragments from 20th-century carbonated bottles.

7.11 Metalwork

- 7.11.1 Fourteen copper alloy items and 131 iron objects were recovered from the investigations. The copper alloy includes two AE2 coins (one of Constantine) from Fields 4 (AAA 1) and 87 (AAA 3). A plain D-shaped ring, also from Field 4, may be Roman in date, along with undiagnostic fragments and a broken ingot piece from Field 60 (AAA10). The remainder of the copper alloy objects are probably post-medieval or modern in date, and include a badge or brooch back plate from Field 39.
- 7.11.2 The iron objects are dominated by nail and nail shank fragments of Romano-British date. Most of the nails were collected from Fields 60 and 68 (AAA10), these including several large structural-type nails, along with utilitarian types. A single shear blade of mid–late Roman date was recovered from Field 4 (AAA1). A medieval horseshoe came from Field 115 (AAA6) and a post-medieval dagger pommel from Field 106 (AAA4). Several relatively modern tools and fittings were recovered that could be attributed to the use and repair of modern agricultural machinery.

7.12 Metal working residues

- 7.12.1 Very little slag was recovered in the evaluation, much of it comprising fuel ash slag not necessarily associated with metalworking. This came from Fields 54 (AAA11), 68 (AAA10), 51, 132 (AAA5), 116 (AAA9) and 140 (AAA11).
- 7.12.2 The most significant quantity, amounting to 2.97 kg, comprises two slightly abraded, relatively large, dense fragments of slag from Field 77. These both have slightly rounded undersides and flatter upper surfaces, with evidence of a viscous flow structure (though not strictly tap slag) which together suggests they derive from an iron smelting furnace. These two pieces (from ditch 74607) provide the only clear evidence of ironworking on the site, almost certainly smelting, though a single small piece of probable tap slag came from ditch 177603 (Field 99; AAA3), with the features indicative of mid–late Romano-British settlement.

7.13 Animal bone

7.13.1 A total of 10,969 fragments (107.106 kg) of animal bone was recovered by hand and from the sieved residues of bulk soil samples. Approximately 81% of the assemblage (by fragment count) came from areas of high archaeological activity (hereafter AAA) as defined by the results of the geophysical survey and evaluation (Table 9). The largest concentrations are from the Late Iron Age–Romano-British settlements and enclosures identified in Fields 87, 98, 99 and 100 (AAA3), Fields 60 and 68 (AAA10) and Fields 45, 47, 49, 54 and 139–40 (AAA11).



Table 9 Quantities of animal bones

AAA	Field	Frag. count	Wt (g)
1	3	159	1357
I	4	147	1129
2	55–6	132	3074
2	62	700	5157
3	87	163	1452
3	98, 99, 100	1343	15,173
4	102, 106	91	675
5	131–2, 137	400	3171
5	133–4	-	-
6	111–2	573	6075
7	123	239	1827
8	94	43	238
0	124	88	1079
9	116	616	5727
10	60	1171	12,356
10	68	1306	15,249
	45, 47	152	1129
11	49, 54	518	3991
	139–40	599	5189
12	31	464	3204
Total AAAs	-	8904	87,252
Total all other areas	-	2065	19,854
Overall total		10,969	107,106

^{*}denotes adjusted for Animal Bone Group (ABG)

Preservation, fragmentation and residuality

- 7.13.2 Bone preservation is generally good albeit with some localised variation due to differences in geology, hydrology and soil pH. For example, areas of poor bone preservation due to localised factors were noted in Fields 131–2 and 137 (AAA5) and from a few features in Fields 94 and 116 (AAAs 8 and 9). The assemblage is, however, highly fragmented with only 18% of the overall total identifiable to species and element, although the slightly higher rate of 20% was achieved on bones from the AAAs.
- 7.13.3 Poor preservation, especially abrasion, also provides an indication of residuality in some features, notably ditches subject to recutting (e.g., trench 1673, Field 98, AAA3). Overall, however, the evidence suggests a low background of residuality, particularly for ditch fills.

Areas of Archaeological Activity

Late Iron Age/early Romano-British

7.13.4 A small number of animal bones came from features, mostly ditches, in Fields 3–4, 94, 116 and 139–40. No large concentrations were found, with 33–134 fragments recovered from individual fields and only 149 identified elements overall (Table 10). The total number of identified fragments is insufficient to provide anything except a general impression of the pastoral economy, which is dominated by cattle- and, to a lesser degree, sheep/goat-farming. Rarer elements include pig, horse and dog.

1781



Species	Late Iron Age/ early Romano- British	Romano- British	Medieval- modern	Undated	Total
Cattle	73	683*	4	42	802
Sheep/goat	61	553	2	30*	646
Pig	11	88	1	8	108
Horse	15	129*	2	15	161
Dog	5	28*	-	1	34
Cat	-	2*	-	-	2
Roe deer	-	1	-	-	1
Hare	-	1	-	-	1
Rabbit	-	1	-	-	1
Domestic fowl	-	6	-	-	6
Goose	-	1	-	-	1
Crow/rook	-	1	-	-	1
Grey heron	-	3	-	-	3
Passerine	-	2	-	-	2
Rodent	-	5	-	-	5
Amphibian	_	7	-	-	7

Table 10 Animal bone: number of identified specimens from AAAs by phase

*denotes adjusted for ABG

Total identified

7.13.5 The landscape was extensively settled and farmed during this period, with activity identified across a wide area (Fields 3–4, 31, 45, 47, 49, 54–5, 60, 62, 68, 87, 94, 98–9, 102, 106, 112, 116, 123–4, 131–2, 137 and 139–40). This activity spans the entire Romano-British period, but the main focus was during the middle/late phase.

1511

165

- 7.13.6 The number of identified elements varied considerable between locations, with less than 49 bones from the majority of fields (17 in total). A further six locations provided 50–99 bones but and only four had over 100 identified fragments, with the largest concentrations from Fields 60, 68 and 99 (comprising 208, 304 and 152 fragments respectively), which relate to AAAs 10 and 3 (respectively).
- 7.13.7 Cattle bones predominate (Table 10), reflecting their economic importance throughout much of the Romano-British period but particularly after the 2nd century AD (Allen 2017, 112). This is linked to a growing demand for meat, particularly beef, from towns and the military, and also a significant expansion of arable agriculture (van der Veen and O'Connor 1998; Dobney 2001; Grant 2004; Albarella 2007; Maltby 2016). There is, however, a slight suggestion that, during the earlier part of the period, the emphasis was on sheep-farming, at least in some locations (e.g., Fields 60, 62, 67 and 87). Pigs were of minor significance and are outnumbered by horse bones. Dog bones are also relatively well-represented and include several morphologically distinct types including one example with bowed limbs, most probably a dwarf hound (see Baxter 2006), from Field 115 (AAA8).
- 7.13.8 Bones from calves, lambs, peri- and neonatal pigs, as well as juvenile horses, were all noted, but most elements came from adult animals. The predominance of fully mature cattle is in keeping with the need to maintain significant numbers of traction animals to aid arable cultivation and as a source of manure. Sheep/goat provided wool, which is also likely to have been of considerable economic importance.



- 7.13.9 The larger bone-rich deposits comprise mixed waste from different stages in the carcass reduction sequence from primary butchery through to consumption (O'Connor 1993). Evidence for wider involvement in more complex supply networks is difficult to ascertain without further analysis and broader regional comparisons. Several articulated (or associated) bone groups were noted, mostly from ditches in Fields 68, 99, 115–6 and 140. These comprise multiple ABGs from cattle, horse and dogs, as well as a cat. The evidence suggests at least some of the animal bones were directly deposited into open ditches.
- 7.13.10 Butchery marks are evident on a range of elements, particularly cattle bones. Most are chop marks resulting from primary and secondary butchery, but there is also evidence for curing meat, specifically shoulder joints (Dobney *et al.* 1996, 24–8; Maltby 2007) and processing for marrow. A few horse bones also show evidence for skinning and dismemberment.
- 7.13.11 Several large cattle post-cranial bones were also noted from middle/late Romano-British contexts. This evidence indicates that local livestock farmers had access to imported cattle to help improve the size of native breeds at this time (Albarella et al. 2008; Rizzetto et al. 2017).
- 7.13.12 Bones from a range of other species were also found (Table 10). These include cat, roe deer, hare, domestic fowl and a few other birds (goose, crow/rook, grey heron, and passerines), as well as rodents and amphibians. In addition, a single rabbit bone was recovered but this is likely to be intrusive given the burrowing habit of this species.
- 7.13.13 The rarity of bird and small animal bones such as amphibians in the assemblage, which includes sieved material, is undoubtedly due to preservation conditions which have adversely impacted the more fragile bones of certain animals. The three heron bones, recovered from two ditches, are potentially incidental inclusions, although these birds were eaten in later periods (Stone 2006, 155) and there is no reason to suppose that this was not also the case during Romano-British times.

Medieval to modern

7.13.14 A few bones came from features of this date range in Fields 4, 31, 68, 99 and 124. The identified bones include small numbers from cattle, sheep/goat and horse, as well as a single pig element.

Undated

7.13.15 A small number of bones came from undated features, mostly ditches, across a wide area (Fields 3–4, 31, 49, 54, 60, 62, 68, 87, 98, 94, 106, 112, 115–6, 124, 131–2, 137 and 140). Bones from cattle and sheep/goat dominate the assemblage, with some horse and pig, and a single element from a dog. Of note is a sheep/goat ABG from one of the ditches. Butchery marks on a cattle scapula from another ditch are consistent with those often seen on cured shoulder joints from Romano-British contexts.

Other areas

Late Iron Age/early Romano-British

7.13.16 Four identified bones came from two features in Fields 14 and 116. They comprise single elements from cattle, sheep/goat, horse and cat (Table 11).

Romano-British

7.13.17 Animal bones were recovered from 16 features in Fields 45, 60, 62, 98–9 and 116. These are mostly ditches dated to the middle/late part of the period. Cattle bones predominate,



followed by sheep/goat, with a few elements from pig, horse, dog, hare and amphibians (e.g., frog/toad). Elements from several calves were noted but the majority of cattle bones are from adult animals.

Table 11 Animal bone: number of identified specimens from other areas by phase

Species	Late Iron Age/ early Romano- British	Romano- British	Medieval– modern	Undated	Total
Cattle	1	38	4	31*	74
Sheep/goat	1	16	3	9	29
Pig		4		2	6
Horse	1	6	1	8*	16
Dog		2		2*	4
Cat	1				1
Hare		1			1
Rabbit				6	6
Domestic fowl				3	3
?Woodcock				1*	1
Amphibian		1			1
Total identified	4	68	8	62	142

^{*}denotes adjusted for ABG

Medieval to modern

7.13.18 The eight identified fragments from ditches, furrows and a hollow in Fields 59, 64, 76 and 99 include a few elements cattle and sheep/goat, and a single horse bone.

Undated

- 7.13.19 Fragments of bones were recovered from 24 features across a wide area (Fields 1–2, 36, 45, 47, 60, 77, 80, 87, 94, 98, 104, 108, 115–6 and 124). Most of the identified bones are from cattle; they include an ABG from a pit, comprising long bones from the right forequarter, vertebrae and ribs. Pathological changes, potentially relating to a soft tissue injury, infection, tuberculous or a tumour are present on the scapula and one of the thoracic vertebrae.
- 7.13.20 The undated assemblage also includes small numbers of bones from other livestock, as well as horse, dog, rabbit and a few birds (Table 11). Two further ABGs were noted, both from ditches; these comprise the burial of a juvenile pig and the partial remains a dog.

7.14 Other finds

7.14.1 Part of the stem of 19th-century clay tobacco pipe was found in a brick soakaway in Field 50, trench 1133.

7.15 Human bone

7.15.1 Small quantities of human bone (six fragments of cranium and a complete third metacarpal) were recovered from single contexts in three areas of the principal site (Fields 60, 99 and 115; Table 12). All derived from ditch fills where they were recovered amongst the animal bone. The locations had a broad distribution across the scheme, with 1.7–2 km between the settings. The ditches formed components within various systems of co-axial field boundaries/enclosures associated with several settlement foci of probable Late Iron Age and/or Romano-British date.



Table 12	Summary of human	remains
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Field no.	Context Cut	Skeletal elements	Age/sex	Pathology	Condition & comments
60	62114 62111	joining frags. right distal parietal	subadult–adult 16–30 yr unsexed		grade 1-2; old, dry bone breaks & fresh breaks with no adjoining frags.
99	177007 177006	joining frags. left temporal	adult >35 yr male	temporo- mandibular osteoarthritis	grade 1-2; fresh breaks join, rest old, dry bone breaks with slightly worn edges – might have been complete when deposited
115	224403 224408	midline (left & right) parietal frag.; left 3 rd MtC	MNI 1 adult >40 yr ??male		grade 2; mostly old, dry bone breaks with small fresh break with no adjoining frag.; two elements not necessarily from same individual

KEY: MtC - metacarpal; MNI - minimum number of individuals; grading of condition after McKinley 2004

- 7.15.2 In each case the bone is in similarly good condition (grades 1–2), the slight level of surface erosion a probable artefact of the sandy clay (acidic) soil matrices, and there is no evidence to suggest it had been subject to repeated episodes of deposition. No indication of graves or disturbed burial deposits were noted in the archaeological investigations, though the possibility of funerary activity in the area cannot be dismissed.
- 7.15.3 At least some of the skeletal elements predominantly comprising fragments of cranium might have been redeposited having formerly been subject to curation. The latter activity, particularly involving all or parts of human skulls, formed a relatively common though not fully explored or understood feature at various stages in prehistory and, to a slightly lesser extent, in the Romano-British period. That the '... majority of Iron Age populations were disposed of in archaeologically untraceable ways ... ' (Hill 1995, 106) is a widely accepted premise. Excarnation, in its various forms, has long been considered to represent one of if not the predominant mortuary rites undertaken in the Iron Age, supported by the relatively common recovery of disarticulated redeposited skeletal elements or parts thereof from what are deemed non-mortuary contexts (Carr and Knüsel 1997; Harding 2016, 108–126; Hill 1995, 13–18; Whimster 1981).
- 7.15.4 Numerous examples of Middle–Late Iron Age and Romano-British deposits of the type recorded at Tillbridge have been found in the county, in some cases radiocarbon dating of the skeletal remains demonstrating it derived from a slightly earlier phase of activity than indicated by the feature of origin (e.g., McKinley 2023). The location of the finds in the Tillbridge scheme does not seem to attribute them any significance in terms of placement, and although the slight emphasis on the skull might be viewed as of some significance, there is as yet no evidence to expressly suggest selection, curation or the deliberate 'placement' of specific skeletal elements.

7.16 Potential

Pottery

- 7.16.1 The pottery has been recorded to sufficient levels in accordance with Wessex Archaeology's guidelines (Morris 1992) and the 'basic level' of analysis according to the nationally recognised guidelines (Barclay et al. 2016, 16–17).
- 7.16.2 The evaluation produced a large assemblage of pottery mainly from secure contexts. The Late Neolithic/Early Bronze Age activity was centred on a single pit in Field 132, but the



bulk of the assemblage represents the disposal of waste from 12 settlements predominantly dating from the Late Iron Age and Romano-British periods. The composition of this assemblage falls within the standard range expected for the area, with a few curiosities such as the sherds in the Lincoln tile fabric from Fields 68 and 116. The possible pottery production waste from Field 60 highlights the potential for the recovery of further sherds and features associated with this hitherto unsuspected kiln site in the vicinity.

- 7.16.3 The medieval sherds mainly derive from the moated site identified in Field 124, with the rest found widely scattered across eight other fields, where they are potentially indicative of manuring with domestic waste. The small post-medieval/modern assemblage is also likely to relate to the agricultural use of the landscape during this time.
- 7.16.4 Although the pottery has already provided a chronological framework for the scheme through the spot-dating of contexts, refinement of the sequence is likely to be possible through further consideration of the sherds in their feature groups and comparisons with contemporary material from other sites in the region.
- 7.16.5 Further consideration of the assemblage will contribute to our understanding of the broader economic and social status of each of the Late Iron Age and Romano-British settlements encountered, as well as the relationships between them and others within the wider environs. These will include sites found at, for example, Nettleton and Rothwell (Willis 2013) on the Lincolnshire Wolds to the north-east, and the Caenby Corner to Gainsborough Pipeline (Pre-Construct Archaeology 2003), Gate Burton (Wessex Archaeology 2023p), South Carlton (Wessex Archaeology 2004) and Cottam Solar Farm (CFA Archaeology 2022a and 2022b), all within the Trent Valley to the south and south-west. Ceramically, such comparisons will also elucidate the relative importance of local, regional and more distant sources of supply, the types of vessels used and any changes within these through time.
- 7.16.6 The assemblage also has the potential to contribute towards several of the more general research themes outlined in the regional research frameworks (Research Frameworks 2023) for the Late Iron Age/Romano-British periods, specifically those relating to: chronology (objective 5.1.1); rural settlement patterns and landscapes (objectives 5.4.1, 5.4.3, 5.4.4 and 5.4.6); the agricultural economy (objective 5.5.4); and artefacts: production, distribution and social identity (objectives 5.6.1, 5.6.3 and 5.6.6).

Ceramic building materials

- 7.16.7 The evaluation produced a very moderate assemblage of CBM of Romano-British, late medieval/early post-medieval and modern date. The Romano-British material mainly came from settlement ditches and related features within Fields 60 and 68 (AAA10), 99 (AAA3) and 112 (AAA6). The later medieval/early post-medieval roofing tile came from Fields 4 (AAA1), 98 (AAA3), 105 and 123 (AAA7), with a small concentration in Field 124 (AAA8) associated with the moated site. The later post-medieval brick, tile and land drain fragments are indicative of the agricultural nature and use of the landscape following the enclosure and drainage of smaller fields.
- 7.16.8 The Romano-British CBM assemblage has the potential to further our understanding of the wider economic and social status of each settlement site. Of the 12 areas of archaeological interest, only two contain (very slight, indirect) evidence for hypocausts (Fields 68; AAA10 and 112; AAA6), with roof tiles from two further fields (Field 60; AAA10 and Field 90). The remainder (Fields 45, 49 (AAA11), 55 (AAA2), 87, 99 (AAA3) 132 (AAA5) and 124 (AAA8)) contained either single pieces or a couple of fragments only, while Fields 3, 4 (AAA1), 102



- and 106 (AAA4), 123 (AAA7), 116 (AAA9) and 31 (AAA12) were devoid of any Romano-British building material.
- 7.16.9 The assemblage has the potential to contribute towards several research questions relating to comparisons of use or status between each site at Tillbridge, as well as with sites in the wider area. The study of both the Romano-British and later medieval/early post-medieval CBM fabrics would contribute, along with other local studied CBM fabrics from the Trent Valley, west Lincolnshire and east Nottinghamshire, to establishing potential distribution and consumption of CBM types from known kilns and possible production sources.

Fired clay

- 7.16.10 The evaluation produced a moderate assemblage of fired clay dating to the Romano-British and late medieval/early post-medieval periods. The Romano-British fired clay was mainly recovered from settlement ditches and related features within Fields 87, 98 and 99 (AAA3), Fields 102 and 106 (AAA4), and Field 60 (AAA10). The later medieval/early post-medieval fired clay consisted of a single fragment of oven/hearth lining in Field 124 (AAA8).
- 7.16.11 The Romano-British assemblage has limited research potential in relation to its original function and the use of the fragments recovered. The single spindle whorl relates to weaving, with wattle impressed fragments indicating oven structures or wattle walls/partitions. The presence of vitrified oven/hearth linings are easier to interpret.

Worked flint

- 7.16.12 The assemblage of worked flint is a small one, particularly given the large size of the area of investigation, but it does have some significance. The most securely identified material reflects activity in the Early Neolithic and Late Neolithic/Early Bronze Age periods, with some pieces possibly dating to the Late Mesolithic. There is very little archaeological evidence for these periods within the limits of the scheme, and it is relatively rare within the broader region.
- 7.16.13 The only previously recorded evidence for Mesolithic activity consists of a small number of blades found towards the south-east of AAA1 (AECOM 2023b). No unequivocally Mesolithic material was collected during the evaluation, but several blades found widely dispersed across the principal site might include pieces dating to this period. Evidence for activity of this date in Lincolnshire is generally found in such small surface scatters, and the most substantial sites are located to the north around the Humber estuary. Several isolated finds of Early Neolithic polished axes are noted in the HER, all located within or close (300 m or less) to Fields 1–8 (AAA1) at the north-west corner of the principal site. The leaf arrowhead recovered from this area might itself be an incidental loss during use, but this loose cluster of Early Neolithic material, probably including some of the blades, suggests the potential for further evidence beyond the limits of the trenches. The strongest evidence of Early Neolithic activity in Lincolnshire centres on the monuments of the Wolds to the east/south-east, but the material found at Tillbridge may supplement a growing number of possible settlements found across the wider region.
- 7.16.14 The assemblage recovered from a Late Neolithic/Early Bronze Age pit (200306) in Field 132 is also of some significance. Activity during this period is entirely absent elsewhere in the scheme and is poorly represented in Lincolnshire generally; the nearest to the site is recorded at Manton Warren 14 km to the north. As such, even this small assemblage provides an important addition to the corpus of evidence in the region. Late Neolithic/Early



Bronze Age pits commonly occur in small groups, and so there is clearly the potential for additional evidence in the vicinity of trench 2003.

Stone

7.16.15 The stone assemblage is a small, widely dispersed one including several pieces of unworked structural debris, and which provides only slight, background evidence for domestic activities associated with Romano-British and, to a lesser extent, medieval/post-medieval settlements. A single shale bracelet/armlet fragment provides evidence of personal adornment, but it is perhaps possible that three unworked shale pieces found in the vicinity of settlement/enclosures in Fields 60 and 68 (AAA10) represent raw material collected for local manufacturing of similar objects. Given the lack of any known production sites in the region, any potential further, more conclusive evidence for local manufacture would clearly be of some significance.

Other finds

7.16.16 The evaluation produced a small assemblage of other types of material of Romano-British, late medieval/early post-medieval and modern date. Overall, the Romano-British material was mainly concentrated in settlement ditches and related features within Fields 60 and 68 (AAA10). Of interest in Field 77 is evidence for iron smelting to the east of AAA10; it is possible that evidence for *in situ* furnaces associated with smelting are present within the environs of the trenches investigated.

Animal bone

- 7.16.17 The evaluation produced a large assemblage of animal bones, the majority recovered from secure, well-dated contexts relating to settlement and farming activity spanning the Late Iron Age and Romano-British periods. A significant quantity of detailed information (e.g., age profiles, butchery evidence etc.) is available for further study.
- 7.16.18 This data has the potential to enhance understanding of the Romano-British pastoral economy and husbandry strategies both locally and within the wider region, which, according to the East Midlands Research Framework, generally lacks large, informative assemblages of animal bone from rural settlements and farmsteads. There is also some scope for local comparison, for example with Romano-British assemblages from the large-scale evaluations for Gate Barton and Cottam Solar Farms (Wessex Archaeology 2023p; CFA Archaeology 2022a; 2022b) to the immediate south. There are also the small assemblages from the Blyborough to Cottam (Cooke and Seager Smith 1998) and Caenby Corner to Gainsborough pipelines (Pre-Construct Archaeology 2003), and evaluations at South Carlton (Wessex Archaeology 2004) and Welton (Archaeological Project Services 2007; Allen Archaeology 2010).
- 7.16.19 The animal bone assemblage from the evaluation has been rapidly scanned as part of the assessment following current guidelines (Baker and Worley 2019). The results indicate that conditions are favourable for bone preservation across much of the proposed development area. The scan has also provided a general indication of the quantity and type of detailed information (e.g., tooth wear, epiphyseal fusion, butchery marks etc.) available for further analysis. This should be reviewed following any further archaeological mitigation within the proposed development area, and consideration should be given to integrating the evaluation material at any further stage, which would include detailed recording of this component.



- 7.16.20 The potential dataset from the evaluation is considered sufficient to provide a general overview of Romano-British livestock farming for locations with significant concentrations of animal bones (e.g., AAAs 3, 10 and 11). However, the real potential lies in providing a broad snapshot across a wide area of extensive settlement and land use, which has seen little previous archaeological investigation. The smaller assemblages from adjacent evaluations at Gate Barton and Cottam provide further points for comparison within the wider landscape, as do the other sites outlined above. Consideration should also be given to significant regional trends and comparisons with urban assemblages (e.g., Dobney et al. 1996).
- 7.16.21 The assemblage has the potential to contribute towards several research questions relating to the agricultural economy (5.5), but especially 5.5.1–2 and 5.5.4 (see Research Frameworks 2023; Knight *et al.* 2012).

Human bone

- 7.16.22 Given the very small size of the assemblage no further analysis of the skeletal remains is specifically recommended. However, the East Midlands Research Framework (Research Frameworks 2023) emphasises the importance of increasing our understanding of Iron Age placed and structured deposits of all forms (Framework Objective 4H). Further deposits of this nature are likely to exist within the current area of investigation and should further works be undertaken more examples might be found. Radiocarbon dating of some of the remains would confirm the date of the mortuary activity and potentially indicate an appropriate interpretation of the deposit type, while further details regarding the location of the deposits with respect to settlements/boundaries/access routes etc. might shed light on the formation processes involved and their significance.
- 7.16.23 Data recovered during radiocarbon analysis of human bone pertains not only to the date of the deposit but, through analysis of the carbon, nitrogen and sulphur isotopic data routinely collected in this process, can provide some information relating to an individual's diet and their place of origin. Such insights enrich our understanding of population movement and economic status, and has recently been successfully undertaken for the similarly dated and derived human remains from the Hornsea Windfarm Project (Moore et al. 2023).

8 ENVIRONMENTAL SUMMARY

8.1 Introduction

8.1.1 A total of 232 bulk sediment samples were taken during the field investigations and processed for the recovery of environmental evidence. Detailed results of the assessment of this evidence have been presented in the preceding evaluation reports (Wessex Archaeology 2023b; c–h; j–k). This report presents a summary of the evidence with a discussion of its potential for addressing research aims.

8.1.2 Materials and methods

8.1.3 The 232 bulk sediment samples were taken from a range of pits, ditches, gullies, postholes, crop-drying ovens, a pond and a hollow. The samples break down into the following provenance groups:



 Table 13
 Sample provenance summary

Field	Trench Number	Feature Types	Number of samples	Volume (litres)
3	25	Ditch	1	25
4	52	Pit	2	17
31	1021, 1025	Pit, ditch	2	71
32	1021	Pit	1	21
47	511	Ditch	1	25
49	561, 562, 563	Ditch, pit, gully	14	309
51	1343	Ditch, pond	2	36
53	586	Pit	1	12
54	589, 590, 592, 599, 605	Gully, ditch, pit, posthole	18	384
55	1312	Ditch	2	73
56	1324	Ditch	1	35
60	618, 619, 620-7, 635, 649	Gully, ditch, pit, crop-drying oven	51	1475
62	1456, 1460	Ditch, pit	2	57
68	647, 649, 672-8	Gully, ditch, pit, crop-drying oven	52	1445.2
75	731	Pit	1	1.5
76	736	Hollow	1	20
78	773, 782, 783	Pit, posthole, ditch	3	30.5
87	1640, 1643	Gully, ditch	2	34
94	2163	Pit	1	29
99	1762, 1766, 1768, 1776	Ditch, pit, gully	6	189
102	908	Ditch	1	24
106	979, 980, 981	Pit, ditch, gully	5	144
108	1805	Ditch	1	10
112	1915, 1920	Ditch	3	81
115	2246, 2247, 2248, 2249, 2251	Ditch, pit	15	455
116	2285, 2286, 2287, 2289	Ditch, pit, gully	22	614
123	2537, 2577, 2579, 2581	Ditch, gully	6	153
124	2611, 2606,	Ditch	7	86.5
131	1967, 1977	Pit, ditch	2	67
132	1998, 1999, 2001, 2003	Ditch, pit	5	166
140	2634	Ditch	1	31
Totals			232	6120.7

- 8.1.4 The size of the samples varied between 0.2 and 40 litres, with an average volume of approximately 26.4 litres per sample. Some of the samples were pre-soaked in a solution of water and hydrogen peroxide to help break up the clayey sediment. The samples were processed by standard flotation methods on a Siraf-type flotation tank and all flots retained on a 0.25 mm mesh, the residues generally on a 1 mm mesh, with a few exceptions detailed below:
 - Six samples were identified as containing waterlogged deposits. These samples were subsampled down to 3.5–10 litres prior to processing; between 10 and 20 litres



- of unprocessed sample sediment were retained for potential further work at a later stage (e.g., analysis of wood, insect remains). The residues for the waterlogged samples were retained on a 0.25 mm mesh.
- One sample was identified as potentially containing mineralised remains, due to the recovery of a coprolite during the excavation of the deposit. The residue for this sample was retained on a 0.25 mm mesh.
- Two samples taken from crop-drying ovens were retained on a 0.5 mm residue mesh. The residues from all other samples were retained on a 1 mm mesh.
- 8.1.5 All residues were sorted into a coarse fraction (>4 mm), these were sorted by eye for artefactual and environmental remains then discarded. The environmental material extracted from the residues was added to the flots. The fine residue fractions (<4 mm 1/0.5/0.25 mm) and the flots were scanned and sorted using a stereomicroscope at magnifications of up to x40.
- 8.1.6 For the assessment, the presence of potential indicators of bioturbation were noted, including the percentage of roots, the abundance of modern seeds, alongside the presence of mycorrhizal fungi sclerotia (e.g., *Cenococcum geophilum*), burrowing snails (*Cecilioides acicula*), or earthworm eggs and insects, if present.
- 8.1.7 The preservation and nature of the environmental remains was recorded. Abundance of remains is qualitatively quantified: C = <5 ('Trace'), B = 5–10 ('Rare'), A = 10–30 ('Occasional'), A* = 30–100 ('Common'), A** = 100–500 ('Abundant'), A*** = >500 ('Very abundant'/Exceptional').
- 8.1.8 Plant remains were identified through comparison with modern reference material held by Wessex Archaeology and relevant literature (e.g., Cappers *et al.* 2006). Nomenclature follows Stace (1997) for wild taxa and Zohary *et al.* (2012) for cereals and other cultivated crops (using traditional names).

8.2 Results

8.2.1 The flots from the samples were generally small and potential indicators of bioturbation are present in variable but generally high quantities. Environmental evidence comprised plant remains preserved by charring, waterlogging and mineralisation/mineral replacement, wood charcoal and molluscs (Appendix 3). Preservation condition was variable, but the prevalence of mineral coating suggests intermittent waterlogging across most of the site which could be detrimental for the preservation of some types of evidence. Small animal bone was also present in some of the samples; this is reported in the animal bone section above.

8.3 Discussion

8.3.1 A large number of the samples (about two-thirds) have not provided significant environmental evidence, suggesting the following fields have low potential for further investigation and sampling: Fields 3, 4, 31, 32, 75–76, 78, 94, 102, 106 and 108. The samples with significant environmental evidence (about one-third, with different levels of significance) are discussed in the following sections.



Late Neolithic/Bronze Age

Field 132

8.3.2 The only environmental evidence from a securely phased prehistoric deposit was retrieved from Field 132, where a pit containing Beaker pottery was sampled. The samples produced a few charred plant remains, and a large amount of wood charcoal in a very good state of preservation.

Romano-British

8.3.3 Extensive environmental evidence for Romano-British activity was found in a number of areas. This includes a range of domestic activities, including crop-processing and the preparation of cereals for consumption, the use of crop-drying ovens, and the use of turves as fuel. This evidence is in variable states of preservation and of variable quality. However, the samples from some fields have provided well-preserved evidence which has high further potential. This confirms that the investigations have been successful in revealing evidence for various site activities, the remains of which were potentially directly deposited after charring. The samples from other fields contain likely reworked material possibly originating from nearby deposits that have not been exposed or sampled, suggesting there is potential in the wider area.

Fields 55-56, 99, 112, 123 and 131

8.3.4 The material is generally very poorly preserved, possibly re-worked and is of very low significance and potential.

Fields 47, 49, 54, 60, 62, 68, 87, 115, 116, 132 and 140

8.3.5 The material is well-preserved and abundant, with high potential and suitable for further analysis.

Medieval

Field 124

8.3.6 The samples from dry deposits contained limited environmental evidence, representative of processing activities occurring nearby, and the remains of which may have been reworked into the ditch and gully fills. The samples from waterlogged deposits are rich in environmental evidence representative of the surrounding environment and have potential to inform on its evolution through time through detailed analysis.

Undated

Field 51

8.3.7 There is good potential for the waterlogged remains in the sampled feature (a pond) to provide environmental material to allow for the reconstruction of the surrounding vegetation and its changes over time.

Fields 53 and 56

8.3.8 Although both features were undated, potentially prehistoric deposits were identified on the basis of the environmental evidence. These features comprise a pit in Field 53 and a ditch in Field 56.

8.4 Potential

8.4.1 The assessments have indicated that a number of the site areas have potential for future sampling (Appendix 3). The design of a site-specific sampling strategy, taking into account



- the findings of the assessments, is recommended to guide the taking of further samples during any subsequent phase of mitigation.
- 8.4.2 A relatively small number of the samples taken during the evaluations have potential for further analysis of a range of palaeoenvironmental indicators (e.g., plant remains, wood and wood charcoal, insects) in addition to radiocarbon dating. The evaluation material should be retained as part of the archive.
- 8.4.3 This material has some potential to address research questions in the regional and period-based research frameworks, agendas and strategies, from the prehistoric to the medieval periods (e.g., Lodwick and Rowan 2022; Monckton 2006; van der Veen et al. 2013). For example, a number of research priorities in the regional research framework for the Romano-British period (Research Agenda 5.4–5.5; Knight et al. 2012) would be applicable, such as the daily life of settlements and their role in the processing and marketing of agricultural products, the impact of the integration of Britain into the Roman Empire upon the agrarian economy (including the introduction of new crops, herbs and fruits), the diet of people of high and low status in urban and rural settlements, the processes of agricultural intensification and expansion and the development of field systems, amongst others.



9 CONCLUSIONS

9.1 Summary

- 9.1.1 The earliest evidenced activity on the principal site comes from the small flint assemblage of Mesolithic–Early Neolithic date. The flints occur at a low density, widely distributed across the principal site, and are likely indicative of background activity along the Lincoln Cliff periphery in prehistory.
- 9.1.2 The earliest dated feature is a pit in Field 132, which contained Beaker pottery and a flint assemblage. The flint largely comprises of micro-debitage, which strongly implies knapping occurred in close proximity. The bulk samples produced a few charred plant remains, and a large amount of well preserved wood charcoal.
- 9.1.3 Pottery of prehistoric probable Iron Age date was recovered from trenches 619 and 1024 (Fields 60 and 31 respectively). In both cases it was found in proximity to Romano-British features and could either suggest residual material or a continuation of activity in these areas around the Roman Conquest.
- 9.1.4 A number of settlements and enclosure systems were established at various points across the principal site, and date to around the Roman conquest and the following centuries. At least nine of these areas have pottery dating to the Later Iron Age and Romano-British periods, with a further 11 of Romano-British date. The settlements appear to form associations and alignments and a relatively high settlement density indicates that the landscape was intensely exploited throughout the period.
- 9.1.5 Following the Romano-British period there is a comparative dearth of activity. A moated site lay in the south-east corner of the principal site, enclosed by a double-ditched moat, with stone revetments or walls extending along the inner edges of the ditches. Pottery and roof tile dating between the 14th–16th centuries was recovered, along with animal bone, and a horseshoe suggests ponies were kept nearby. The borehole survey indicated that the organic basal moat fill is of moderate to high potential to preserve palaeoenvironmental remains and material suitable for scientific dating. It is possible this moated site was a precursor to Glenworth Hall. Elsewhere, only a single, isolated pit of secure medieval date was excavated, in trench 1644 (Field 87). Ridge and furrow was recorded in Fields 3, 14, 28, 31–32, 36, 37, 38, 40–41, 50, 54, 55, 59, 60, 62, 64–65 68, 78, 87, 98–100, 105, 108, 116, 132.
- 9.1.6 There is evidence of post-medieval to modern landscape organisation across the evaluation area, in the form of ditch and hedgerow boundaries, backfilled ponds and modern agricultural drainage. These features do, in places, truncate earlier archaeological remains but the impact is not so significant as to hinder identification and interpretation.
- 9.1.7 Towards the western edge of the principal site modern deposits and below ground structures, related to former RAF Sturgate, were recorded in Fields 33, 35 and 138. These comprised layers of made ground or levelling, demolition layers and concrete drains.
- 9.1.8 The geophysical survey proved to be largely accurate and successfully identified all major areas of archaeology activity. Its accuracy diminished in areas with high concentrations of features, and small outlying features (e.g., the crop-drying ovens) were sometimes missed. Nevertheless, it was, overall, successful at defining the extent of the surviving archaeology.



9.1.9 The borehole survey successfully enabled a programme of deposit modelling for areas of the principal site although the deposits are generally of low potential with exception of an organic basal deposit identified within the possible moat (Field 124).

9.2 Discussion

- 9.2.1 The archaeological evaluation has been successful in its stated aims and has provided information on the archaeological potential of the principal site. The results of the evaluation help to refine the understanding of the presence, nature and distribution of archaeological features and their potential to contribute to wider historical narrative and regional agenda. They also largely corroborate the results of the preceding cultural heritage desk-based assessment (AECOM 2023b), geophysical (Magnitude Surveys 2023), LiDAR and aerial photography surveys (Deegan 2023).
- 9.2.2 The most significant period of activity within the principal site occurred during the Late Iron Age to Romano-British period, with more limited activity in the prehistoric, medieval, post-medieval and modern periods when the area was predominantly utilised for agricultural exploitation, with the exception of RAF Sturgate, established during WWII.
- 9.2.3 Prehistoric activity at the site largely appears to be transitory with the exception of a possible activity area at the base of the Lincoln Cliff. Previously recorded evidence for Mesolithic activity consists of a small number of blades found towards the south-east of Field 1 (AAA1; AECOM 2023b). No unequivocally Mesolithic material was collected during the evaluation, but several blades found widely dispersed across the site might include pieces dating to this period.
- 9.2.4 Several isolated finds of Early Neolithic polished axes are noted in the HER, all located within or close (300 m or less) to Fields 1–8 at the north-west corner of the evaluation. The leaf arrowhead was recovered from this area, and this loose cluster of Early Neolithic material, probably including some of the blades, suggests the potential for further evidence beyond the limits of the trenches here. The strongest evidence of Early Neolithic activity in Lincolnshire centres on the monuments of the Wolds to the east/south-east, but the material found at Tillbridge may supplement a growing number of possible settlements found across the wider region.
- 9.2.5 The pit in Field 132 produced the largest worked flint assemblage and the only Beaker pottery from the site. There is scant evidence for Late Neolithic/Early Bronze Age activity across Lincolnshire; the nearest examples being 14 km north at Manton Warren (Riley 1957) and to the west of the River Trent at Rampton (Knight 2000), and so the pit is of some significance.
- 9.2.6 Between the Late Neolithic/Early Bronze Age and Late Iron Age periods very limited activity is represented by a handful of broadly later prehistoric dated pottery sherds, all found in close proximity to areas of Late Iron Age/Romano-British settlements or enclosure systems. These sherds may be residual or representative slightly earlier activity in these areas. The pattern changes quite dramatically in the Late Iron Age with at least nine possible sites founded within this period, and a further 11 emerging throughout the Romano-British period.
- 9.2.7 The late Iron Age to Romano-British settlements themselves appear to form some loose associations; tending to be within 0.5 km of one another, and seeming to favour slightly higher ground. The Romano-British sites undoubtedly take advantage of favourable land likely evidenced by the fact that most remain in close proximity or directly underlie modern



farms or farm buildings (e.g., Harspwell Grange, Harpswell Low Farm and at Harpswell Farm). Interestingly, activity in the sites seems to remain fairly focused, with caveated exceptions, where possible field systems continue (e.g., Field 98), or crop-drying ovens were identified, beyond the limits of the settlement (Fields 60 and 68). There is remarkably little 'background noise', indicating that despite a number of these sites being contemporary, activity remained relatively localised. It is also possible that the larger sites (e.g., Fields 60 and 68, 94 and 115) formed the focus of activity with the outliers acting as satellites for the main settlement.

- 9.2.8 In the south-east corner of the site, a total of six Romano-British sites form an alignment between the base of the Lincoln Cliff and Glentwoth Grange. These sites also align with a footpath depicted on historic mapping until the mid-20th century. It is possible that this footpath is a fossilisation of a routeway connecting these ancient settlements which has persisted in this part of the Lincolnshire landscape for nearly two millennia.
- 9.2.9 The sites also provide a remarkable insight into settlement density; with the working assumption that each site identified during the evaluation does represent a settlement site, then we are left with 20 Romano-British settlements across a 14 square-kilometre area, and a settlement density of 0.7 per square kilometre. If one discounts the smaller sites, the figure drifts closer to one site per square kilometre. Compared with traditional conceptions of the Romano-British countryside, this may seem high, but it is consistent with the results of other areas landscape-scale investigations. Parallels to the emerging Romano-British settlement density across the proposed Tillbridge Solar Scheme can be found across other areas of Lincolnshire (e.g., Tuck 2023; Wessex Archaeology 2023p) and in intensively investigated areas further afield; recent work around Cambridge identified as many as 1.4 Romano-British sites per square km (Evans et al. 2023).
- 9.2.10 The settlements comprise a mix of complex and unclassified farmsteads, of varying sizes, that are known from across rural Roman Britain (Allen and Smith 2016, 17–33). Whilst the settlements and enclosures observed within the principal site all appear to be farmsteads, there is also evidence for higher status buildings nearby, with a villa at Glentworth, and hypocaust tile recovered at Gate Burton (Wessex Archaeology 2023p). The pottery wares represented are diverse and when compared to other sites nearby could offer a substantial insight to status and pottery consumption across rural Lincolnshire in the period.
- 9.2.11 The evaluation has produced a large assemblage of pottery, primarily of Late Iron Age—Romano-British date, with very small quantities of Late Neolithic/Early Bronze Age, later prehistoric and medieval material. There is little that is unexpected, but the assemblage provides a chronological framework for the scheme as a whole and contributes to an understanding of the broader economic and social status of the settlements, and relationships between them and those in the wider area.
- 9.2.12 A similarly substantial assemblage of Late Iron Age—Romano-British animal bone was also recovered, which can usefully contribute to a better understanding of the pastoral economy and husbandry strategies in the local area as well the broader region.
- 9.2.13 Finds of other materials, for example metalwork, are much less well represented but the CBM and stone, for example, can add a little more information on the economic and social status of the various settlements, while the worked flint provides additional chronological data, with locally rare evidence for activity in the Early Neolithic, Late Neolithic/Early Bronze Age and, possibly, the Mesolithic periods. The small group of redeposited human bone is



- of some interest in potentially providing information on Iron Age/Romano-British mortuary practices.
- 9.2.14 The environmental evidence provides evidence of a range of domestic activity across the site, including crop-processing and the preparation of cereals for consumption, the use of crop-drying ovens and the use of turves as fuel. Amongst these, a relatively small number of samples have high potential for further analysis and to contribute to the rural settlement patterns, landscapes and the agricultural economy sections of the East Midlands Research Agenda and Strategy for the Historic Environment (Research Agenda 5.4, 5.5; Knight *et al.* 2012).
- 9.2.15 The trenching results at Tillbridge are largely consistent with those of other archaeological evaluations in the wider area including investigations at Cottam (CFA Archaeology 2022a; 2022b) and Gate Burton (Wessex Archaeology 2023p). Together these sites represent a rural landscape developing throughout the Late Iron Age and Romano-British periods, characterised by settlements of various sizes and status. The settlements would have been relatively well connected with access to trade and resources both via the waterways of the River Trent and the Fossedyke, and the roadways of Ermine Street and Till Bridge Lane. Such routes provided access to both military and civilian sites, including the fort at Littleborough Lane, Segelocum a Roman town at a crossing of the River Trent, Owmby the Ermine Street roadside settlement, and to Roman Lindum.
- 9.2.16 Taken holistically, the results from Tillbridge fit the established regional narrative of isolated settlements interspersed with larger, agglomerated settlements (Taylor 2007, 46–47, 76). The surge of pre-Conquest settlements followed by later modification and new sites in the mid–late Romano-British period is also well evidenced, and reflects developments elsewhere in settlement, infrastructure and further Romano-British agricultural expansion (Allen 2016, 206; Taylor 2007, 109). Nonetheless, they represent a significant landscape study and can contribute to our understanding of settlement development and interaction; the settlements after all, would have been in visual contact with one another. They could also provide evidence for local relations with nearby towns (Segelocum, Owmby, Lindum etc) and military sites (Littleborough Lane). The sites identified across the Tillbridge Solar Scheme evaluation form a valuable regional comparator to Evans' (2023) recent Cambridgeshire study and represent a useful contribution to both the East Midlands Research Agenda and Strategy for the Historic Environment (Research Agenda 5.4; Knight et al. 2012) and the site-specific objectives of the project (see Section 3.3).
- 9.2.17 The moated site evidenced in the south–west of Field 124 proved difficult to fully characterise due to the narrow window that archaeological trenches provide; however, what is clear is that there is archaeological complexity to the site and that it covers a larger area than the earthwork evidence suggests. Samples from the basal fill of the moat also hold good dating, environmental and geoarchaeological potential.
- 9.2.18 The archaeological remains suggest that the site was a medieval moated manor, possibly the precursor to Glentworth Hall (NHLE 1063348). The absence of finds post-dating the late 16th century ties in well with the construction of the hall in around 1566. While the HER entry (MLI50291) suggests that the moated site was a park keeper's lodge, this is unlikely as the land was only turned to parkland once the new hall had been constructed.
- 9.2.19 Evidence of the deer park pale (MLI54002), which was identified in the LiDAR survey results as a ditch and bank, was potentially recorded in the evaluation. An east–west aligned ditch was present in trenches targeted on the pale, however no finds were recovered.



- 9.2.20 There is much evidence for ridge and furrow cultivation, particularly around the villages of Springthorpe, Heapham, Harspwell and Glentworth. They are found at some distance from the current villages and possibly provide evidence the contraction of the settlements over the following centuries. However, given the limited survival and lack of associated artefacts, this adds little to the wider site narrative.
- 9.2.21 Figures 39–72 illustrate the areas of significant archaeology and further potential across the principal site. More specifically, there is potential for further analysis and to better characterise and understand the archaeological remains of Late Neolithic/Early Bronze Age (Field 132) and Late Iron Age and Romano-British date within Fields 3, 4, 31, 45, 47, 49, 54–56, 60, 62, 68, 87, 94, 98–100, 111–112, 115–116, 123, 131–132, 137, 139 and 140, and in the area of the moated site (Field 124). The post-medieval 'opening up' of the site area and its agricultural usage is well represented both archaeologically and through historical sources and there is limited scope to develop this further.

10 ARCHIVE STORAGE AND CURATION

10.1 Museum

10.1.1 The archive resulting from the evaluation is currently held at the offices of Wessex Archaeology in Sheffield. The Collection Museum, Lincoln has agreed in principle to accept the archive on completion of the project, under the accession code LCNCC:2023.32. Deposition of any finds with the museum will only be carried out with the full written agreement of the landowner to transfer title of all finds to the museum.

10.2 Preparation of the archive

Physical archive

- 10.2.1 The archive, which includes paper records, graphics, artefacts and ecofacts, will be prepared following the standard conditions for the acceptance of excavated archaeological material by The Collection Museum, Lincoln, and in general following nationally recommended guidelines (Brown 2011; ClfA 2014c; SMA 1995).
- 10.2.2 All archive elements are marked with the LCNCC:2023.32, and a full index will be prepared.

Digital archive

10.2.3 The digital archive generated by the project, which comprises born-digital data (e.g., site records, survey data, databases and spreadsheets, photographs and reports), will be deposited with a Trusted Digital Repository, in this instance the Archaeology Data Service (ADS), to ensure its long-term curation. Digital data will be prepared following ADS guidelines (ADS 2013 and online guidance) and accompanied by metadata.

10.3 Selection strategy

10.3.1 It is widely accepted that not all the records and materials (artefacts and ecofacts) collected or created during the course of an archaeological project require preservation in perpetuity. These records and materials will be subject to selection in order to establish what will be retained for long-term curation, with the aim of ensuring that all elements selected to be retained are appropriate to establish the significance of the project and support future research, outreach, engagement, display and learning activities, i.e., the retained archive should fulfil the requirements of both future researchers and the receiving Museum.



- 10.3.2 The selection strategy (Appendix 4), which details the project-specific selection process, is underpinned by national guidelines on selection and retention (Brown 2011, section 4) and generic selection policies (SMA 1993; Wessex Archaeology's internal selection policy) and follows CIfA's *Toolkit for Selecting Archaeological Archives* (CIfA 2022b). It should be agreed by all stakeholders (Wessex Archaeology's internal specialists, external specialists, local authority, museum) and fully documented in the project archive.
- 10.3.3 Detailed selection proposals for the project archive, comprising finds, environmental material and site records (analogue and digital), are made in the site-specific selection strategy (Appendix 4).
- 10.3.4 Any material not selected for retention may be used for teaching or reference collections by Wessex Archaeology.
- 10.3.5 A full summary of the physical and digital archive generated by the evaluation, and the recommended selection strategy relating to it, will be included in the forthcoming final report on the results of the trenching from across the entire site.

Finds

- 10.3.6 All finds have been recorded to an appropriate archive level prior to any selection proposals being implemented, and the selection process will be fully documented in the project archive. Any material not selected for retention may be used for teaching or reference collections by Wessex Archaeology.
- 10.3.7 Animal bone (10,969 fragments): large assemblage, predominantly of Romano-British date, with small Late Iron Age/early Romano-British and medieval—modern components. Romano-British element has significant future potential to provide additional information about the livestock economy relating to an extensive area of settlement and farming activity. There is also some potential for radiocarbon dating. Retain all from well dated, stratified contexts of Late Iron Age—Romano-British date. Discard later components (medieval—modern) and bones from undated contexts.
- 10.3.8 Burnt flint (182 pieces): intrinsically undiagnostic material; already discarded.
- 10.3.9 Ceramic building material (258 fragments): small—moderate assemblage, predominantly of Romano-British date, with smaller collection of later medieval/early post-medieval examples and material of later post-medieval/modern date. The Romano-British CBM requires further basic analysis and has significant potential to provide additional information about localised status, use, consumption between the various sites identified at Tillbridge and comparison to other Romano-British sites in a wider catchment area. The later medieval/early post-medieval roofing tile requires further fabric analysis that will enable comparisons to manufacture, supply and possibly status in relation to other similar sites in both Lincoln and Nottinghamshire. Retain all the Romano-British and later medieval and early post-medieval CBM. Discard the later post-medieval and modern CBM following basic fabric analysis and recording.
- 10.3.10 Fired clay (454 fragments): small-moderate assemblage, predominantly of Romano-British date. Limited potential at present, although if any further archaeological work is undertaken adjacent to any of the sites producing fired clay, the assemblage would have further research potential, especially in light of any structural features or remains associated with the fired clay debris encountered within the cut features investigated during the evaluation.



Retain all the Romano-British and later medieval fired clay. Review at the next stage of the project.

- 10.3.11 Pottery (8,691 fragments); Large assemblage, predominantly of Late Iron Age to later Romano-British date, with smaller quantities of early prehistoric and medieval/modern pottery. Romano-British pottery has significant potential to provide additional information about status, consumption, use and longevity between each individual site and with sites from a wider catchment area. Retain all early prehistoric, later prehistoric, Romano-British and medieval pottery. Discard any Modern material.
- 10.3.12 Stone (18 pieces): unworked hearth lining, and post-packing has no further research potential; discard: the remainder consists of shale and diagnostic objects with some further research potential; retain.
- 10.3.13 Worked flint (94 pieces): small assemblage substantially comprised of material from a pit of Late Neolithic/Early Bronze Age date, and also including diagnostic Neolithic pieces; some future research potential; retain.
- 10.3.14 Other finds (349 fragments/objects): moderate assemblages, predominantly of Romano-British date, with smaller collection of later Medieval/early post-medieval examples and material of later post-medieval/modern date. The Romano-British finds have significant potential to provide additional information about localised status, use, consumption between the various sites and comparison to other Romano-British sites in a wider catchment area. The later medieval/early post-medieval material is limited but enriches the overall finds assemblage of this period. Retain all the Romano-British and later medieval and post-medieval finds. Discard the later post-medieval and modern finds unless diagnostic (i.e., copper alloy objects of interest)

Palaeoenvironmental material

- 10.3.15 Some of the samples could have potential for further analysis. The material should be retained as part of the site archive until further sampling or research has been undertaken, following which recommendations for analysis and deposition will be made. Once further sampling is undertaken, final recommendations for dispersal or retention (and analysis if applicable) in the site archive will be made.
- 10.3.16 A selection of unprocessed sample material is being retained for possible future analysis. Recommendations on these samples will be made once further fieldwork is undertaken.

Documentary records

10.3.17 Paper records comprise site registers (other pro-forma site records are digital), drawings and reports (Written Scheme of Investigation, client report). All will be retained and deposited with the project archive.

Digital data

10.3.18 The digital data comprise site records (tablet-recorded on site) in spreadsheet format; finds records in spreadsheet format; survey data; photographs; reports. All will be deposited, although site photographs will be subject to selection to eliminate poor quality and duplicated images, and any others not considered directly relevant to the archaeology of the site.



10.4 Security copy

10.4.1 In line with current best practice (e.g., Brown 2011), on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

10.5 OASIS

10.5.1 An OASIS (online access to the index of archaeological investigations) record (http://oasis.ac.uk) has been initiated, with key fields completed (Appendix 5; wessexar1-517568). A .pdf version of the final report will be submitted following approval by the Historic Environment Officers at LCC on behalf of the LPA. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service (ADS) ArchSearch catalogue.

11 COPYRIGHT

11.1 Archive and report copyright

- 11.1.1 The full copyright of the written/illustrative/digital archive relating to the project will be retained by Wessex Archaeology under the *Copyright, Designs and Patents Act 1988* with all rights reserved. The client will be licenced to use each report for the purposes that it was produced in relation to the project as described in the specification. The museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use conforms to the *Copyright and Related Rights Regulations 2003*.
- 11.1.2 Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied without reference to Wessex Archaeology for the purposes of archaeological research or development control within the planning process.

11.2 Third party data copyright

11.2.1 This document and the project archive may contain material that is non-Wessex Archaeology copyright (e.g., Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the *Copyright, Designs and Patents Act 1988* with regard to multiple copying and electronic dissemination of such material.



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APPENDICES

Appendix 1 Pottery ware types by period, totals and weight (g)

Period/Fabric	Number of sherds	Weight (g)
Prehistoric:		
Grog and flint-tempered ware	19	17
Grog-tempered	1	4
Shell-tempered	2	15
subtotal:	22	36
Late Iron Age and Romano-British:		
Amphorae	17	862
BB1	271	3132
Bourne/Greetham ware	2	190
Central Gaulish black slipped ware	2	11
Central Gaulish colour-coated ware	30	84
Creamware	3	17
Dales-type greyware	181	3957
Dales-type ware	432	7283
Derbyshire ware	3	17
Flint-tempered ware	1	25
Fine greyware	1	2
Grey burnished ware	31	462
Grey sandy ware	45	291
Greyware	3953	71,826
Grit-tempered ware	6	149
Grog and light vesicular fabric	7	18
Grog with voids	5	93
Grog-tempered ware	215	2447
Late Roman grooved ware	1	18
Legionary-type greyware	2	5
Lincoln tile fabric	2	108
Mancetter-Hartshill mortaria	8	285
Market Rasen fine reduced ware	5	69
Nene Valley colour-coated ware	52	894
Nene Valley greyware	3	21
Oxidised grog-tempered ware	1	45
Oxidised ware	47	650
Oxford red colour-coated ware	2	6
Parisian ware	8	47
Parisian-type ware	37	432
Reduced sandy ware	10	35
Samian ware	80	734
Sandy with voids	1	23
Sandy greyware	36	68
Sandy ware	234	2060
Shell and flint-tempered ware	4	35
Shell and grog-tempered ware	4	43



Period/Fabric	Number of sherds	Weight (g)
Shell-tempered ware	2500	34,037
Shell-tempered ware (leached)	5	9
South Carlton colour-coated ware	1	1
South Carlton cream ware	72	1293
South Carlton mortaria	3	112
Swanpool colour-coated ware	42	457
Swanpool mortaria	18	868
Swanpool oxidised ware	6	101
Terra Nigra	1	17
Whiteware	28	189
subtotal:	8418	133,528
Medieval:		
Humber ware	1	9
Late Lincoln glazed ware	8	483
Lincoln Fabric A	1	7
Lincoln glazed ware	4	83
Lincoln sandy ware	18	162
Midlands purple ware	1	9
Potterhanworth ware	12	203
Sandy ware	4	43
Shell-tempered ware	19	474
Toynton All Saints glazed ware	3	48
subtotal:	71	1521
Post-medieval/modern:		
Black/brown glazed earthenware	2	8
Brown glazed coarseware	1	27
Creamware	1	1
Midlands black glazed ware	1	118
Nottingham stoneware	4	42
Pearlware	1	1
Red earthenware	5	19
Slipware	1	6
Tickhill ware	1	36
Transfer printed whiteware	2	5
Yellow ware	1	31
subtotal:	20	294
Unassigned sherds	160	717
Overall total:	8691	136,096



Appendix 3 Potentially significant type of environmental remains by Field

	Provenance	Pot	entially significant	tremains		Potential co	ontribution to resea	arch aims	Potential future	e work
Field	Trench Number	Plant remains	Wood/charcoal	Molluscs	Insects	Prehistoric	Romano-British	Medieval	Further sampling	Analysis
47	511	✓	-	✓	-	-	✓	-	High	P
49	561, 562, 563	✓	-	✓	-	-	✓	-	High	Р
51	1343	-	✓	-	-	-	-	-	Medium	?
53	586	✓	✓	-	-	√	-	-	Medium	?
54	589, 590, 592, 599, 605	✓	-	✓	-	-	✓	-	High	Р
55	1312	✓	-	✓	-	-	-	-	Medium	?
56	1324	✓	-	-	-	✓	-	-	Low	?
60	618, 619, 620-7, 635, 649	✓	-	✓	-	-	✓	-	High	Р
62	1456, 1460	✓	✓	✓	-	-	✓	-	High	Р
68	647, 649, 672-8	✓	-	✓	-	-	✓	-	High	Р
87	1640, 1643	✓	-	-	-	-	✓	-	High	Р
99	1762, 1766, 1768, 1776	✓	-	✓	-	-	-	-	Medium	?
102	908	-	-	✓	-	-	-	-	Low	?
112	1915, 1920	-	-	-	-	-	✓	-	Low	?
115	2246, 2247, 2248, 2249, 2251	✓	-	✓	-	-	✓	-	High	Р
116	2285, 2286, 2287, 2289	✓	-	✓	-	-	✓	-	High	Р
123	2537, 2577, 2579, 2581	✓	-	✓	-	-	✓	-	Low	?
124	2611, 2606,	✓	✓	-	✓	-	-	✓	High	Р
131	1967, 1977	-	-	-	-	-	✓	-	Low	?
132	1998, 1999, 2001, 2003	✓	✓	-	-	√	✓	-	High	Р
140	2634	✓	-	✓	-	-	✓	-	High	Р



Appendix 4 Selection Strategy

273790 Tillbridge Solar Project Evaluation

[version 2, 08.12.23]

Selection Strategy

Project Information			
Project Management			
Project Manager	Richard O'Neill		
Archaeological Archive Manager	Jessica Irwin		
Organisation	Wessex Archaeology (WA)		
Stakeholders		Date Contacted	
Collecting Institution(s)	Lincoln Museum (Rebecca Craven) Archaeology Data Service	27.02.23	
Project Lead / Project Assurance	Lead: Hannah Dabill Assurance: Richard O'Neill	N/A	
Landowner	Various Landowners	To be contacted on completion of fieldwork	
Other (external)	External finds & environmental specialists (see WSI) Lincolnshire CC Historic Environment Officers Historic England	Ongoing	
Other (internal)	WA Finds Manager (Rachael Seager Smith) WA Environmental Manager (Sander Aerts) WA Geomatics & BIM Manager (Chris Breedon) WA internal finds & environmental specialists (see WSI)	N/A; briefed as part of standard project process	
Resources			
Resources required	WA Finds and Environmental specialis environmental specialists; WA archive		

Context

This overarching selection strategy document is based on the ClfA Archives Selection Toolkit (2019) and relates to archaeological project work being undertaken by Wessex Archaeology as defined in the WSIs (Wessex Archaeology 2023. *Tillbridge Solar Scheme, Gainsborough, Lincolnshire, Written Scheme of Investigation for Archaeological Evaluation*. Sheffield: unpublished report ref. 273790.01.)

Relevant standards, policies and guidelines consulted include: General

- Selection, Retention and Dispersal of Archaeological Collections (Society of Museum Archaeologists, 1993)
- Archaeological archives: a guide to best practice in creation, compilation, transfer and curation (AAF, revised edition 2011, section 4)
- Lincoln Museum Archaeological Archives Deposition Guidelines v4.1 May 2017
- Lincolnshire County Council Archaeology Handbook (Revised; Jennings 2019).
- Archaeological Data Service Instructions for Depositors 30.01.22

Relevant research agendas

• East Midlands Historic Environment Research Framework 2023 (https://researchframeworks.org/emherf/)

Finds

- Standard Guidance for the collection, documentation, conservation & research of archaeological materials (CIFA, 2014)
- A Standard for Pottery Studies in Archaeology (Prehistoric Ceramics Research Group, Study Group for Roman Pottery, Medieval Pottery Research Group 2016)

Environmental

- Environmental Archaeology: A Guide to the Theory, Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage 2011)
- Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record (Historic England 2015)
- Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains (English Heritage 2008)
- Waterlogged Wood: Guidelines on the Recording, Sampling, Conservation and Curation of Waterlogged Wood (English Heritage 2010)
- Waterlogged Organic Artefacts: Guidelines on their Recovery, Analysis and Conservation (Historic England 2018)

Research objectives of the project

Following consideration of the archaeological potential of the site and the regional research framework, the site-specific objectives of the evaluation are to:

- test the results of the geophysical survey;
- test the 'blank areas' for any previously undetected archaeological remains;
- determine the presence or absence of early prehistoric remains covered by alluvial deposits or by peat;
- examine evidence for remains of Late Iron Age/Roman dispersed settlements that may exist within the site;
- examine evidence for medieval/post-medieval agricultural remains and assess if this has impacted on any earlier remains;
- examine the evidence of water management and land drainage change in the postmedieval and modern (AD 1750+) periods;
- determine the depth of the alluvial sequence and examine the archaeological and palaeoenvironmental potential of alluvial deposits;

- examine the artefactual and ecofactual potential of archaeological deposits, some of which may be waterlogged; and
- assess the potential for the recovery of artefacts to assist in the development of type series within the region.

REVIEW POINTS

Consultation with all Stakeholders regarding project-specific selection decisions will be undertaken at a maximum of three project review points:

- 1. Data gathering: on site, if any unforeseen discovery necessitates an amendment to the proposed collection strategy, or if adjustments are made to any sampling strategy
- 2. End of data gathering (assessment stage)
- 3. Archive compilation

1 - Digital Data

Stakeholders

WA Project Manager; WA Archives Manager; WA Geomatics & BIM Manager; Lincoln Museum; Lincolnshire CC Historic Environment Officers; ADS

Selection

Location of Data Management Plan (DMP)

This document is designed to link to the project Data Management Plan (DMP), which can be supplied on request.

To promote long-term future reuse deposition file formats will be of archival standard, open source and accessible in nature following national guidance from ADS 2013, CIfA 2014c and the requirements of the digital repository.

Any sensitive data to be handled according to Wessex Archaeology data policy to ensure it is stored and transferred securely. The identity of individuals will be protected in line with GDPR. If required, data will be anonymised and redacted. Selection and retention of sensitive data for archival purposes will occur in consultation with the client and relevant stakeholders. Confidential data will not be selected for archiving and will be handled as per contractual obligation.

Document type	Selection Strategy	Review Points
Site records	Most records will be completed digitally on site (with the exception of registers). All will be selected for deposition.	3
Reports	To include WSIs, Interim reports, post-excavation assessment reports, publication reports. Final versions only will be selected for deposition.	2, 3
Specialist reports	Specialist reports will generally be incorporated in other documents with only minimal editing (reformatting, etc), and will be selected only if the original differs significantly from the incorporated version.	2, 3

Photographic media (site recording)	Substandard and duplicate images will be eliminated; pre-excavation images may not be selected where duplicated by post-excavation shots; working shots will be very rigorously selected to include only good quality images with potential for reuse and those integral to understanding features, their interrelationships and location on site; site condition and reinstatement photos will not be selected.	2, 3
Photographic media (objects)	Images of individual or groups of objects, to include those of significance selected for publication and reporting. Substandard and duplicate images will be eliminated; all others will be selected.	3
Photographic media (community engagement and other activities)	General shots, promotional videos, etc. None will be selected, unless images are generated that are not duplicated in the main site record, but which have specific archaeological value.	3
Survey data	Site survey data will be used to generate CAD/GIS files for use in post-excavation activities. Shapefiles of both the original tidied survey data, and the final phased drawings will be selected.	2, 3
Databases and spreadsheets	Context, finds and environmental data in linked databases. Final versions will be selected. Any specialist data submitted separately will also be selected.	2, 3
Geophysical data	RAW data and Interpretation Geo-tiffs	2, 3
Administrative records	Includes invoices, receipts, timesheets, financial information, email correspondence. None will be selected, with the exception of any correspondence relating directly to the archaeology.	3

De-Selected Digital Data

De-selected data will be stored on WA secured servers on offsite storage locations. The WA IT department has a backup strategy and policies that involves daily, weekly and monthly and annual backups of data as stated in the DMP. This strategy is non-migratory, and original files will be held at WA under their unique project identifier, as long as they remain useful and usable in their final version format. This data may also be used for teaching or reference collections by the museum, or by WA unless otherwise required by contractual or copyright obligations.

Amendments

Date	Amendment	Rationale	Stakeholders

2 - Documents

Stakeholders

WA Project Manager; WA Archives Manager; Lincoln Museum; Lincolnshire CC Historic Environment Officer

Selection

A security copy of all paper/drawn records is a requirement of ClfA guidelines. This will be prepared on completion of the project, in the form of a digital PDF file. If the security copy is not required for deposition by Stakeholders, it will be retained on backed-up servers belonging to Wessex Archaeology.

Note that some information may be redacted to comply with GDPR legislation (personal data).

Document type	Selection Strategy	Review Points
Site records	Selected records only will be completed in hard copy on site (registers, some graphics). All will be selected for deposition.	3
Reports	Hard copies of all reports (WSIs, Interim reports, post-excavation assessment reports, publication reports). All will be selected for deposition, with the exception of earlier versions of reports which have been clearly superseded.	2, 3
Specialist reports & data	Specialist reports will generally be incorporated in other documents with no significant editing. Supporting data is more likely to be included in the digital archive, but if supplied in hard copy and not incorporated elsewhere, this will be selected.	2, 3
Photographic media	X-radiographic plates: all will be selected.	3
Secondary sources	Hard copies of secondary sources will not be selected.	3
Working notes	Rough working notes, annotated plans, preliminary versions of matrices etc, will not be selected.	3
Administrative records	Invoices, receipts, timesheets, financial information, hard copy correspondence. None will be selected, with the exception of any hard copy correspondence relating directly to the archaeology.	3

De-Selected Documents

De-selected sensitive analogue data will be destroyed (shredded) subject to final checking by the WA Archives team with the remainder recycled. Possible exceptions include records retained for business purposes, including promotional material, teaching and internal WA library copies of reports.

Amendments

Date	Amendment	Rationale	Stakeholders

3 - Materials

Material type	Artefacts (bulk and registered finds)	Section 3.	3.1
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Stakeholders

WA Archives Manager; WA Finds Manager; WA internal specialists; external specialists; Lincoln Museum; Lincolnshire CC Historic Environment Officer; landowners

Selection

Note that human remains are not included in this selection strategy; their recovery and subsequent treatment and curation will be governed by a Ministry of Justice licence(s).

The on-site finds recovery strategy is given below; it is of necessity fairly generic. It is anticipated that this will be reviewed and updated at the project assessment stage, once all collected finds have been processed and quantified. Amendments may be made prior to that on site in the event of unforeseen discoveries necessitating adjustments to recovery or sampling strategies (e.g. production sites, large concentrations of building debris, 'burnt mounds').

Throughout the following section, 'stratified' is taken to include topsoil deposits, while 'unstratified' indicates anything completely separated from context e.g. spoil heap finds, or surface finds other than those directly associated with underlying features.

Find Type	Selection Strategy	Review Points
Animal bone	10,969 fragments: large assemblage, predominantly of Romano-British date, with small Late Iron Age/early Romano-British and medieval—modern components. Romano-British element has significant future potential to provide additional information about the livestock economy relating to an extensive area of settlement and farming activity. There is also some potential for radiocarbon dating. Retain all from well dated, stratified contexts of Late Iron Age—Romano-British date. Discard later components (medieval—modern) and bones from undated contexts.	2, 3
Building materials (other, e.g., mortar, plaster, opus signinum)	Two fragments of intrusive (modern) cement from Romano-British contexts. Limited potential for further analysis. Discard.	2, 3
Burnt (unworked) flint	182 pieces: intrinsically undiagnostic material; already discarded.	2, 3
Ceramic building	258 fragments: small–moderate assemblage,	2, 3

material	predominantly of Romano-British date, with smaller collection of later medieval/early post-medieval examples and material of later post-medieval/modern date. The Romano-British CBM requires further basic analysis and has significant potential to provide additional information about localised status, use, consumption between the various sites identified at Tillbridge and comparison to other Romano-British sites in a wider catchment area. The later medieval/early post-medieval roofing tile requires further fabric analysis that will enable comparisons to manufacture, supply and possibly status in relation to other similar sites in both Lincoln and Nottinghamshire. Retain all the Romano-British and later medieval and early post-medieval CBM. Discard the later post-medieval and modern CBM following basic fabric analysis and recording.	
Clay tobacco pipes	One fragment. Limited potential for further analysis. Discard	2, 3
Coins	Three examples. Two Romano-British copper alloy coin, and one modern copper alloy. Retain.	2, 3
Fired clay	454 fragments: small–moderate assemblage, predominantly of Romano-British date. Limited potential at present, although if any further archaeological work is undertaken adjacent to any of the sites producing fired clay, the assemblage would have further research potential, especially in light of any structural features or remains associated with the fired clay debris encountered within the cut features investigated during the evaluation. Retain all the Romano-British and later medieval fired clay. Review at the next stage of the project.	2, 3
Marine shell	83 pieces: from Romano-British features. Limited potential for further analysis. Retain to compare with assemblages from other parts of the site and review at the next stage.	2, 3
Metalwork	144 objects: identifiable Romano-British objects (bit-head, iron shears blade, D-shaped ring and open lamp fragment), and a medieval horseshoe; the others are nails/nail shank fragments or of modern date. Some further research potential if considered together with items from the rest of the proposed development area. Retain and review at next stage when discard of modern items is likely to be recommended	2, 3
Metalworking residues	87 pieces: slag and fuel ash waste evidence of metalworking. No further research potential beyond that already recorded. Retain to compare with assemblage from the rest of the proposed	2, 3

	development area and review at next stage when discard is likely to be recommended.	
Pottery, all other periods	8,691 fragments; Large assemblage, predominantly of Late Iron Age to later Romano-British date, with smaller quantities of early prehistoric (Beaker) and medieval/modern pottery. Romano-British pottery has significant potential to provide additional information about status, consumption, use and longevity between each individual site and with sites from a wider catchment area. Retain all early prehistoric, later prehistoric, Romano-British and medieval pottery. Discard any Modern material.	2, 3
Stone, unworked and portable objects	18 pieces: unworked hearth lining, and post- packing has no further research potential; discard: the remainder consists of shale and diagnostic objects with some further research potential; retain	2, 3
Worked bone and antler	One undiagnostic object from Late Iron Age/Romano-British context. Retain.	2, 3
Worked flint	94 pieces: small assemblage substantially comprised of material from a pit of Beaker date, and also including diagnostic Neolithic pieces; some future research potential; retain.	2, 3

De-Selected Material

Consideration will be given to the suitability for use for handling or teaching collections by the museum or Wessex Archaeology, or whether they are of particular interest to the local community. De-selected material will either be returned to the landowner or disposed of. All will be adequately recorded to the appropriate level before de-selection.

Amendments

Date	Amendment	Rationale	Stakeholders

3 - Materials

Material type	Palaeoenvironmental material	Section 3.	3.2
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Stakeholders

WA Archives Manager; WA Environmental Officer; WA internal specialists; external specialists; Lincoln Museum; Lincolnshire CC Historic Environment Officer

Selection

All environmental sampling has been undertaken following a site-specific sampling strategy or Wessex Archaeology's in-house guidance, which adheres to the principles outlined in Historic England's guidance (English Heritage 2011 and Historic England 2015a) and as stated in the relevant WSIs().

All environmental samples collected and suitable to address project aims and research objectives, as deemed by Wessex Archaeology's Environmental team, have been processed and assessed.

Env Material Type	Selection Strategy	Review Points
Unprocessed samples	A selection of unprocessed sample material is being retained for possible future analysis. Recommendations on these samples will be made once further fieldwork is undertaken.	2, 3
Unsorted residues	All residues have been sorted and discarded.	2, 3
Assessed flots with no further potential	Assessed flots with no further potential will be dispersed.	2, 3
Assessed flots with further potential	All samples with further research potential will be retained.	2, 3
Charred & waterlogged plant remains	All extracted plant remains will be selected	3
Mollusca	All extracted mollusca will be selected	3
All other analysed material (e.g., insects, pollen)	All material will be selected	3

Uncollected Material

Any uncollected material will be left in situ or re-incorporated into the site.

De-Selected Material

De-selected material from samples will be disposed of after processing and post-excavation recording. All processed material will be adequately recorded to the appropriate level before deselection.

Amendments

Date	Amendment	Rationale	Stakeholders

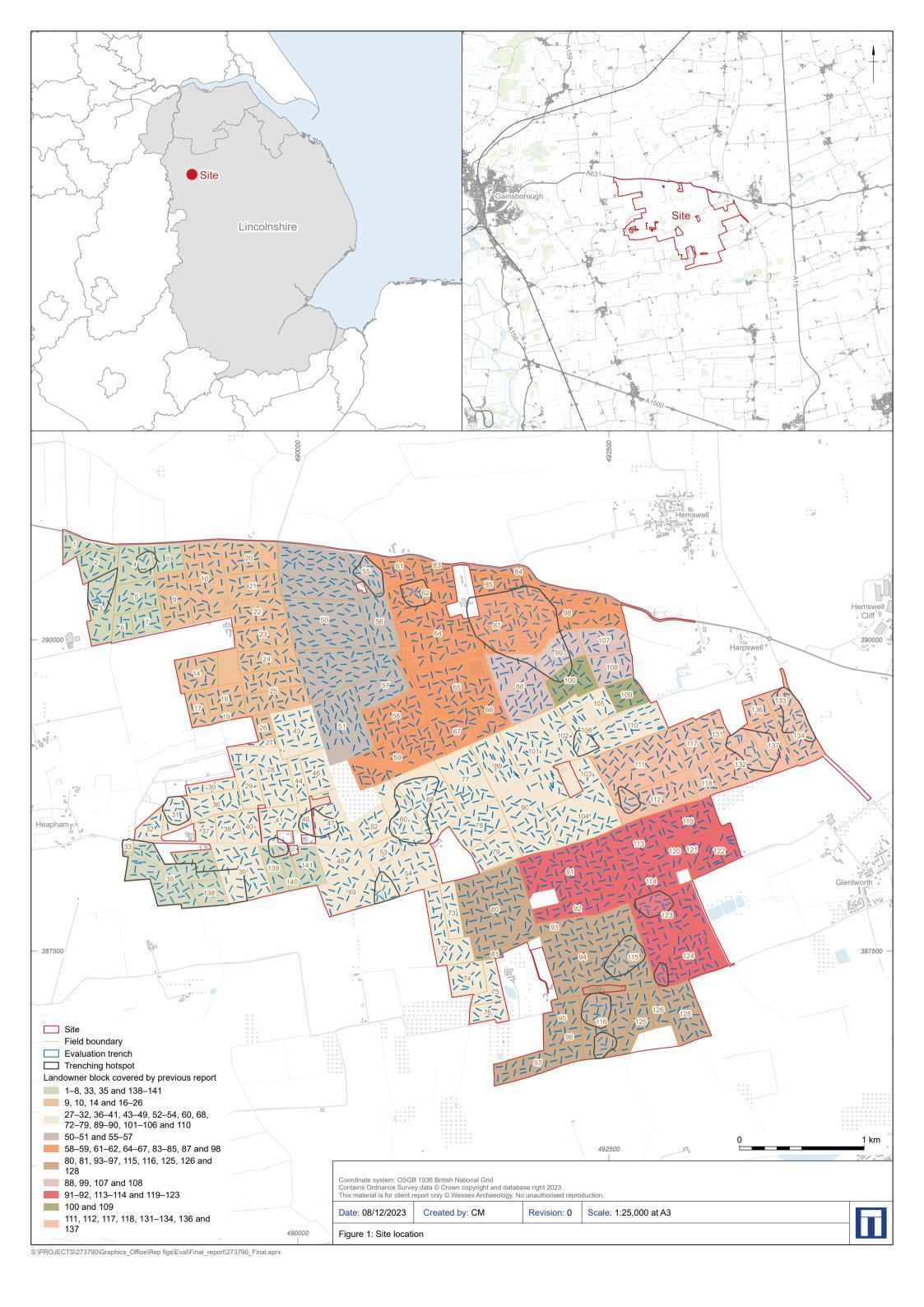


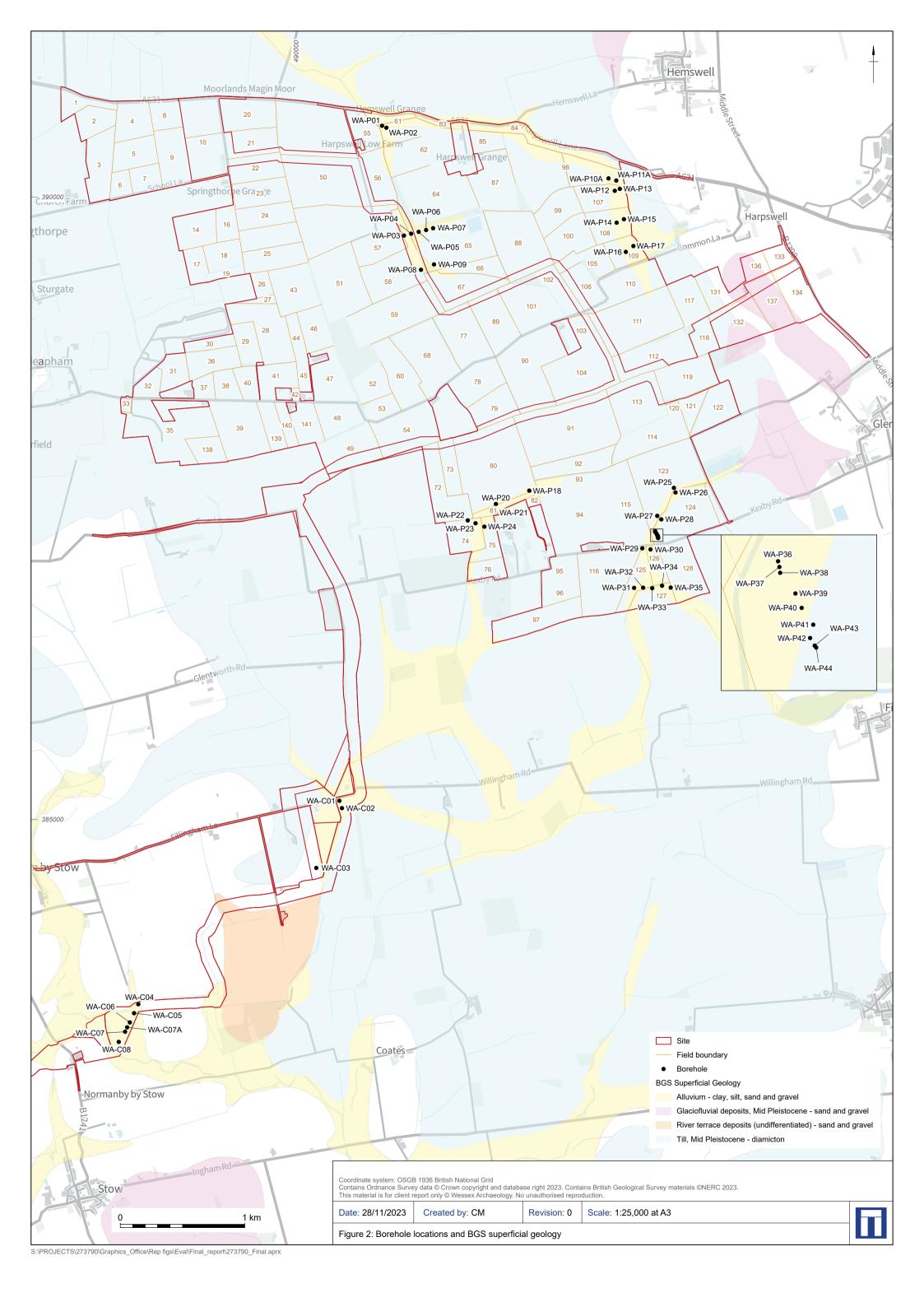
Appendix 5 OASIS wessexar1-517568

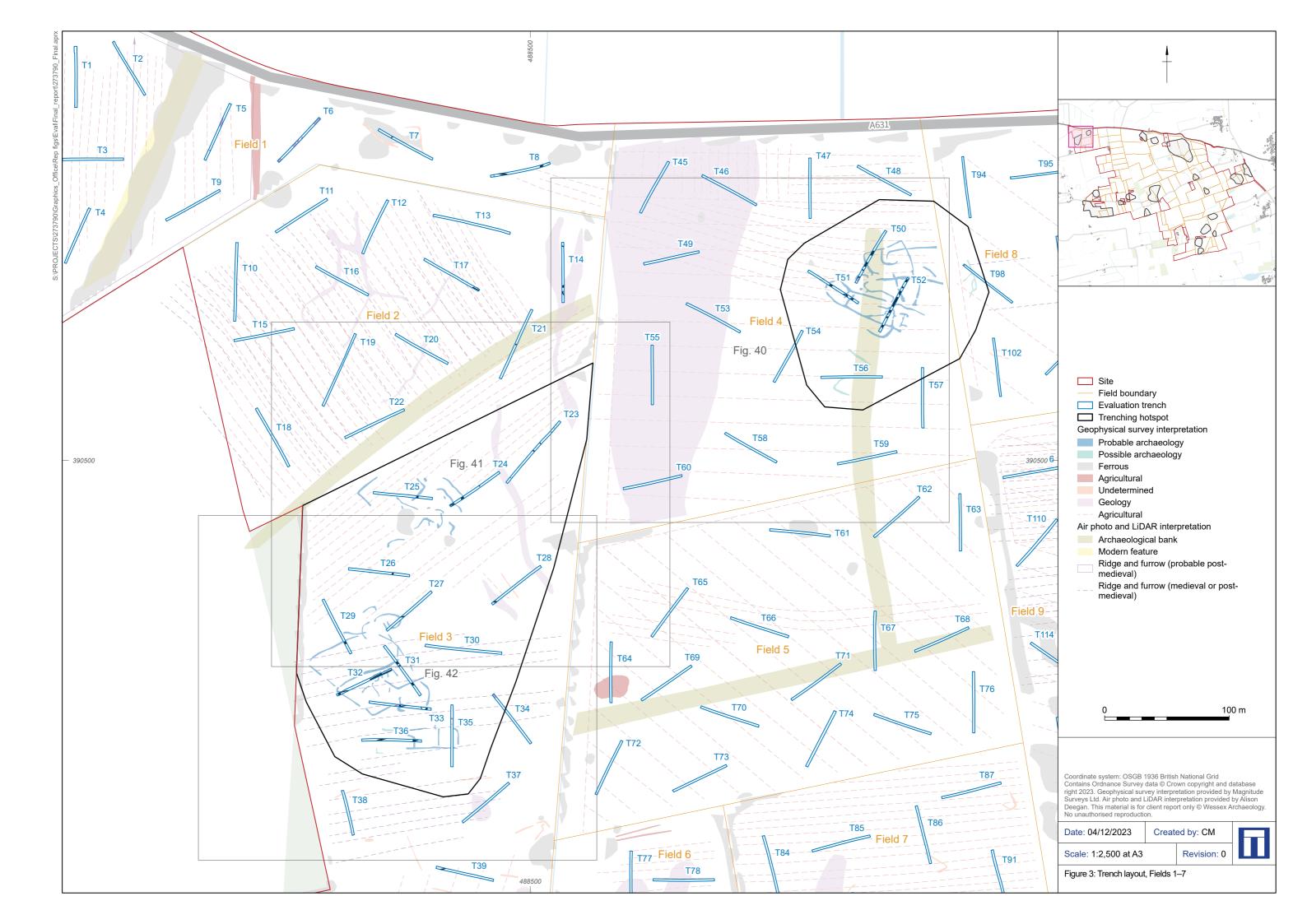
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Project Name	Tillbridge Solar Scheme, Gainsborough, Lincolnshire. Archaeological Evaluation	
Site name	Tillbridge Solar Project, Gainsborough, Lincolnshire	
Site code	LCNCC:2023.32	
Project Identifier(s)	273790	
Activity type	Evaluation	
Planning Id	DCO Application	
Reason For Investigation	Planning: Pre application	
Organisation Responsible for work	Wessex Archaeology	
Project Dates	24-Apr-2023 - 29-Sep-2023	
Location	Tillbridge Solar Project, Gainsborough, Lincolnshire NGR: SK 91224 8943 LL: 53.38945594062208, -0.629779897891011 12 Fig: 491224,388943	
Administrative Areas	Country: England County/Local Authority: Lincolnshire Local Authority District: West Lindsey Parish: Corringham Parish: Heapham Parish: Springthorpe Parish: Upton Parish: Fillingham Parish: Glentworth Parish: Harpswell Parish: Hemswell	
Project Methodology	Wessex Archaeology was commissioned by Tillbridge Solar Limited, to undertake an archaeological evaluation of an approximately 1,400 ha parcel of land centred around Common Lane, Gainsborough, Lincolnshire, DN21 5UZ. The evaluation area is centred on NGR SK 91197 88413. Across the Tillbridge Solar development principal site 2628 archaeological evaluation trenches were investigated and recorded.	
Project Results	Archaeological features and deposits were identified in 427 trenches and comprise ditches, gullies, pits, postholes, furrows and structures. Results are reasonably well distributed across the site and the features accord well with the results of the earlier geophysical survey. Taken in tandem with the earlier surveys, the archaeological evaluation has confirmed the presence of at least twenty Late Iron Age/Romano-British activity sites, a possible medieval moated site and the remains of the former World War II RAF Sturgate. Additionally, ridge and furrow, a large number of former field boundaries and other features associated with agriculture, such as dew ponds, were also identified. The evaluation has, therefore, achieved its aim of providing information on the archaeological potential of the site. The results of the evaluation help to refine the understanding of the presence, nature and distribution of archaeological features which significant potential to contribute to the East Midlands Historical Research Agenda.	
Keywords	Enclosed Settlement - ROMAN - FISH Thesaurus of Monument Types Settlement - ROMAN - FISH Thesaurus of Monument Types Field System - ROMAN - FISH Thesaurus of Monument Types Corn Drying Oven - ROMAN - FISH Thesaurus of Monument Types Pit - EARLY BRONZE AGE - FISH Thesaurus of Monument Types Pit - MEDIEVAL - FISH Thesaurus of Monument Types Lithic Implement - EARLY NEOLITHIC - FISH Archaeological Objects Thesaurus Lithic Implement - MESOLITHIC - FISH Archaeological Objects Thesaurus Airfield - 20TH CENTURY - FISH Thesaurus of Monument Types Moat - MEDIEVAL - FISH Thesaurus of Monument Types Field Boundary - POST MEDIEVAL - FISH Thesaurus of Monument Types Ridge And Furrow - MEDIEVAL - FISH Thesaurus of Monument Types	

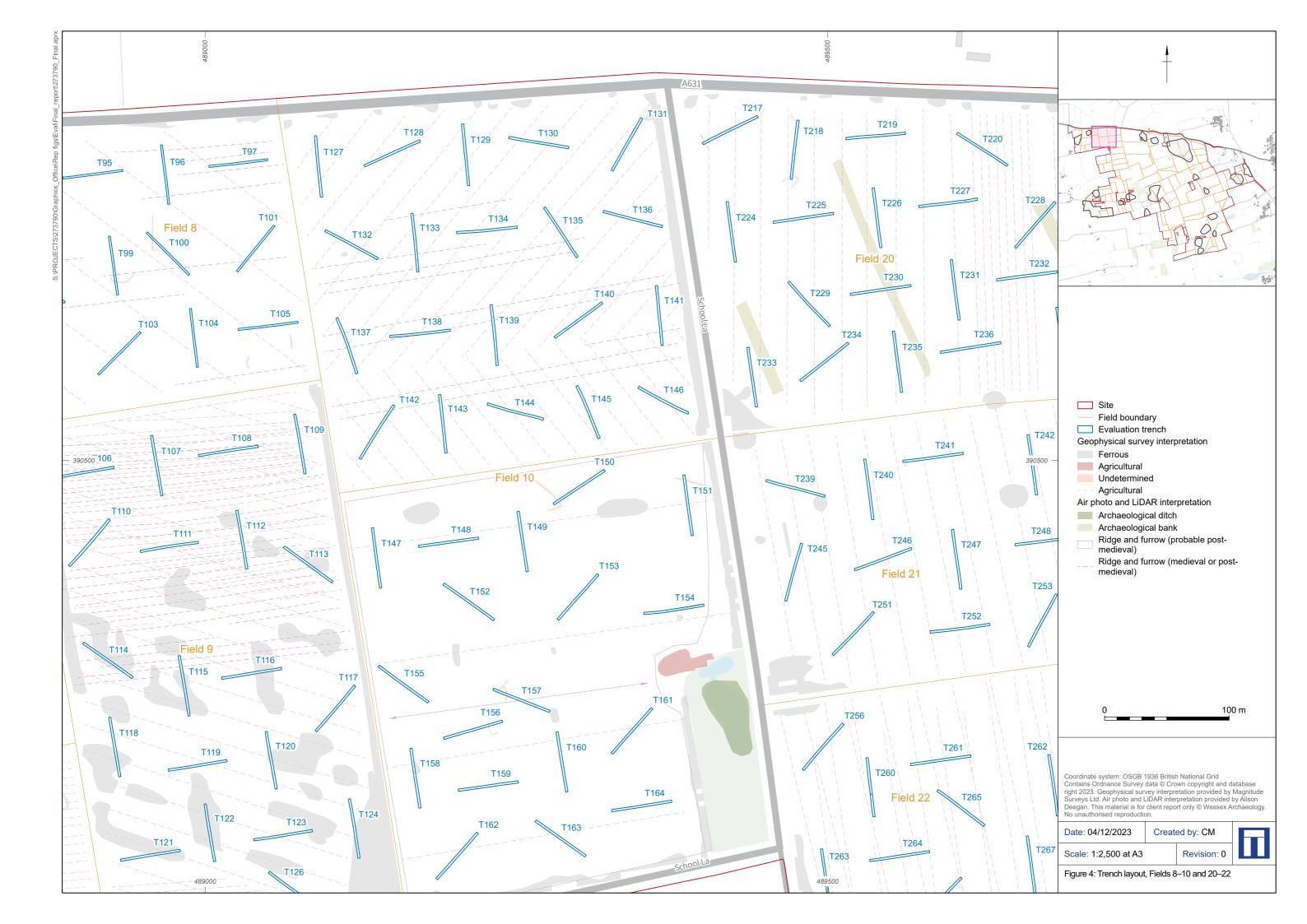


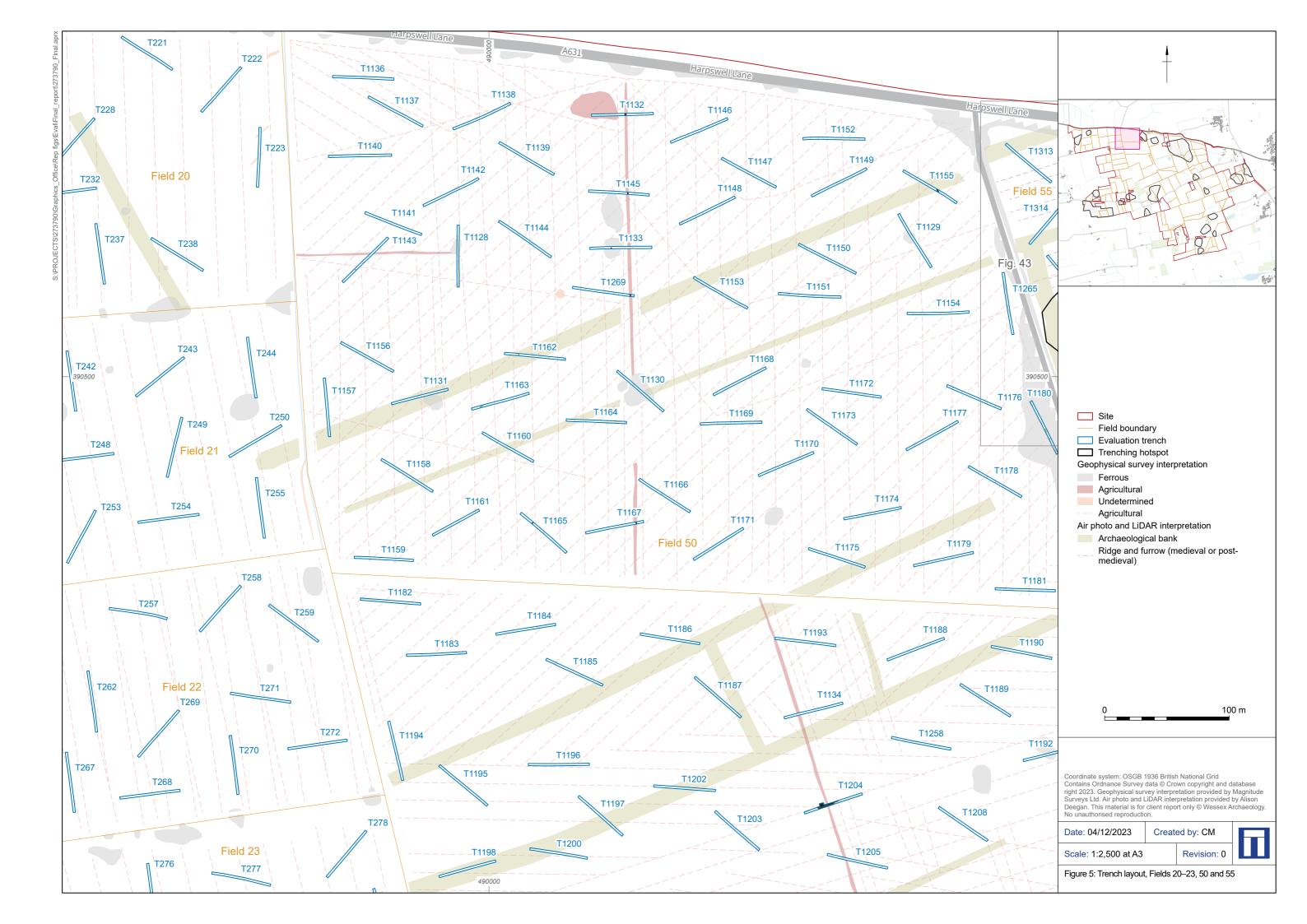
HER	Lincolnshire HER - unRev - STANDARD
Person Responsible for work	Emily Eastwood, Richard O' Neill
HER Identifiers	
Archives	Documentary Archive - to be deposited with The Collection: Art and Archaeology in Lincolnshire; Digital Archive - to be deposited with Archaeology Data Service Archive

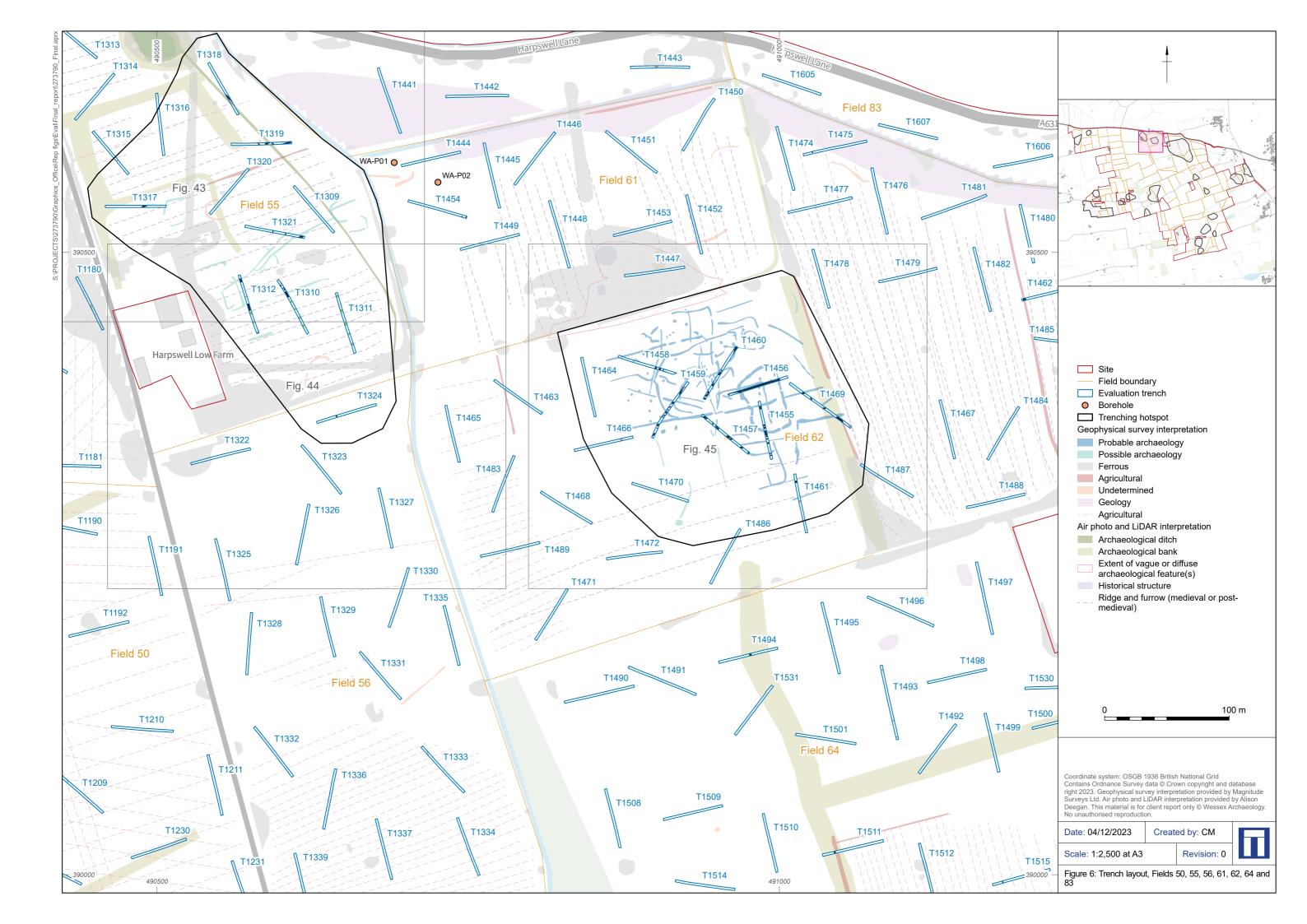


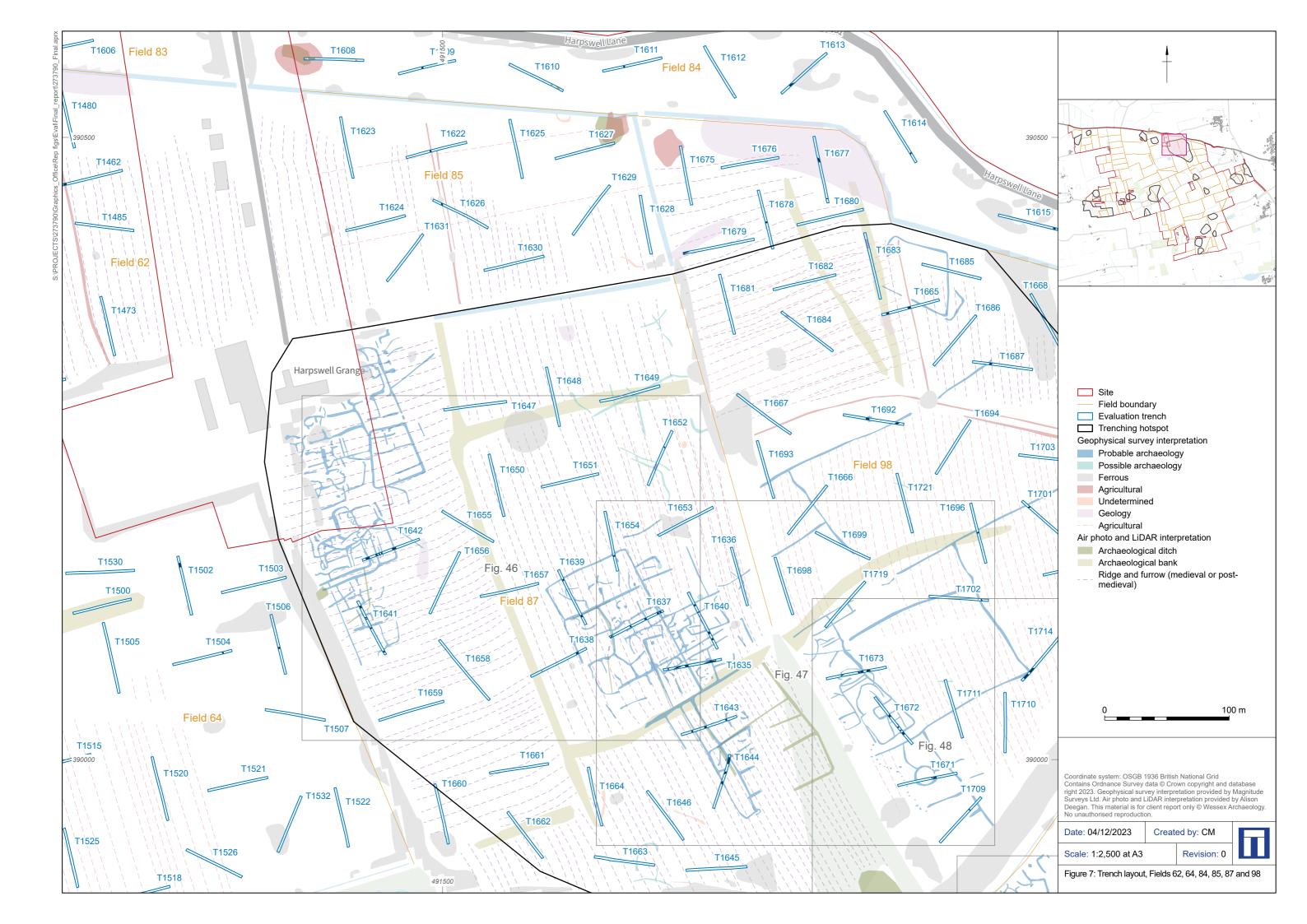


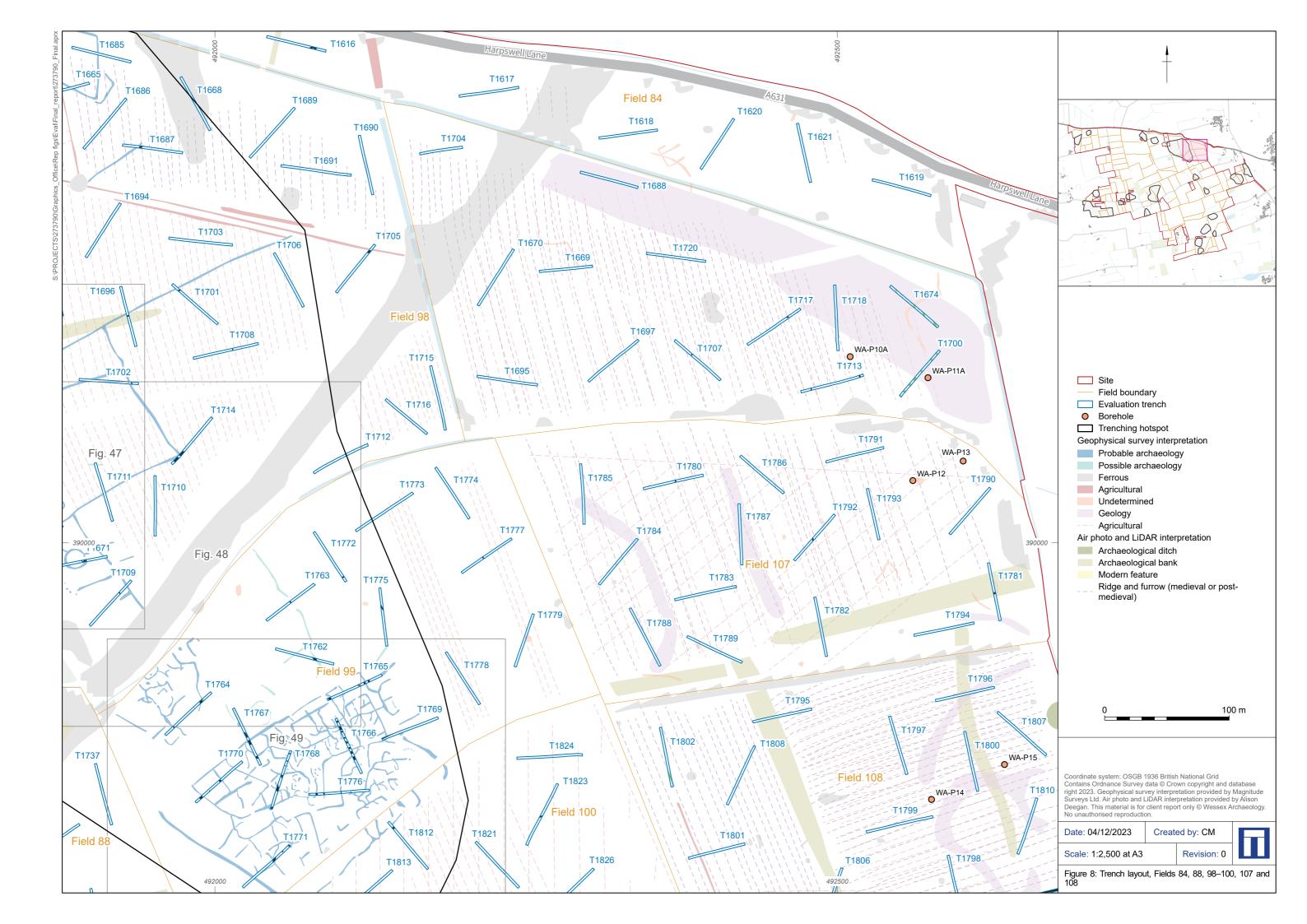


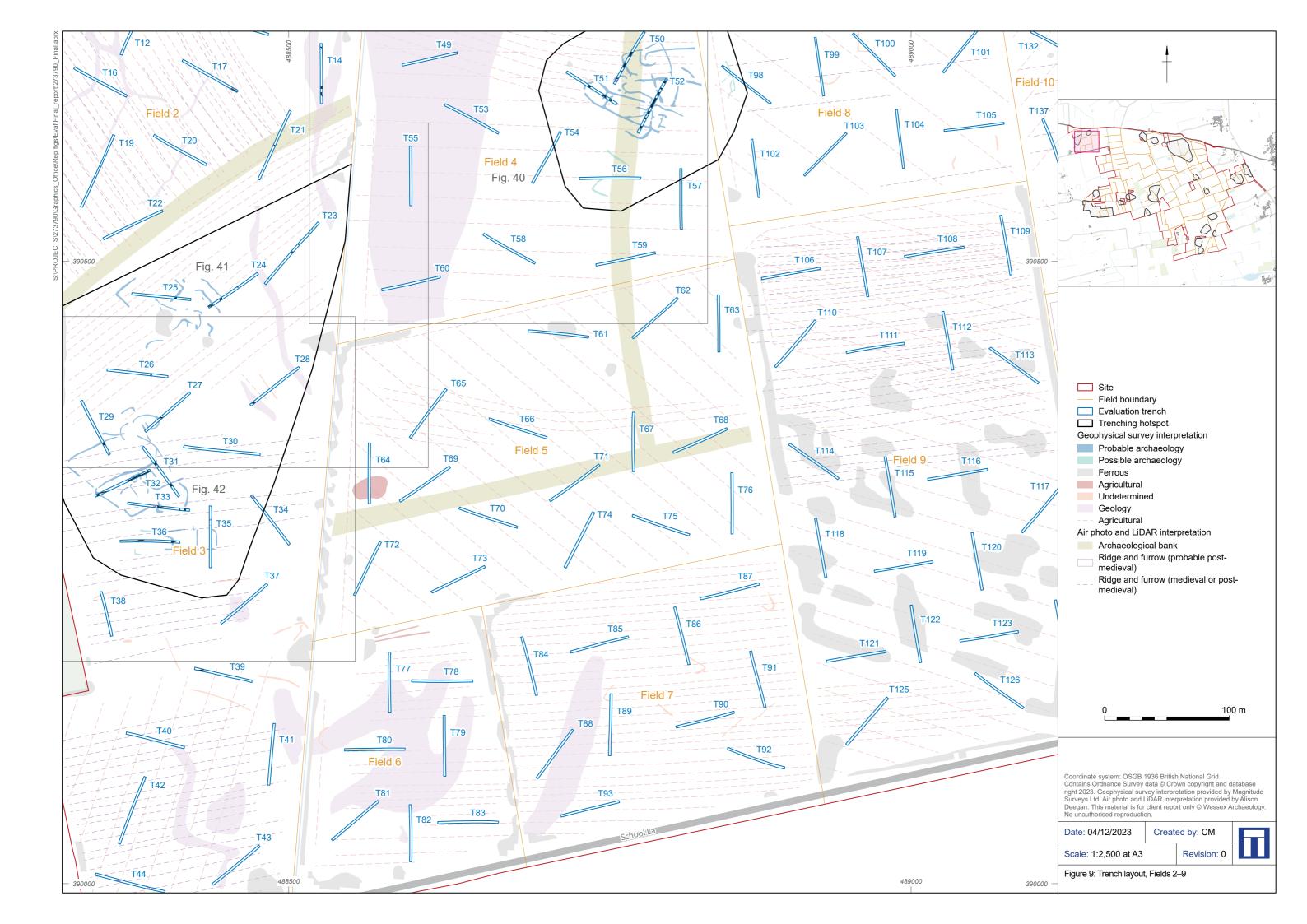


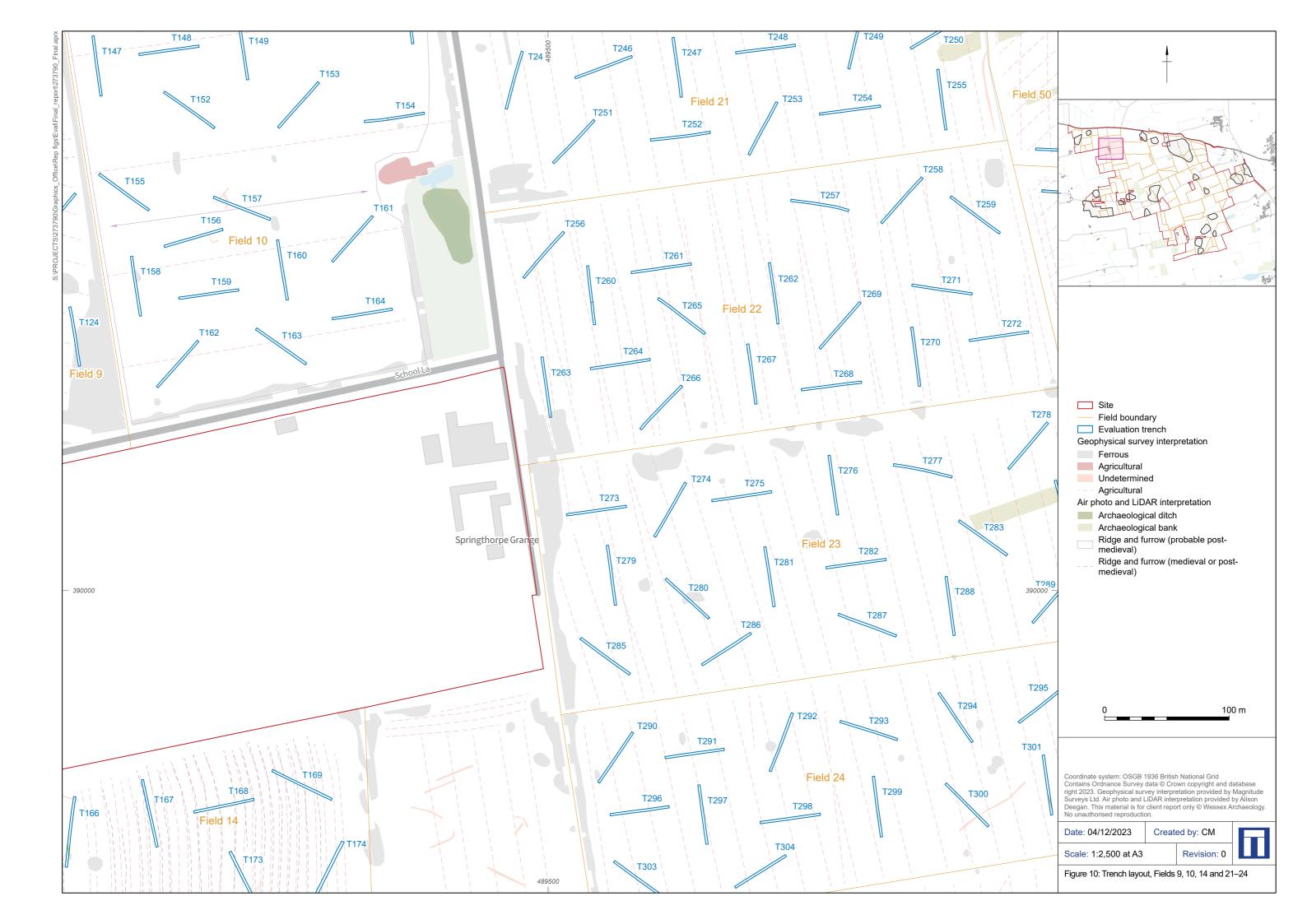


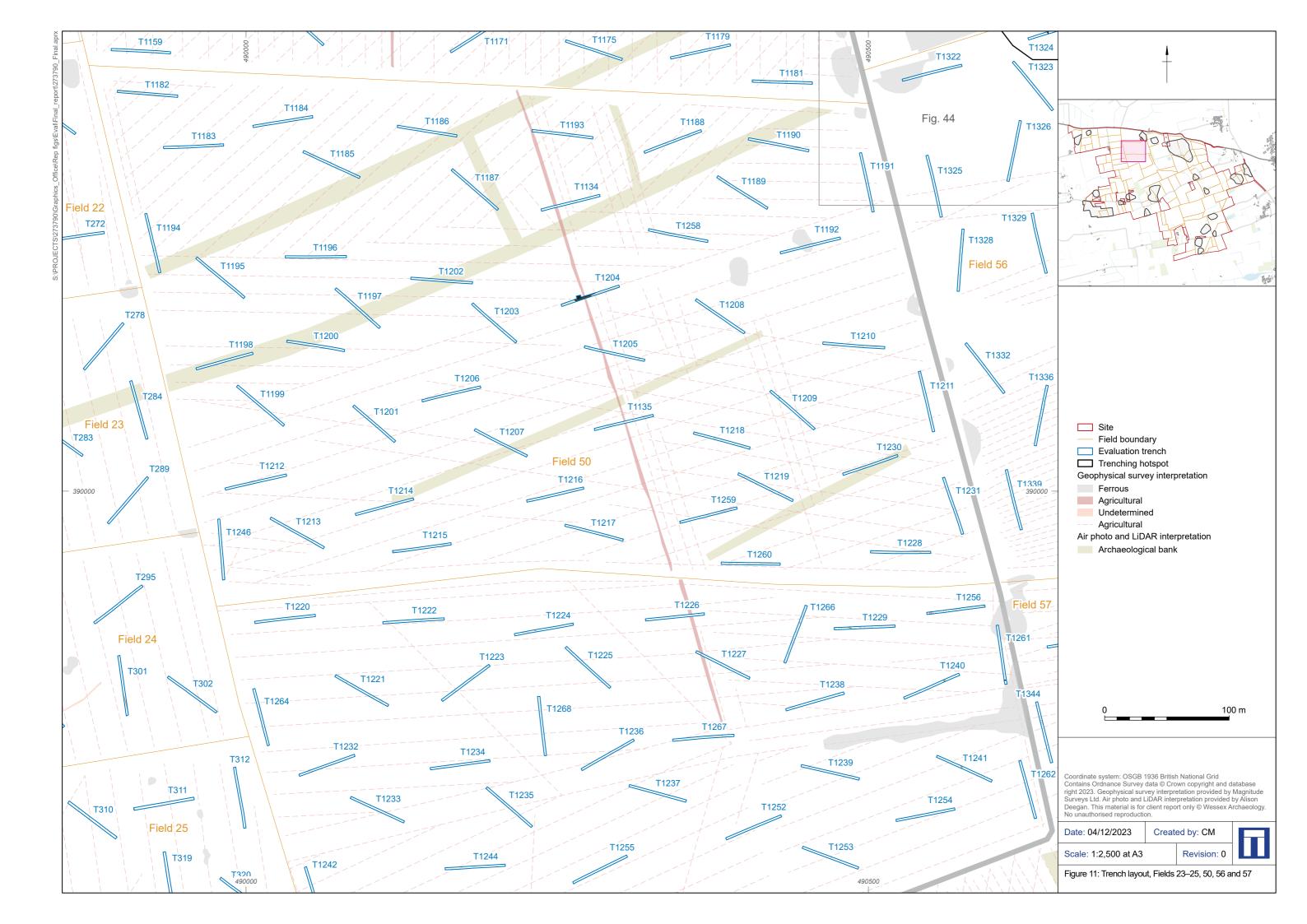


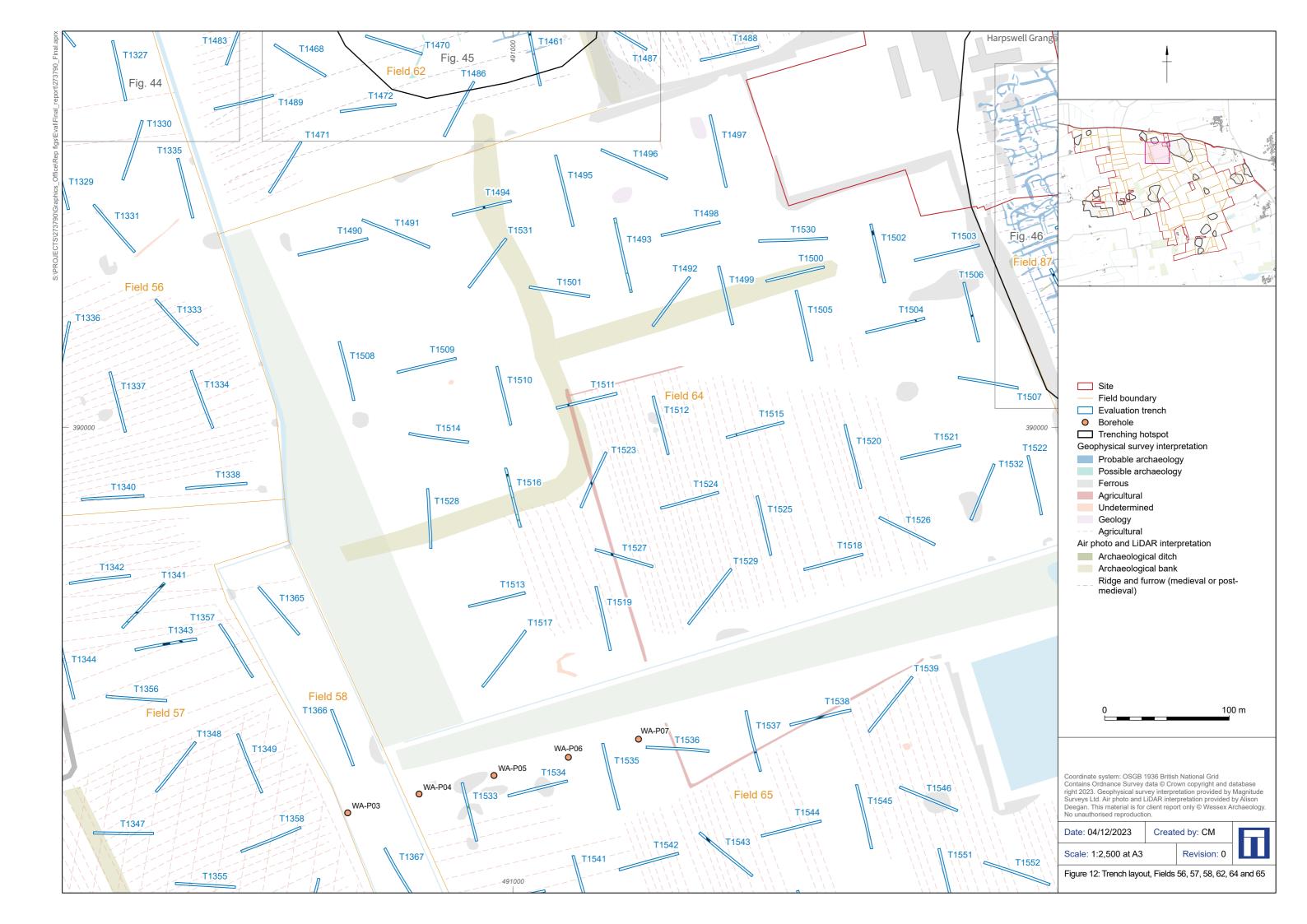


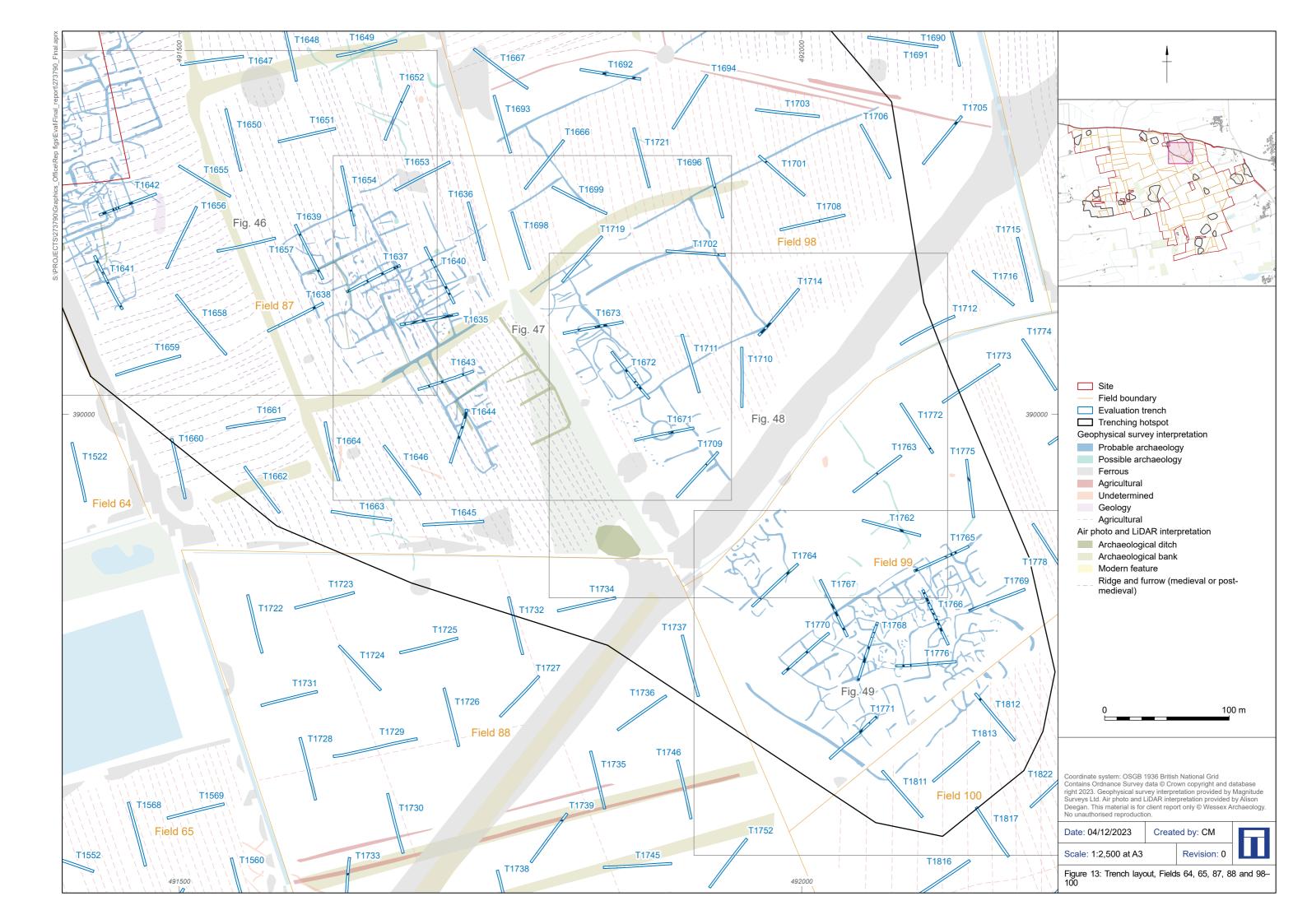




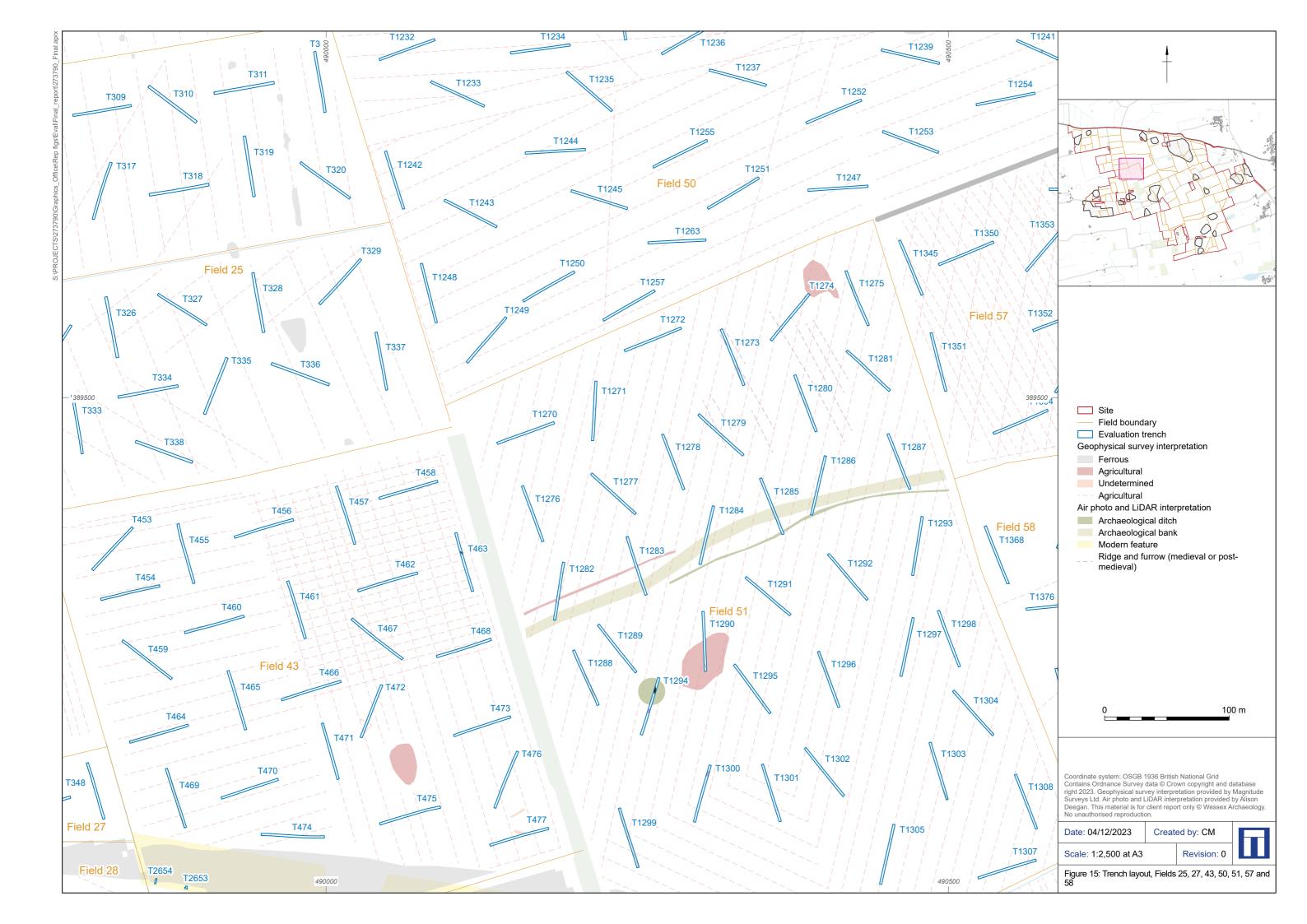


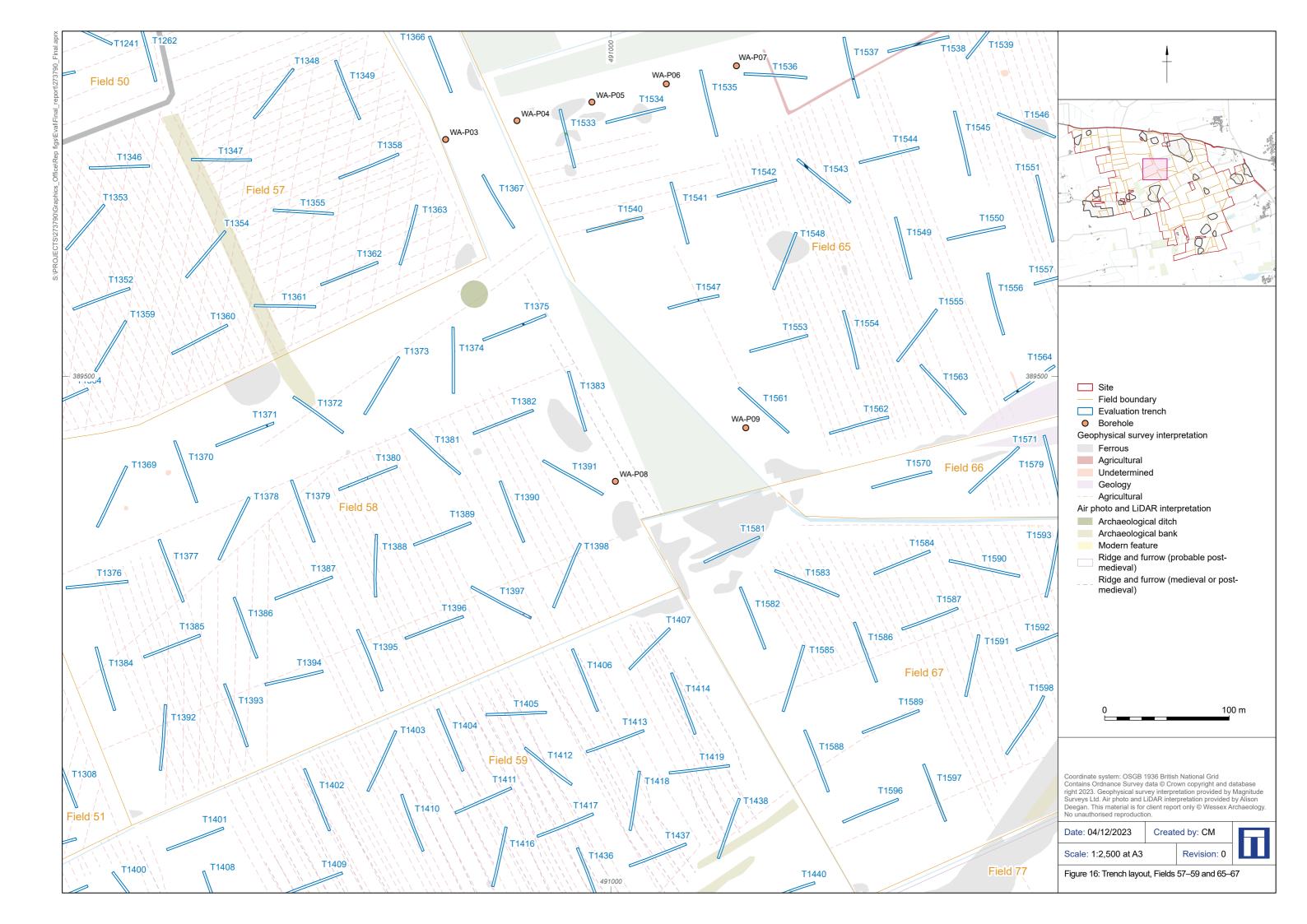


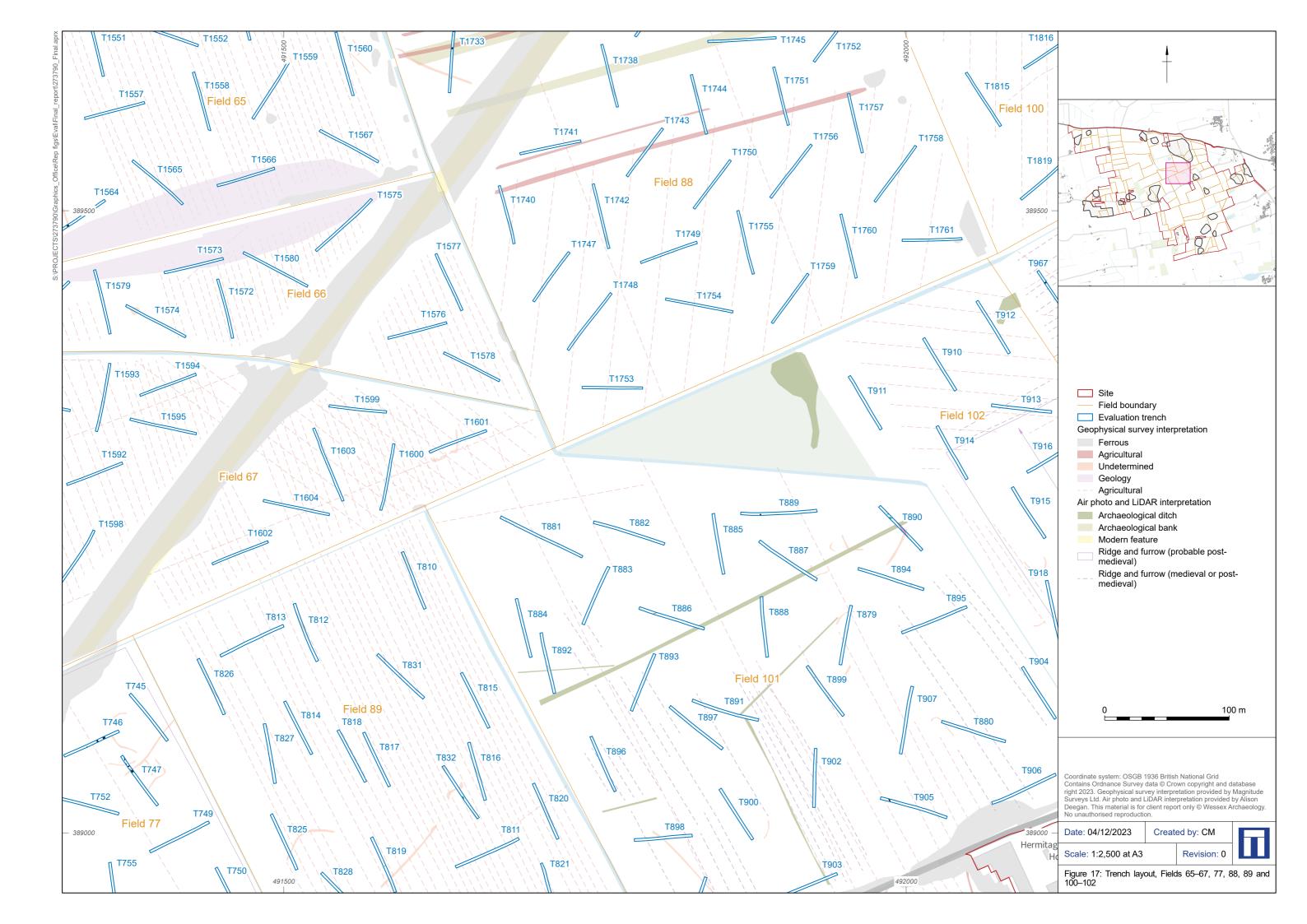


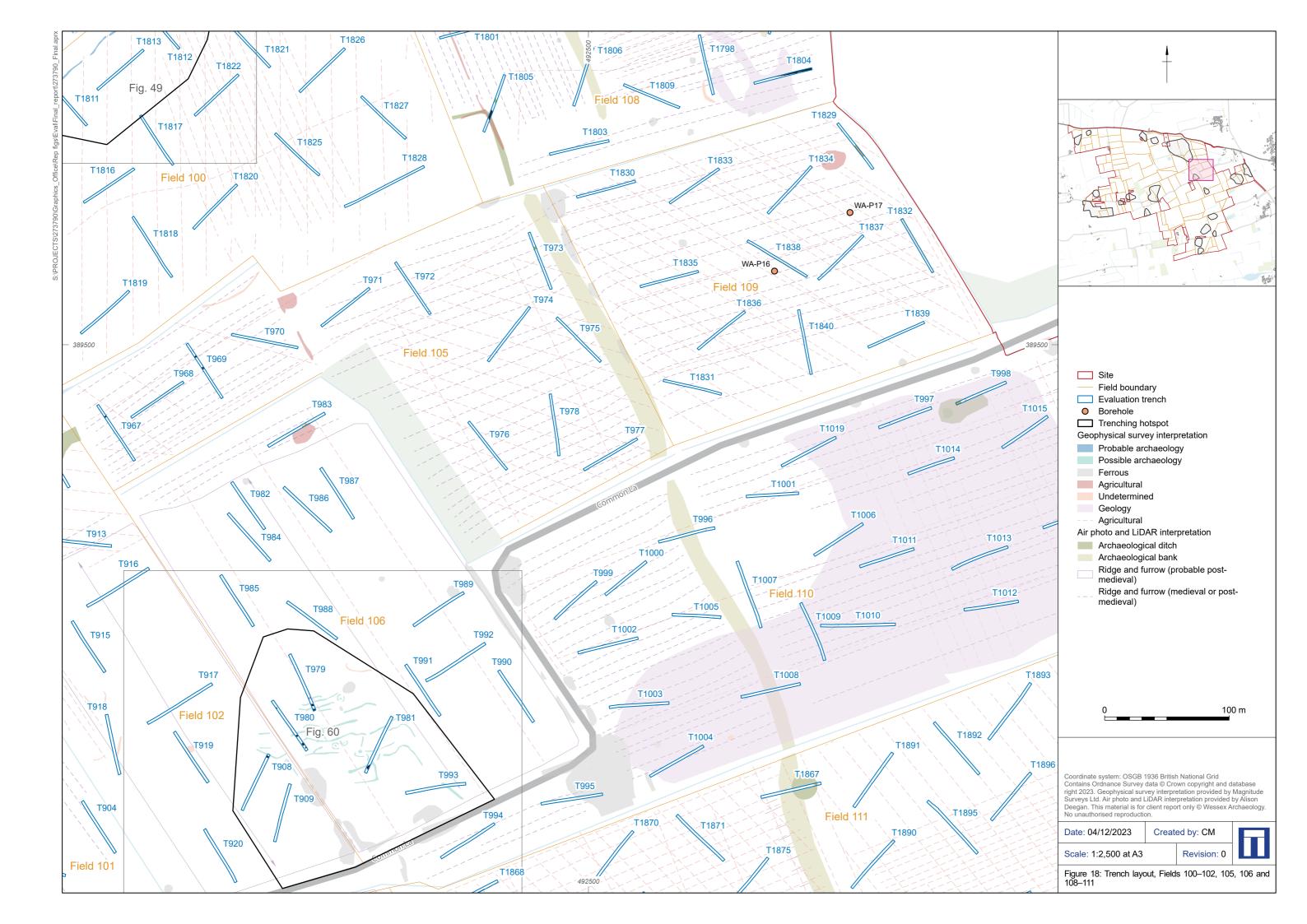


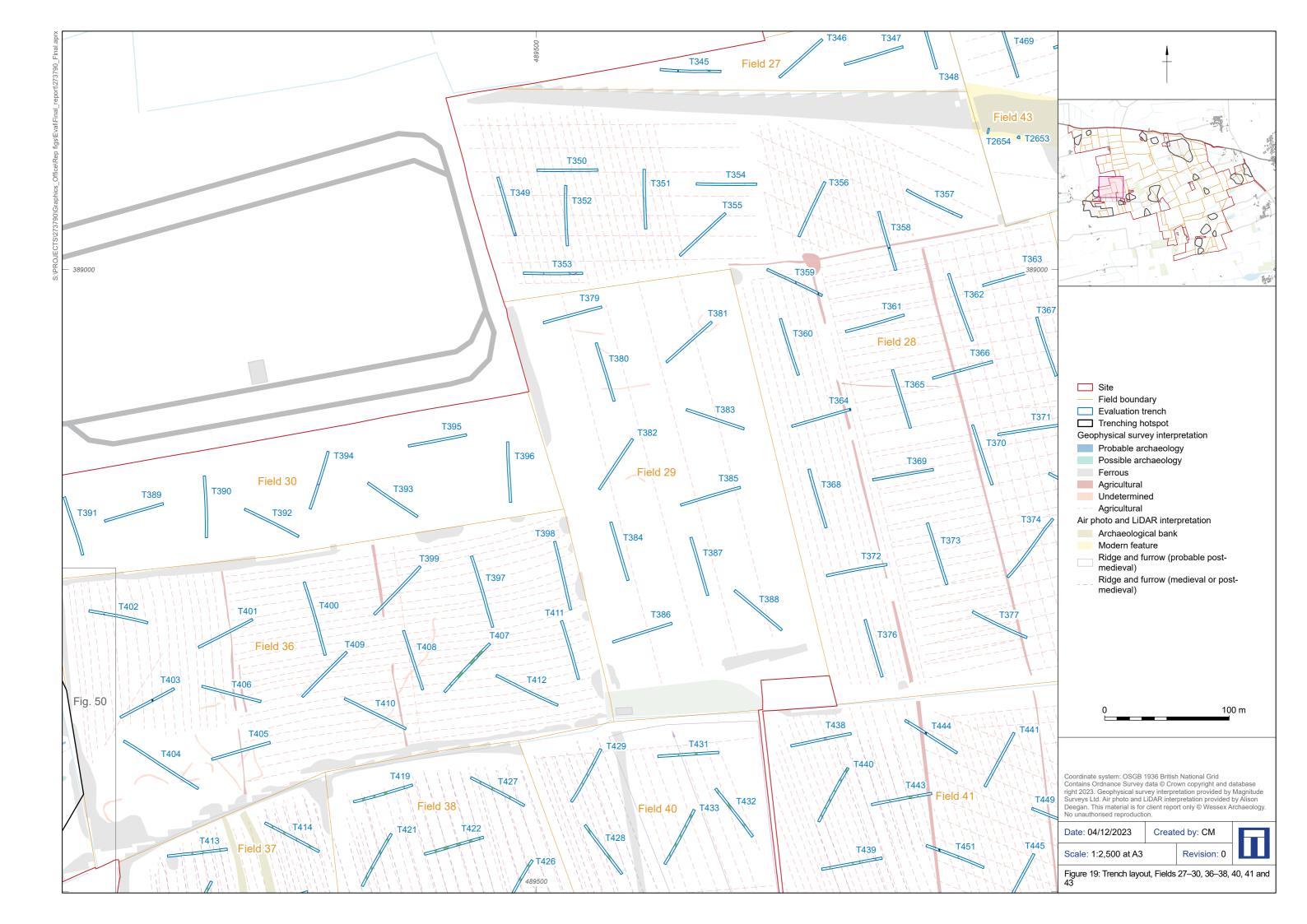


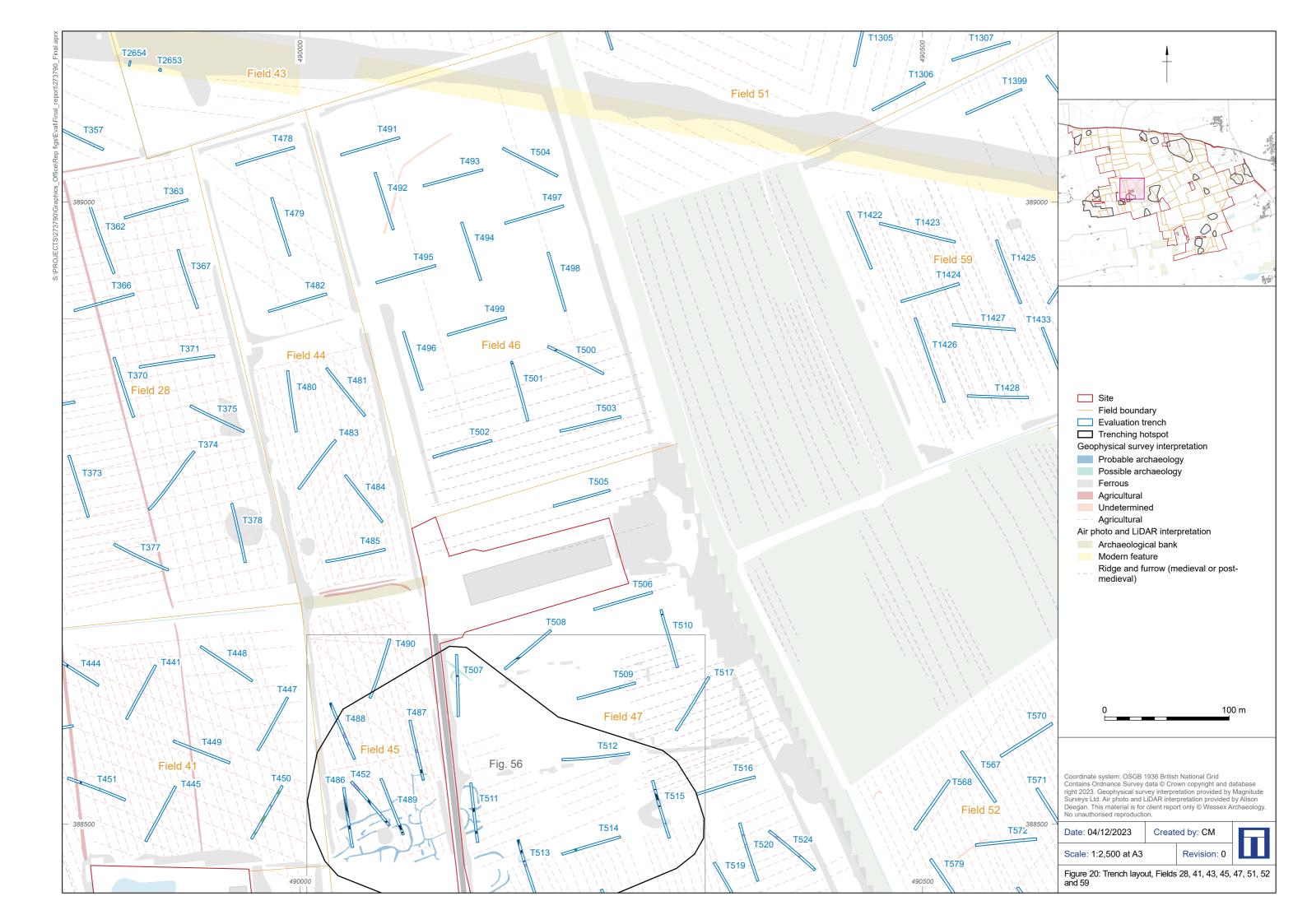


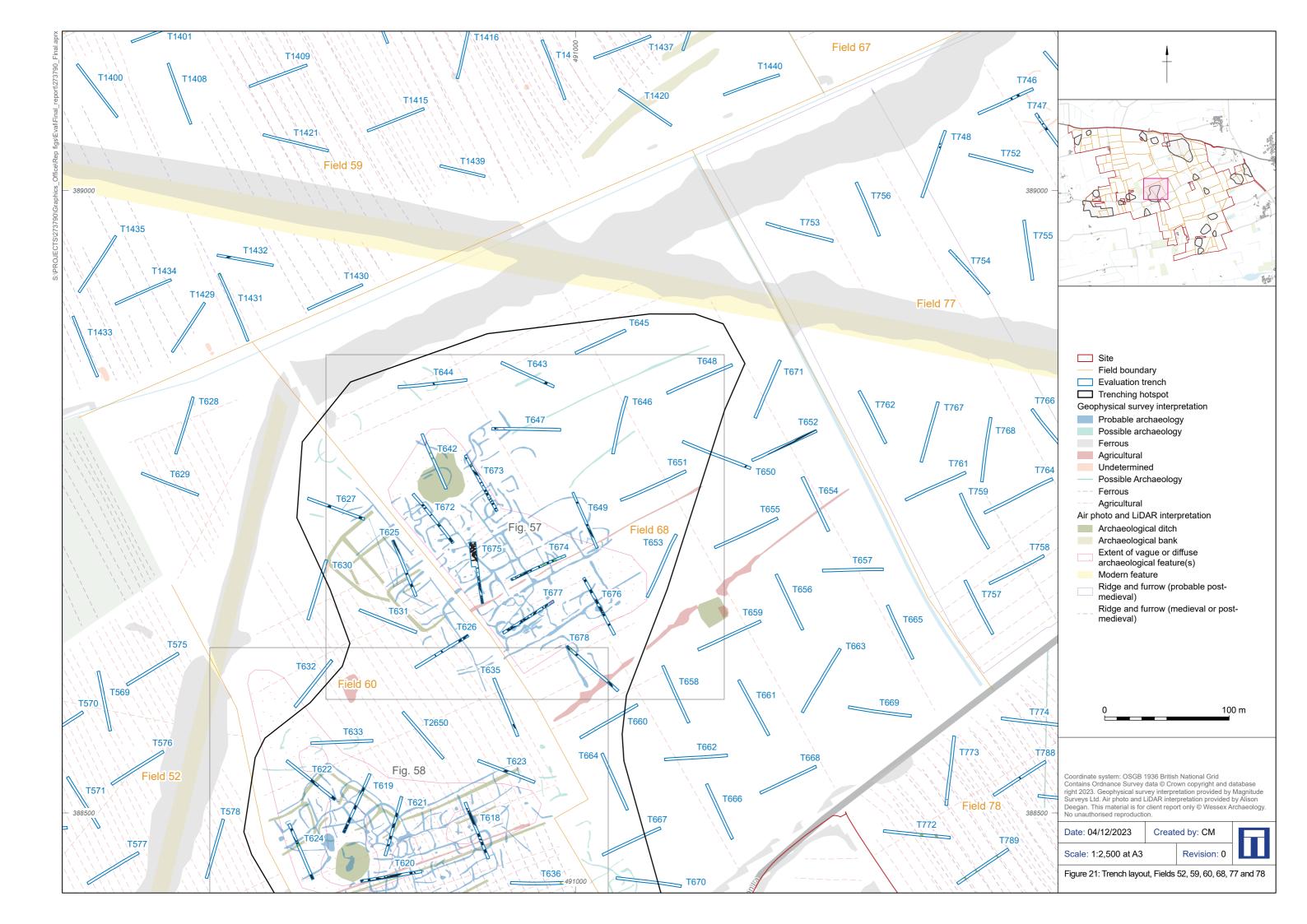


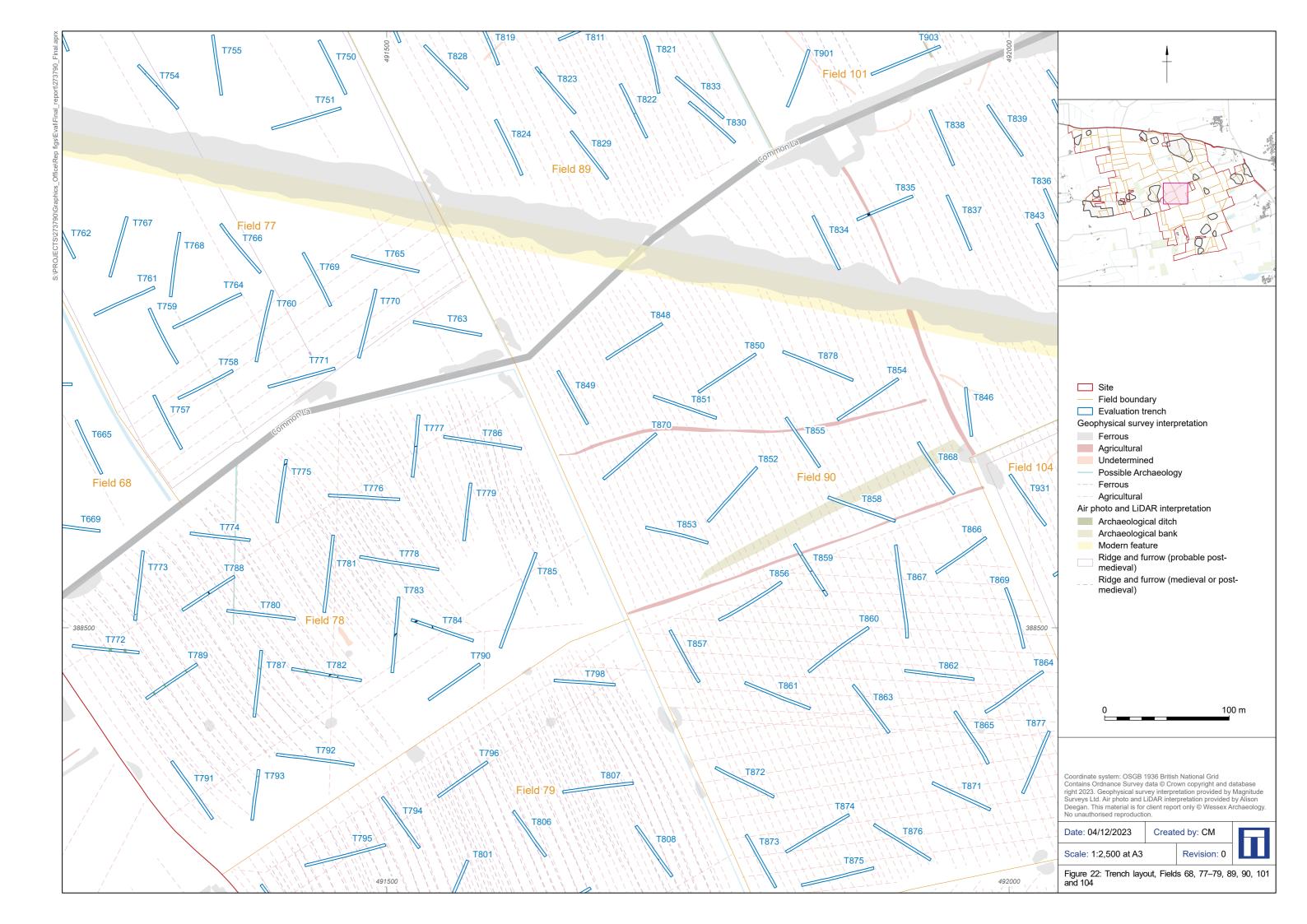


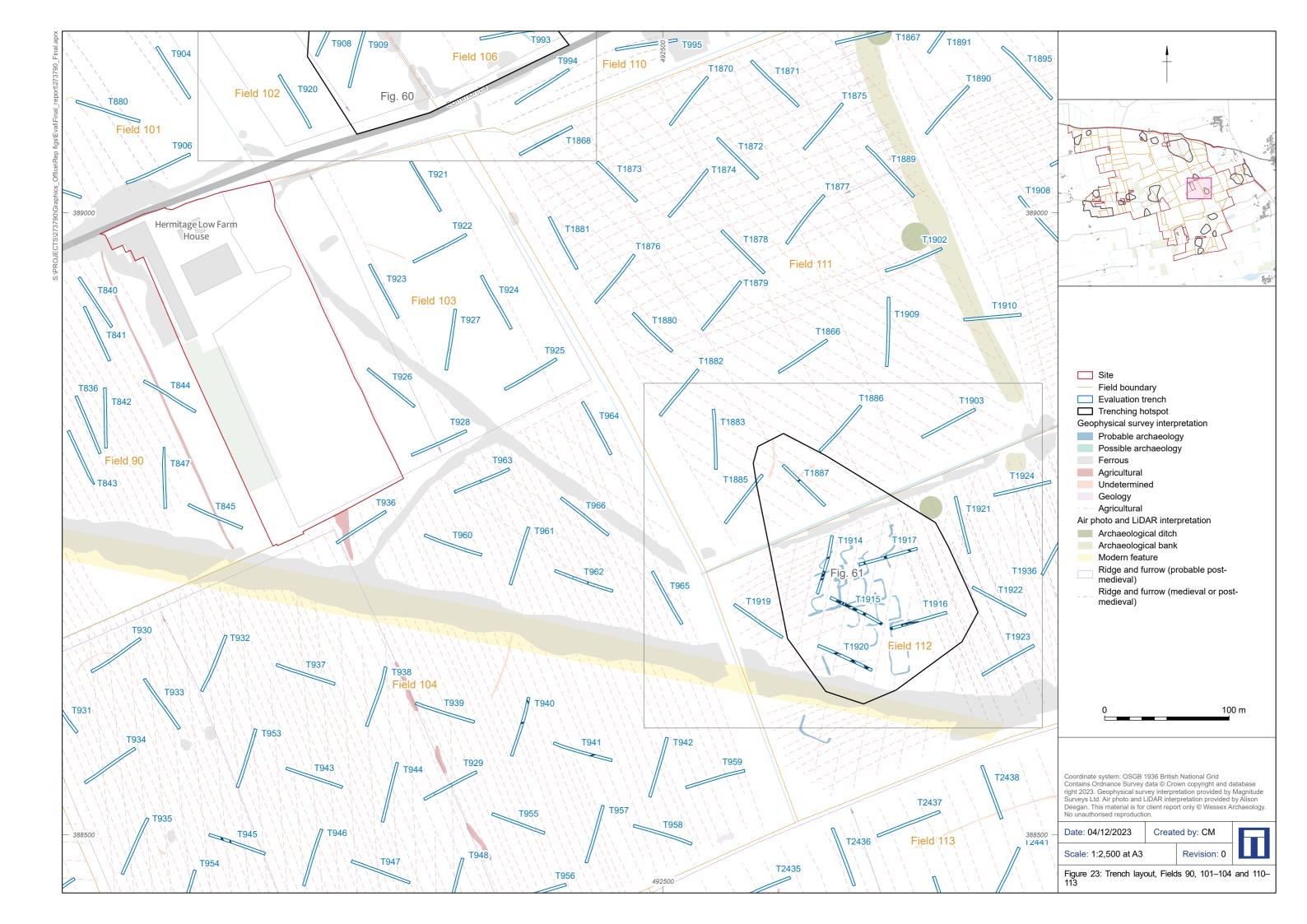


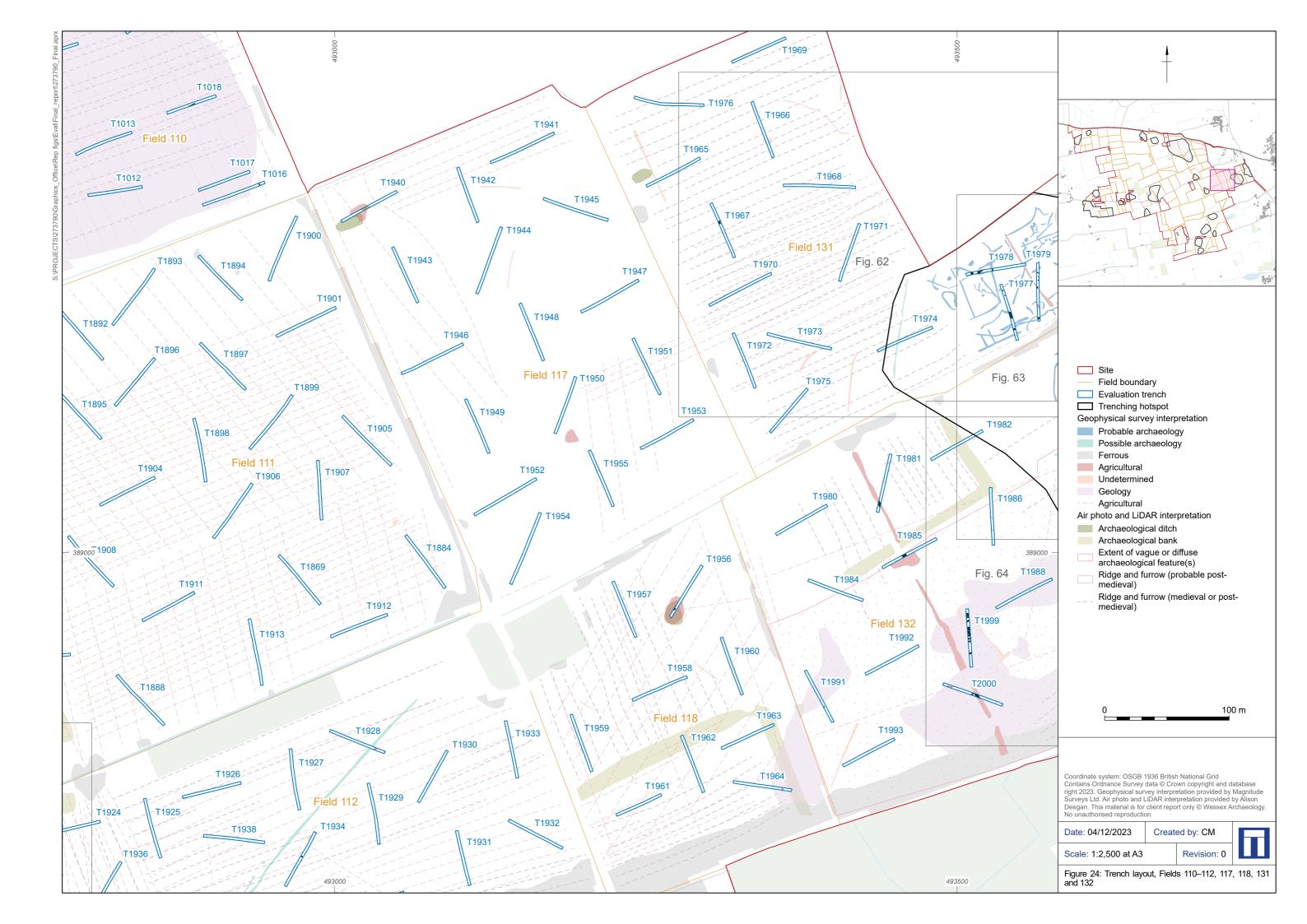




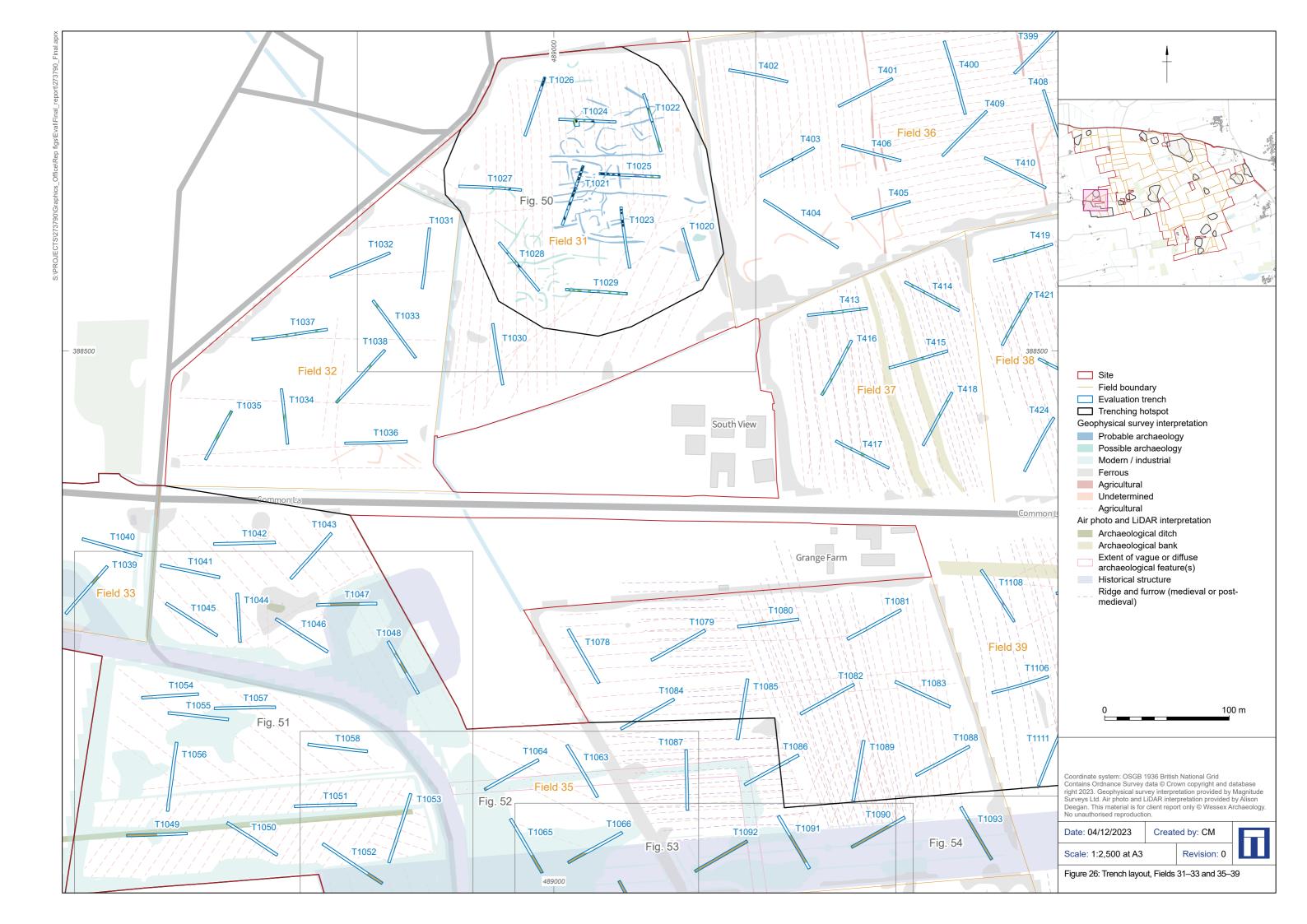


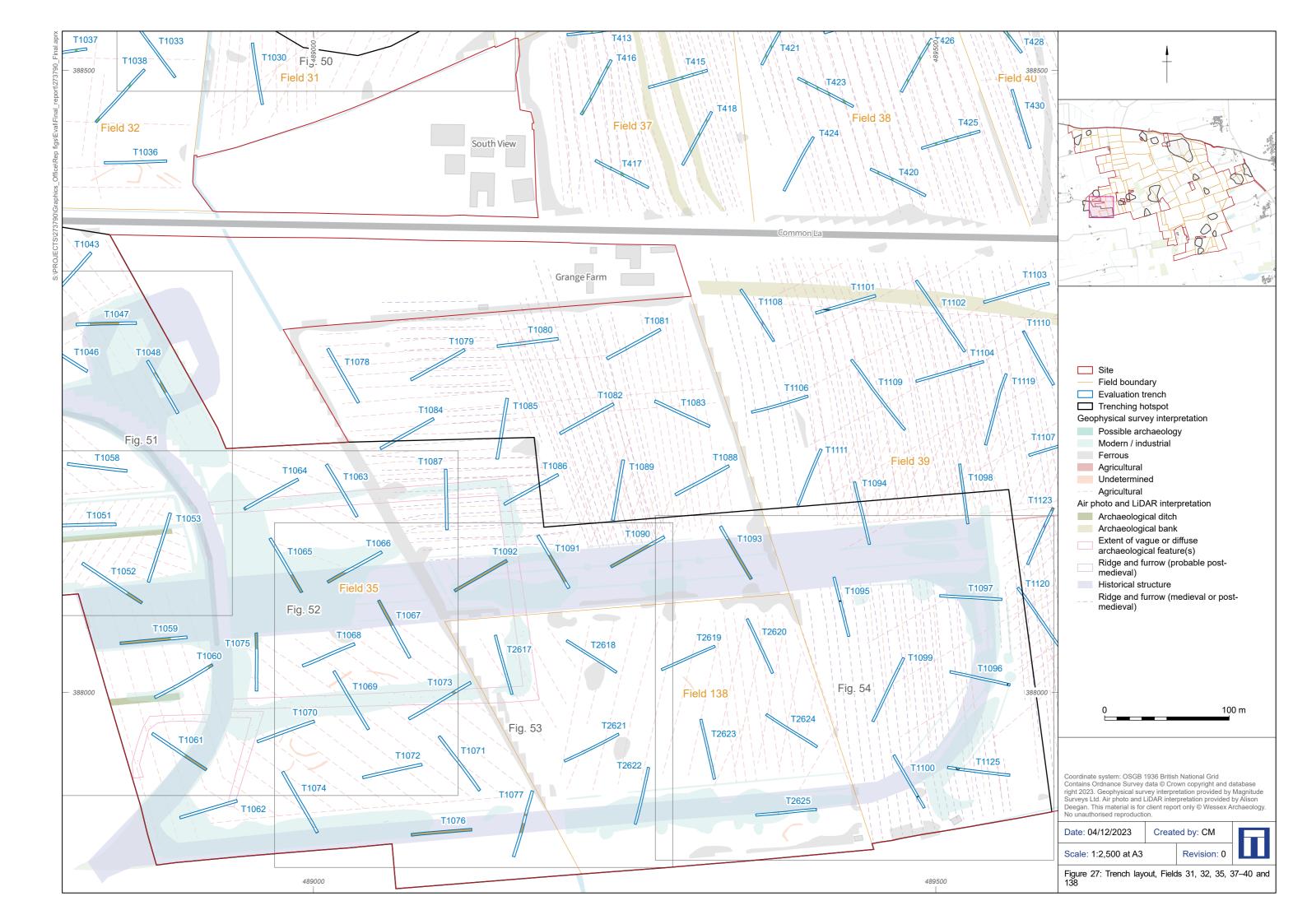




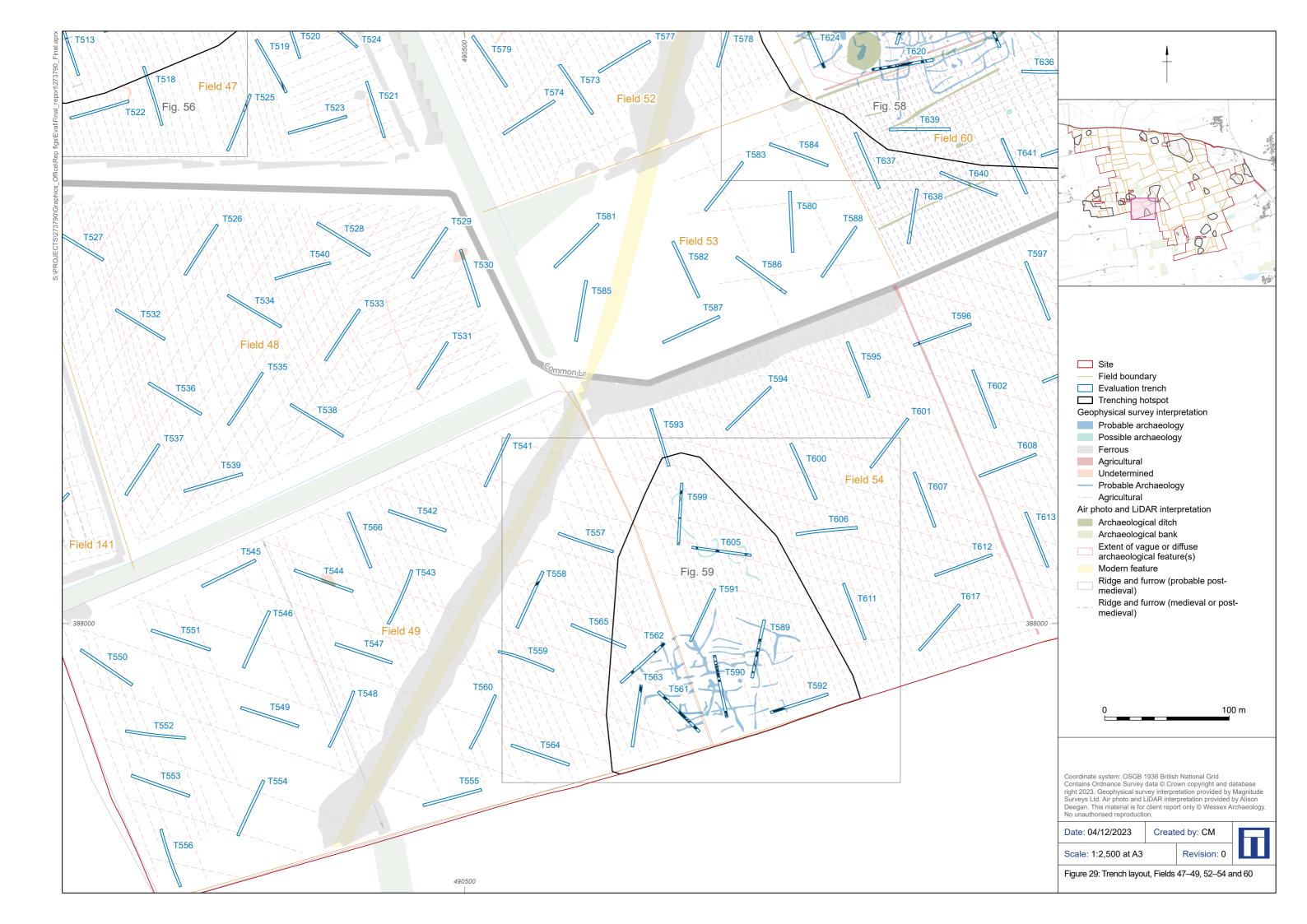


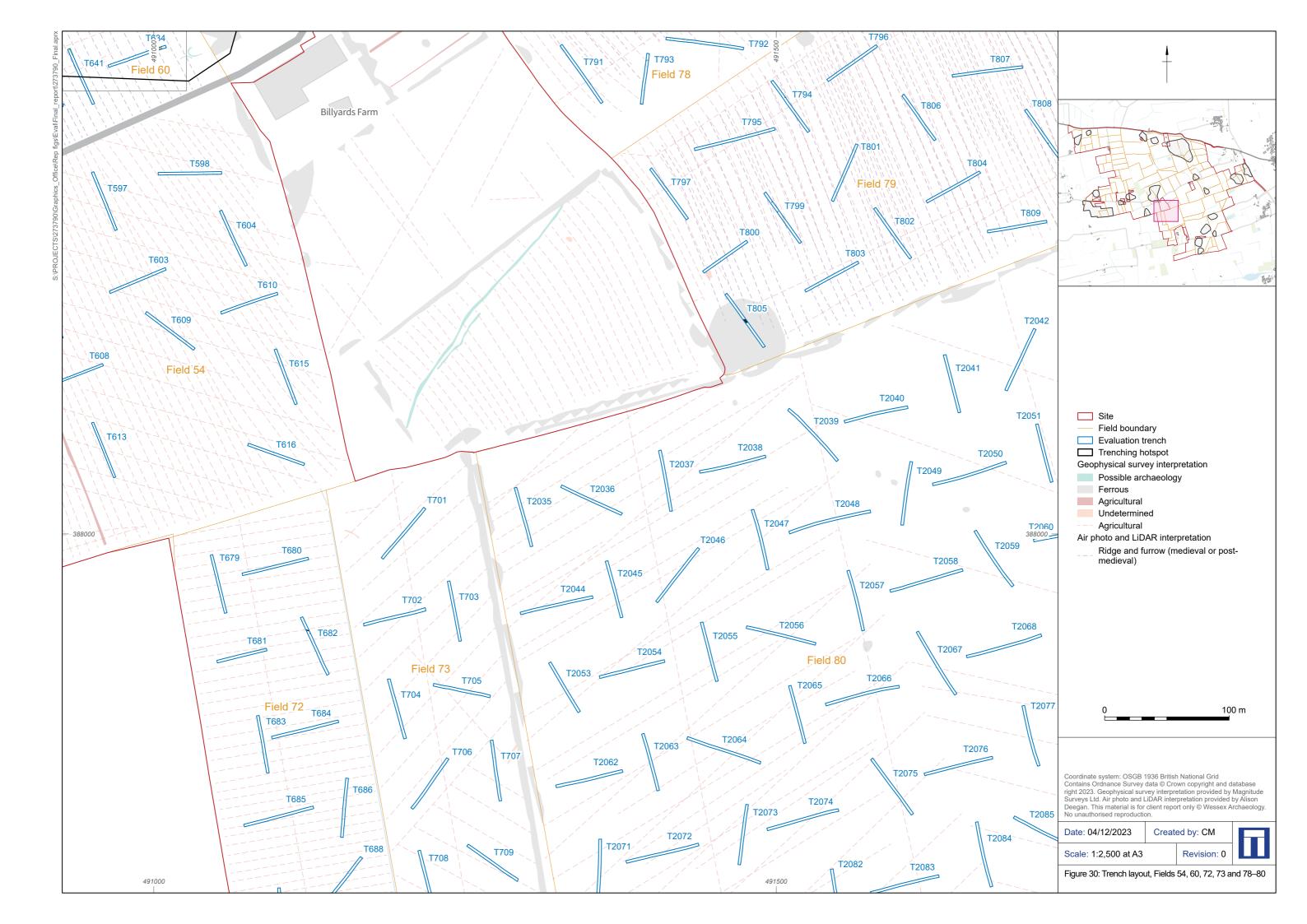


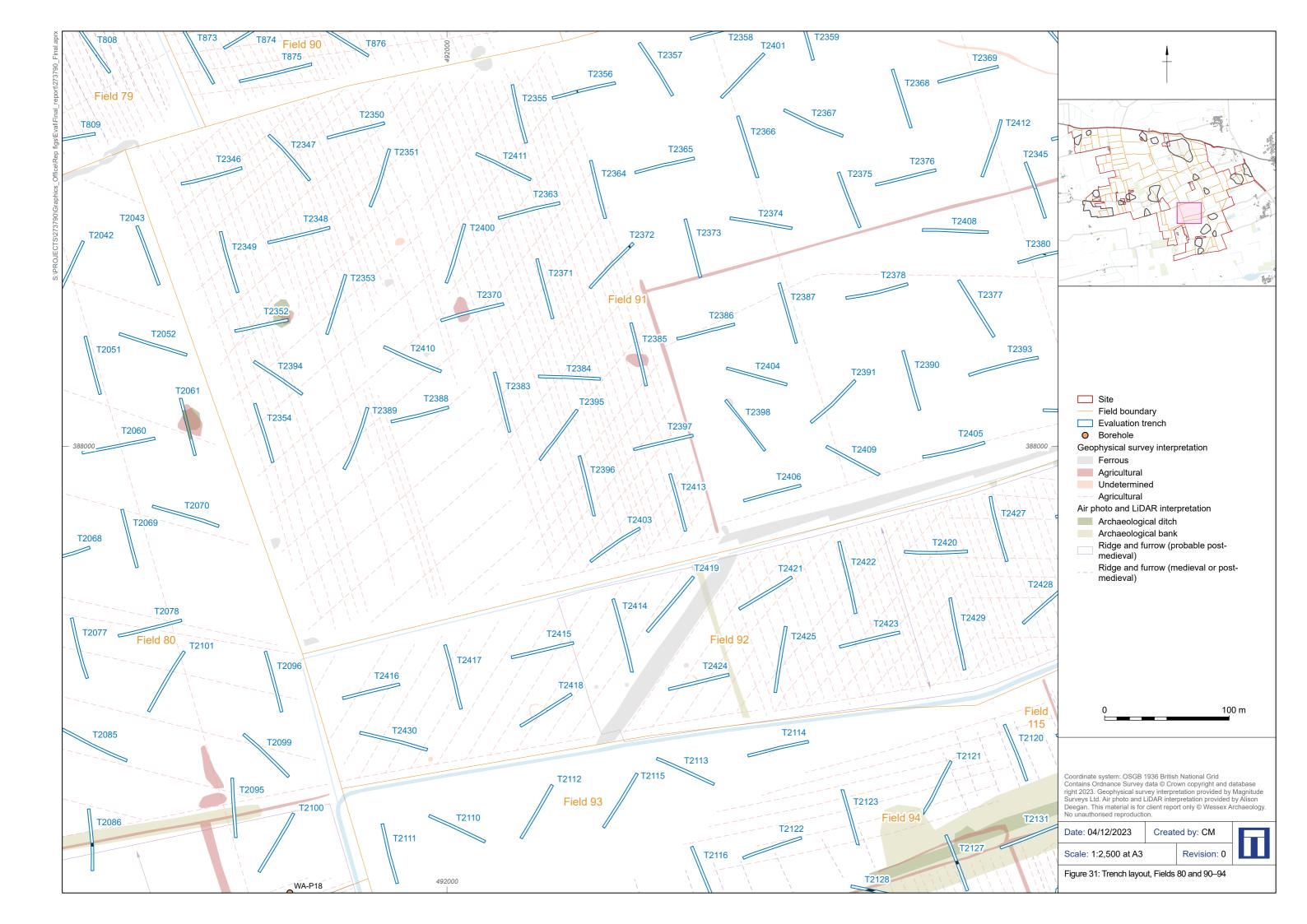


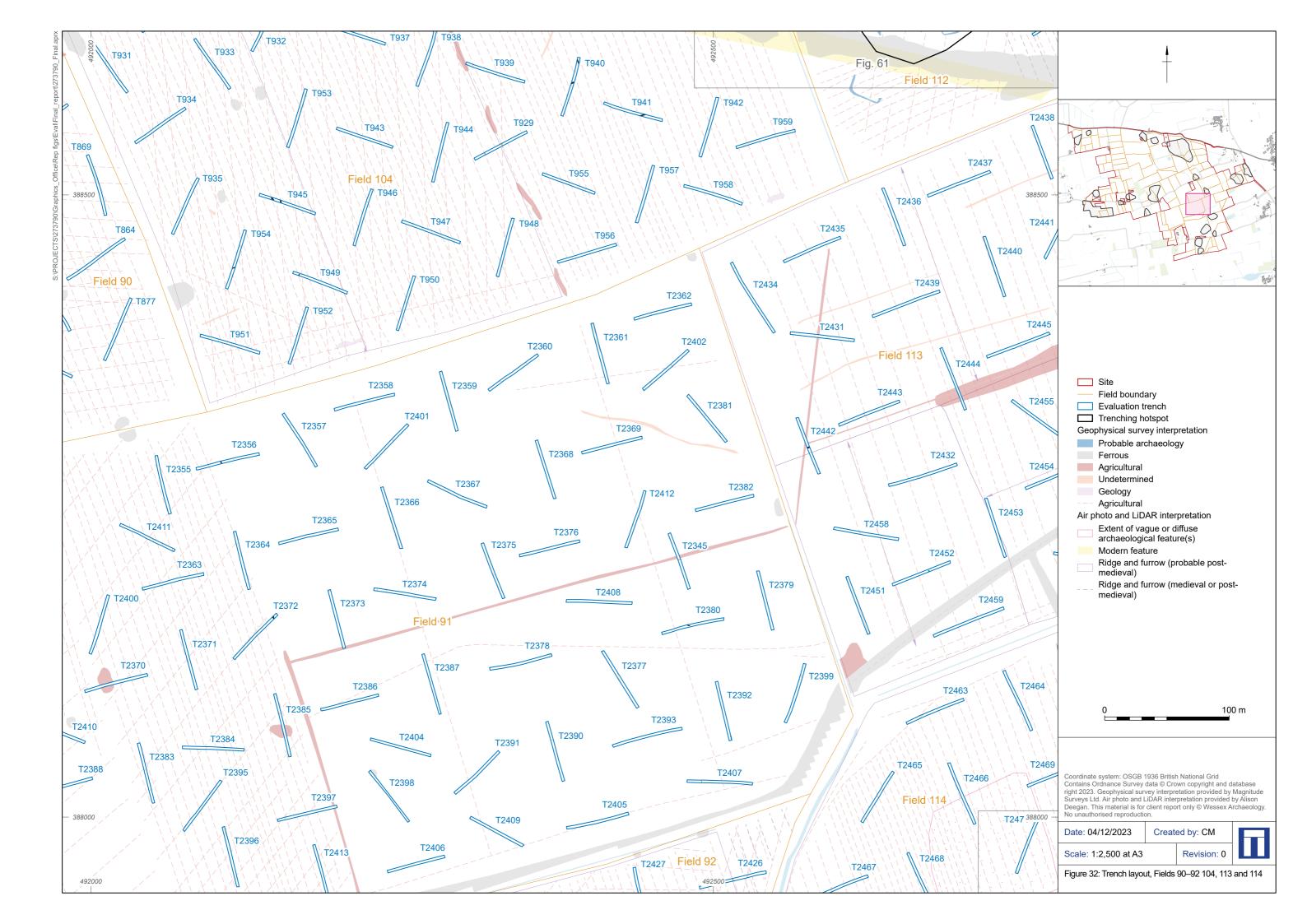




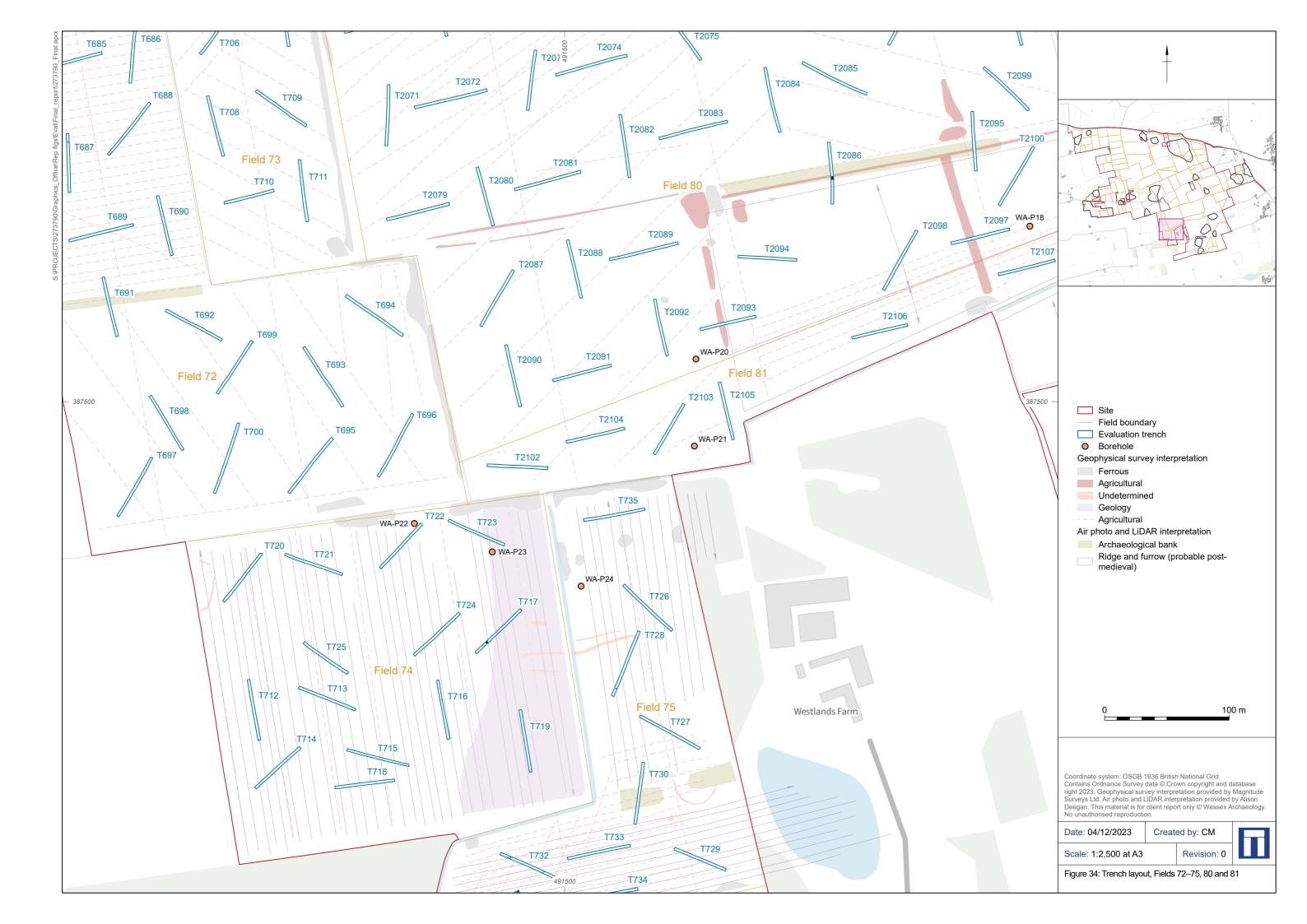


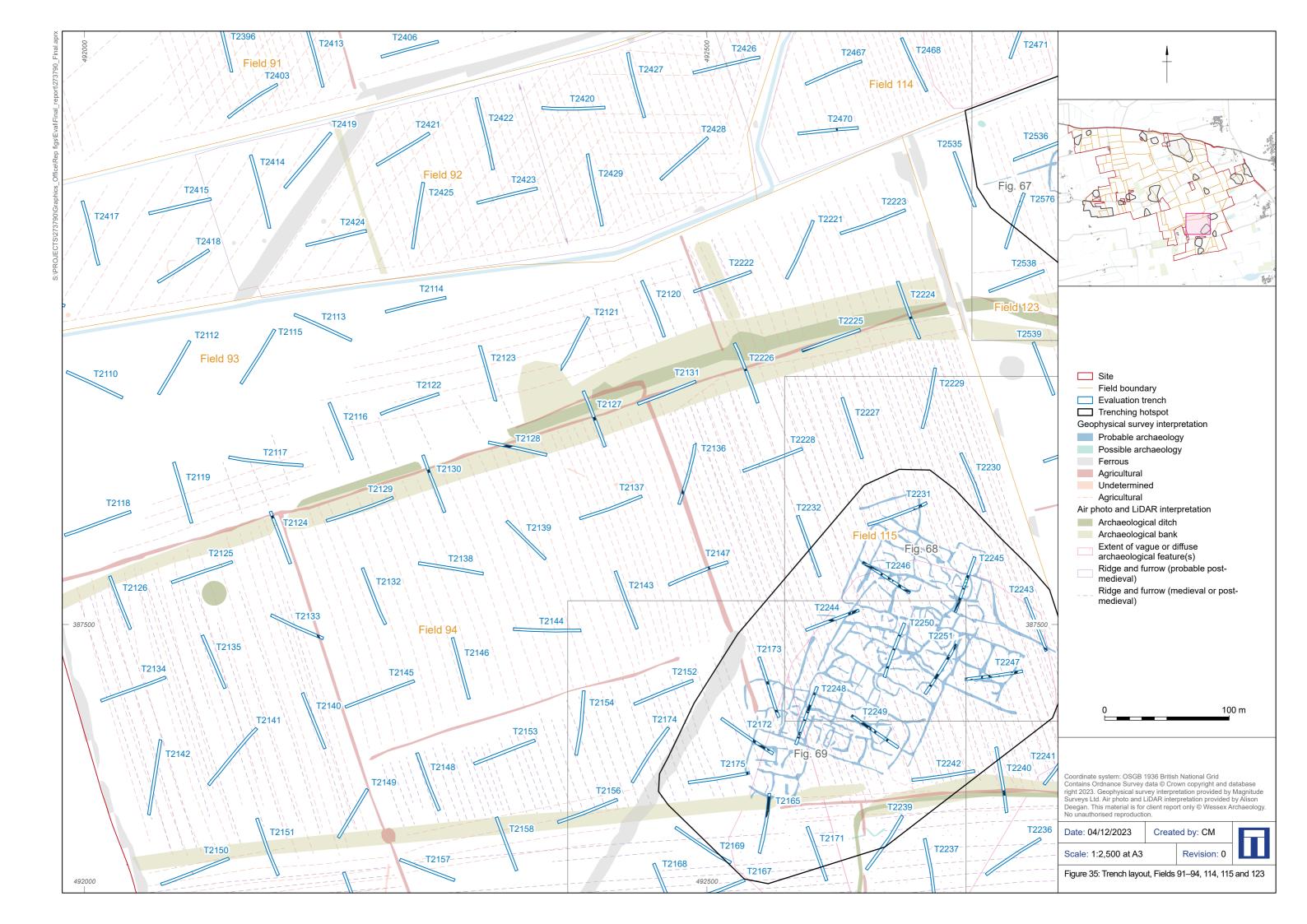


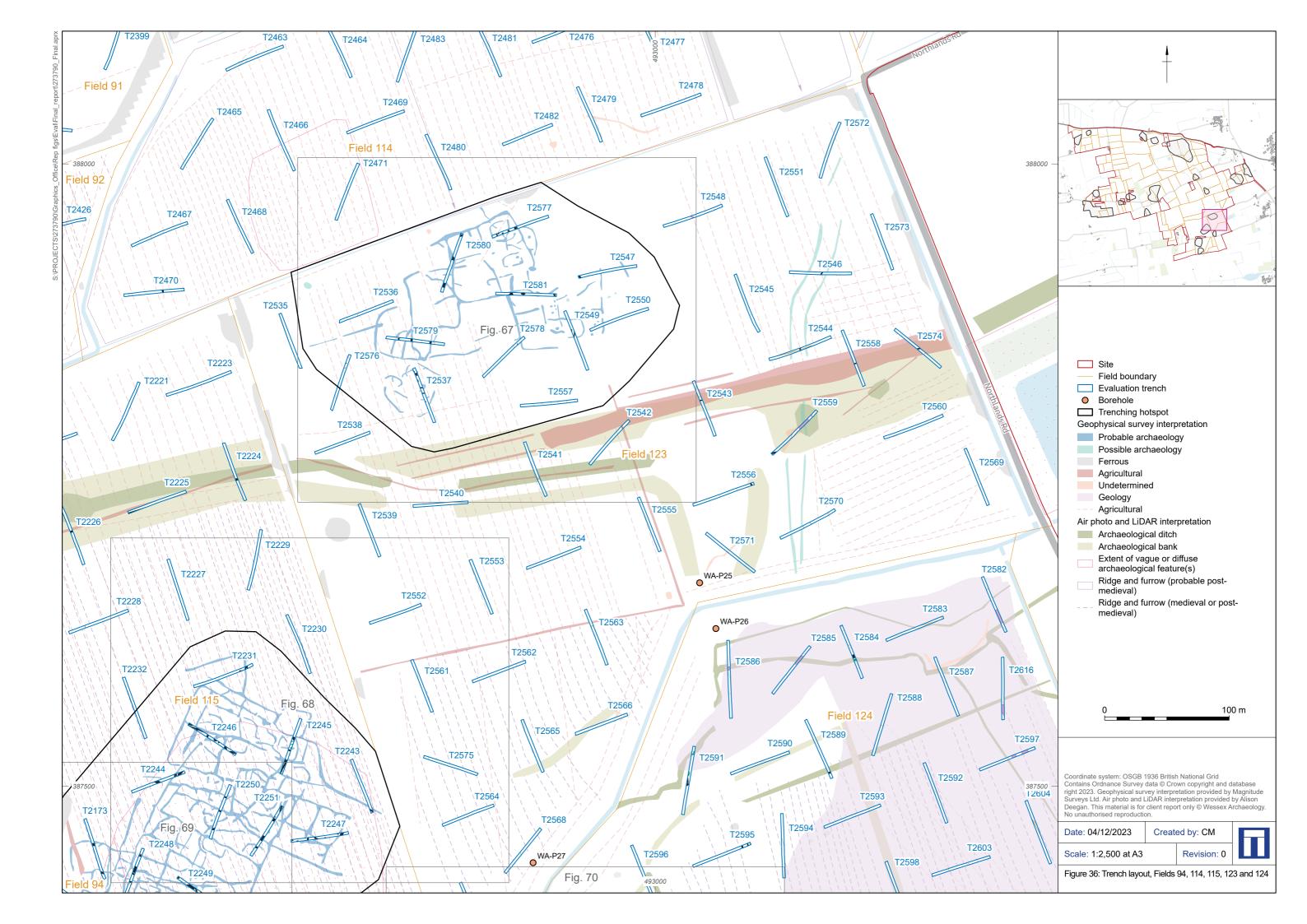


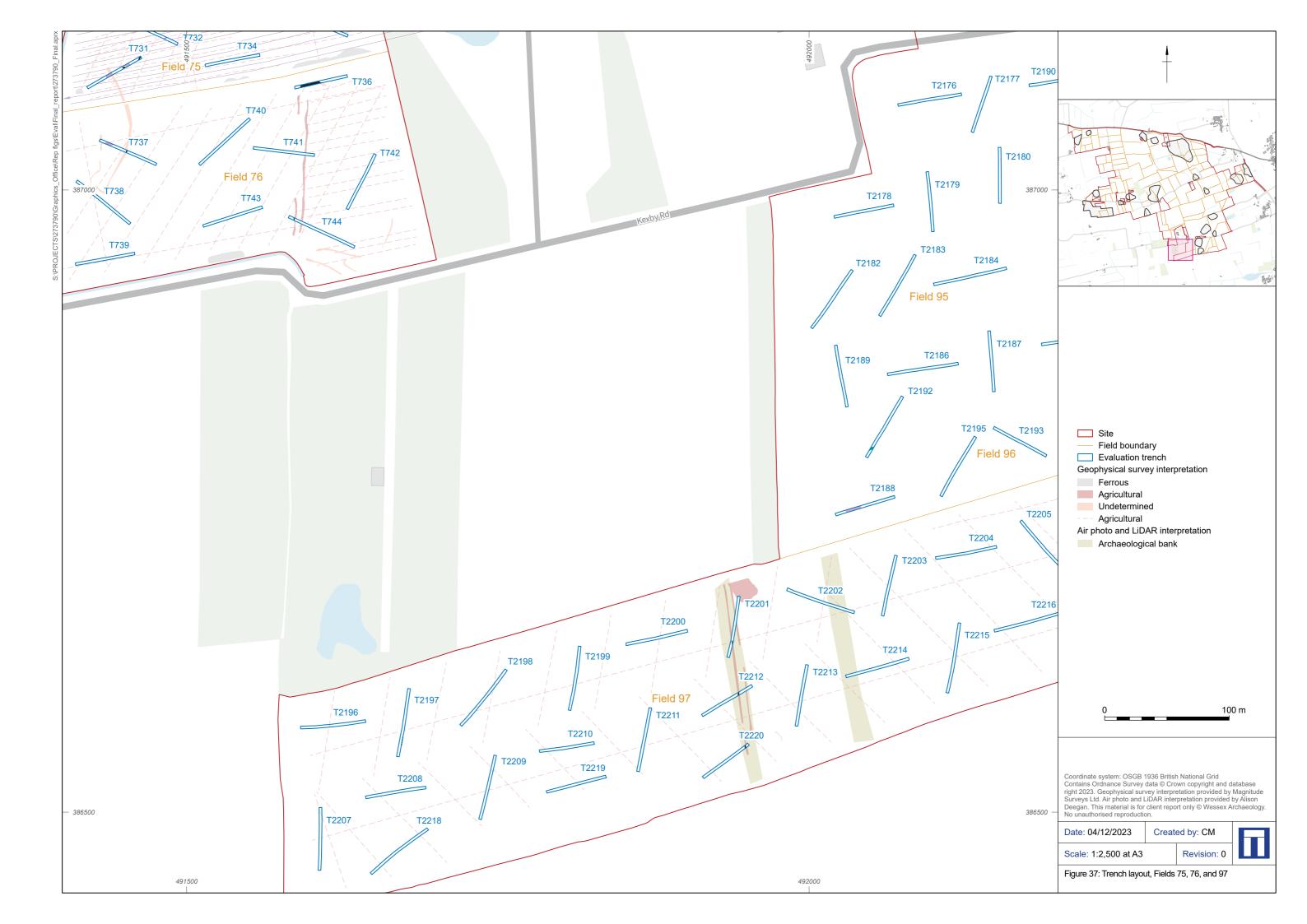


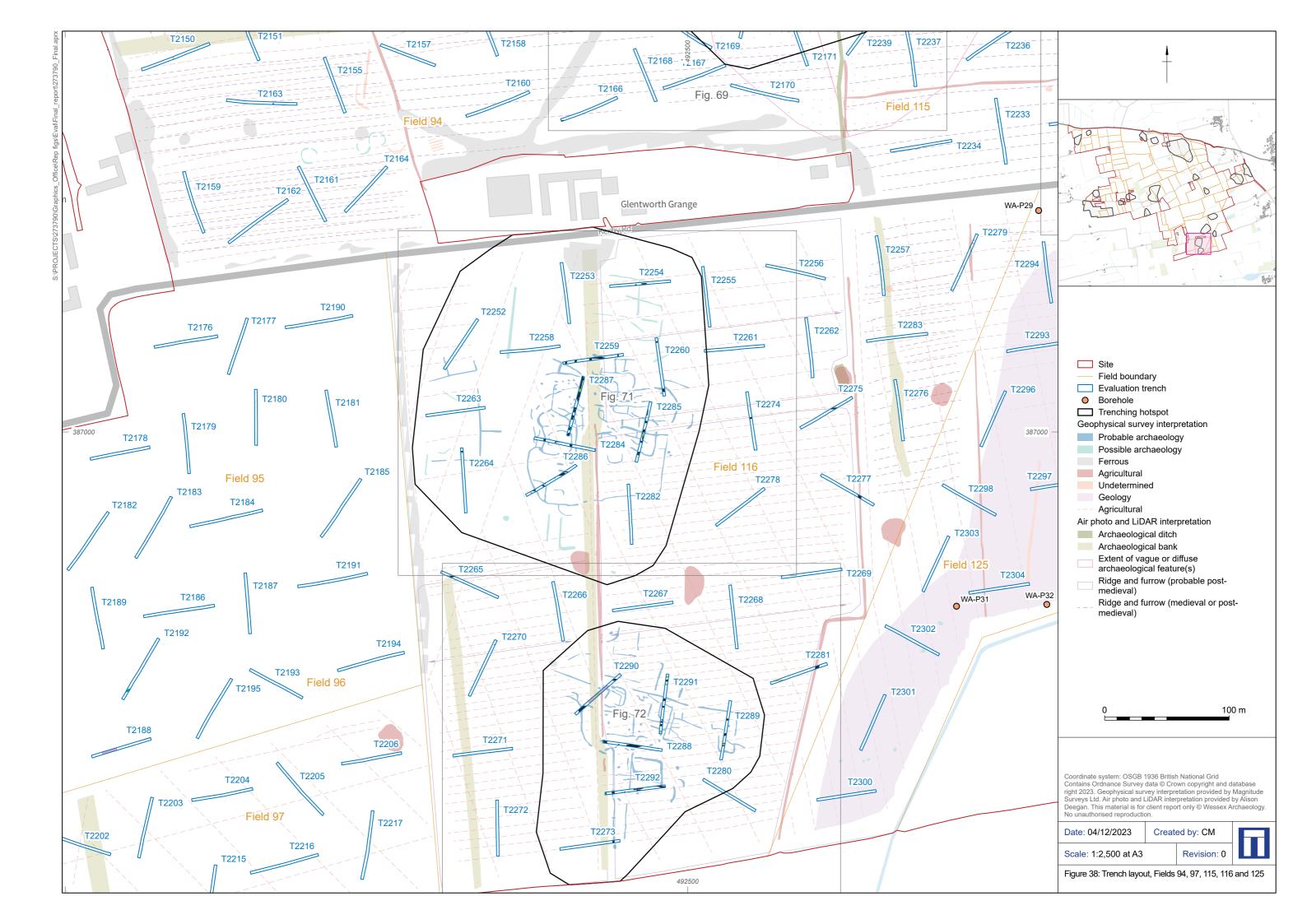


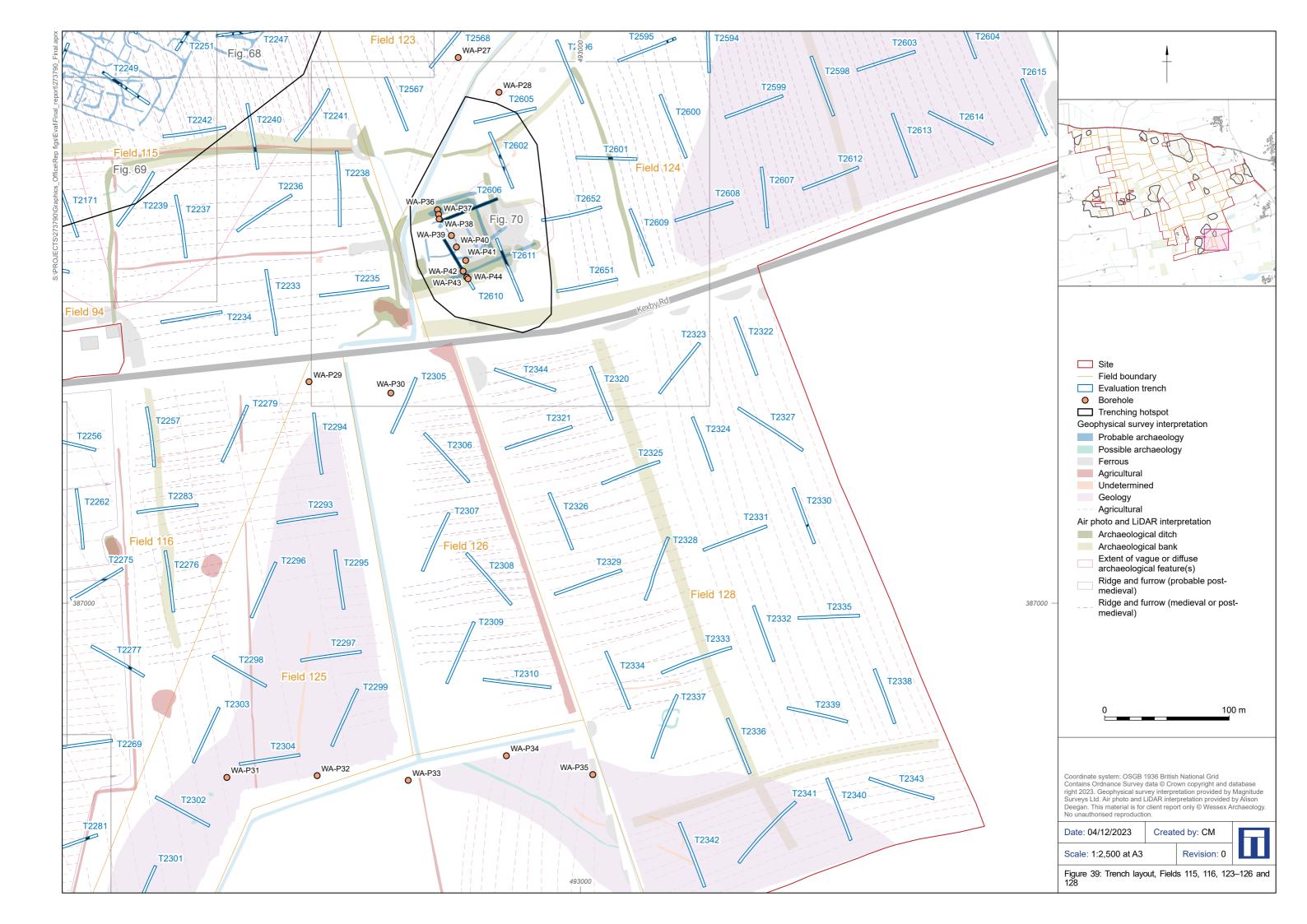


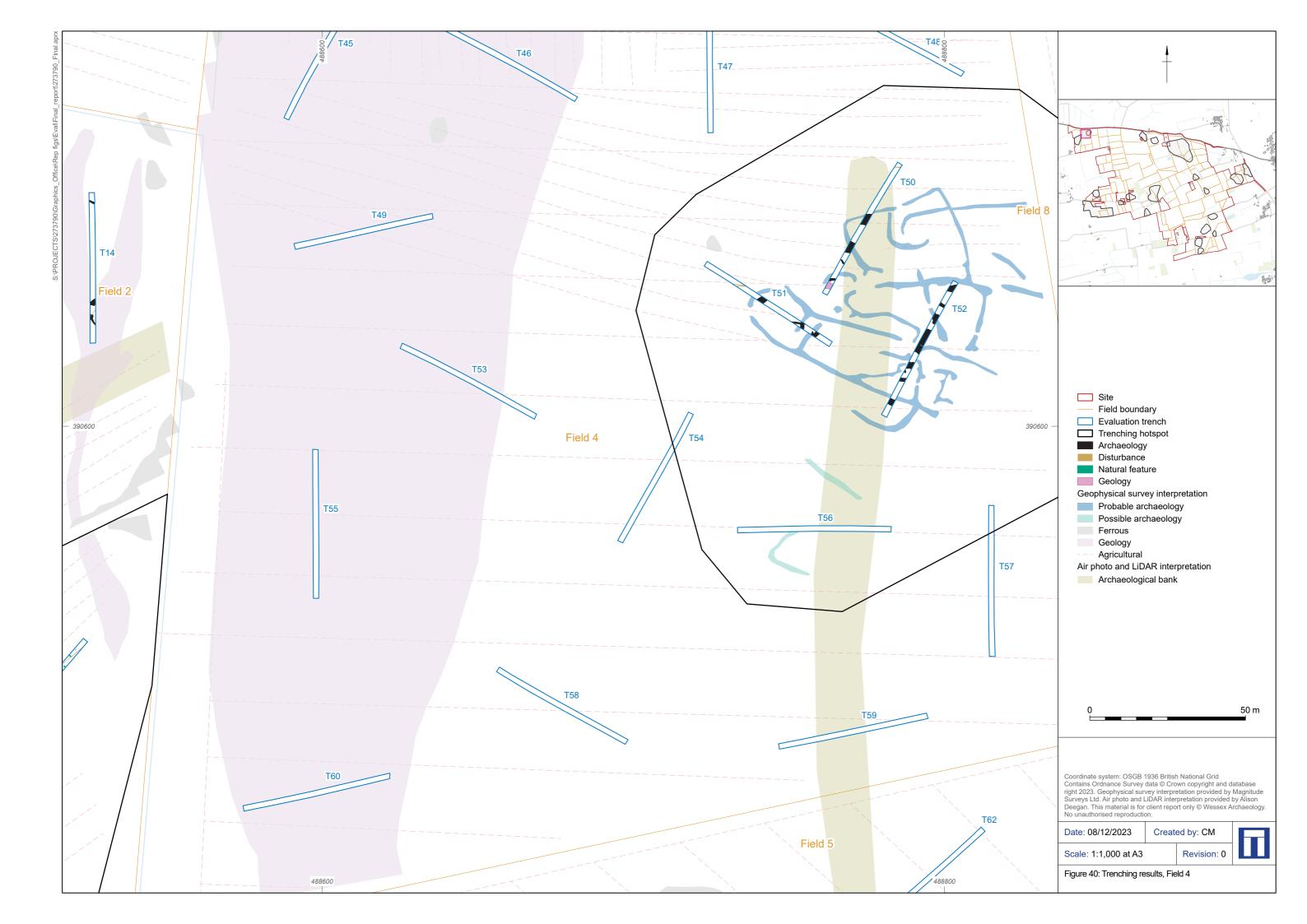


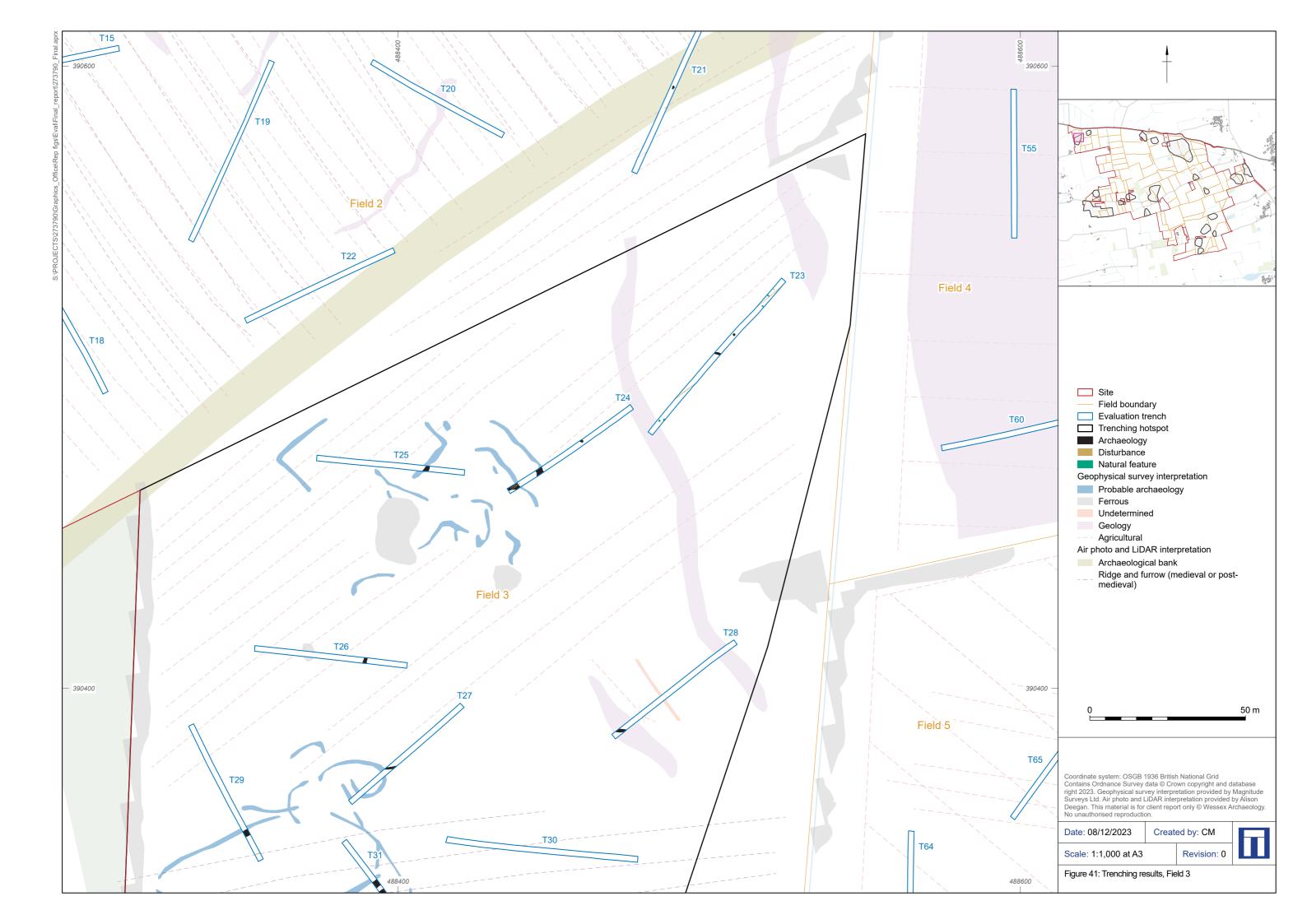


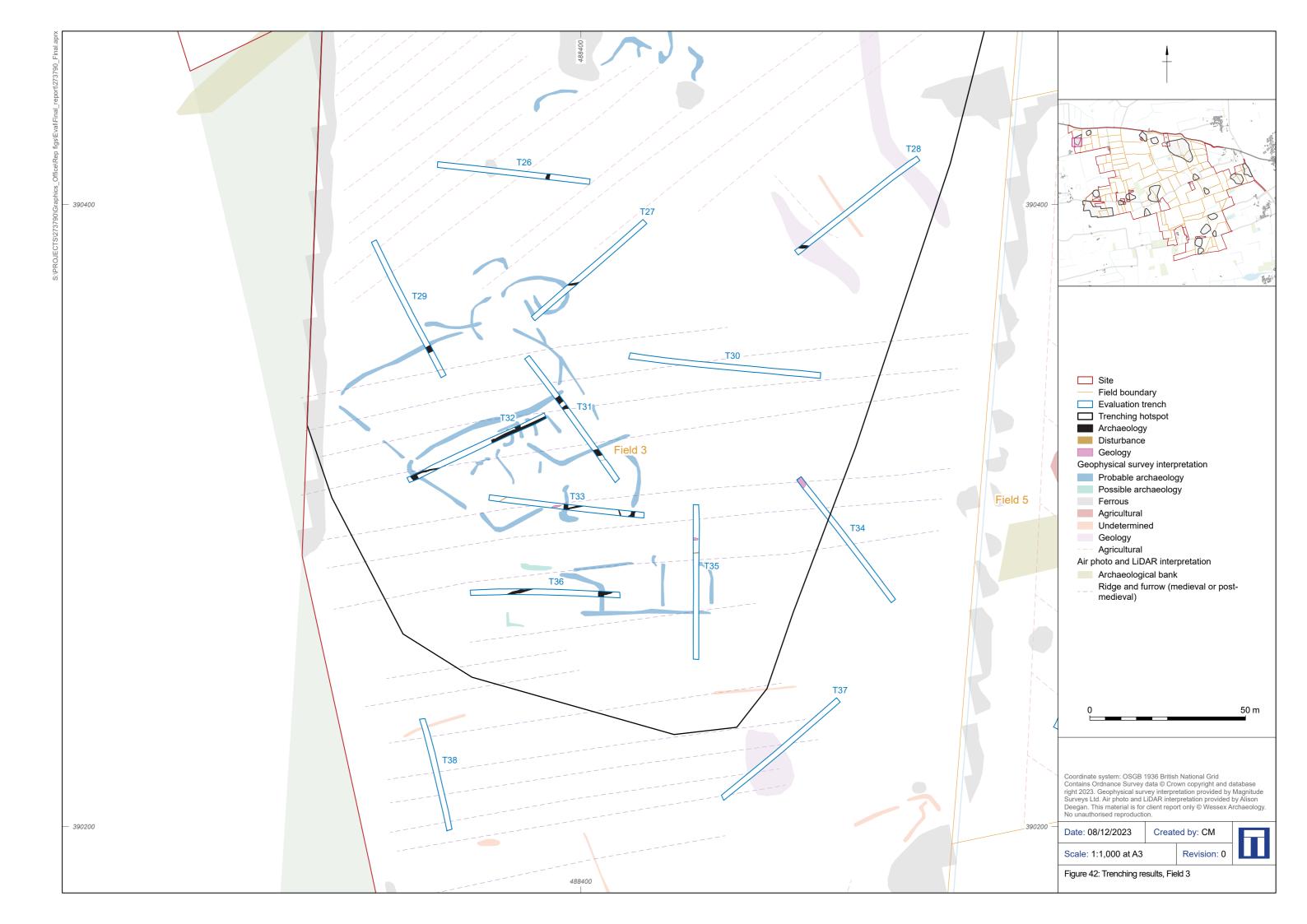


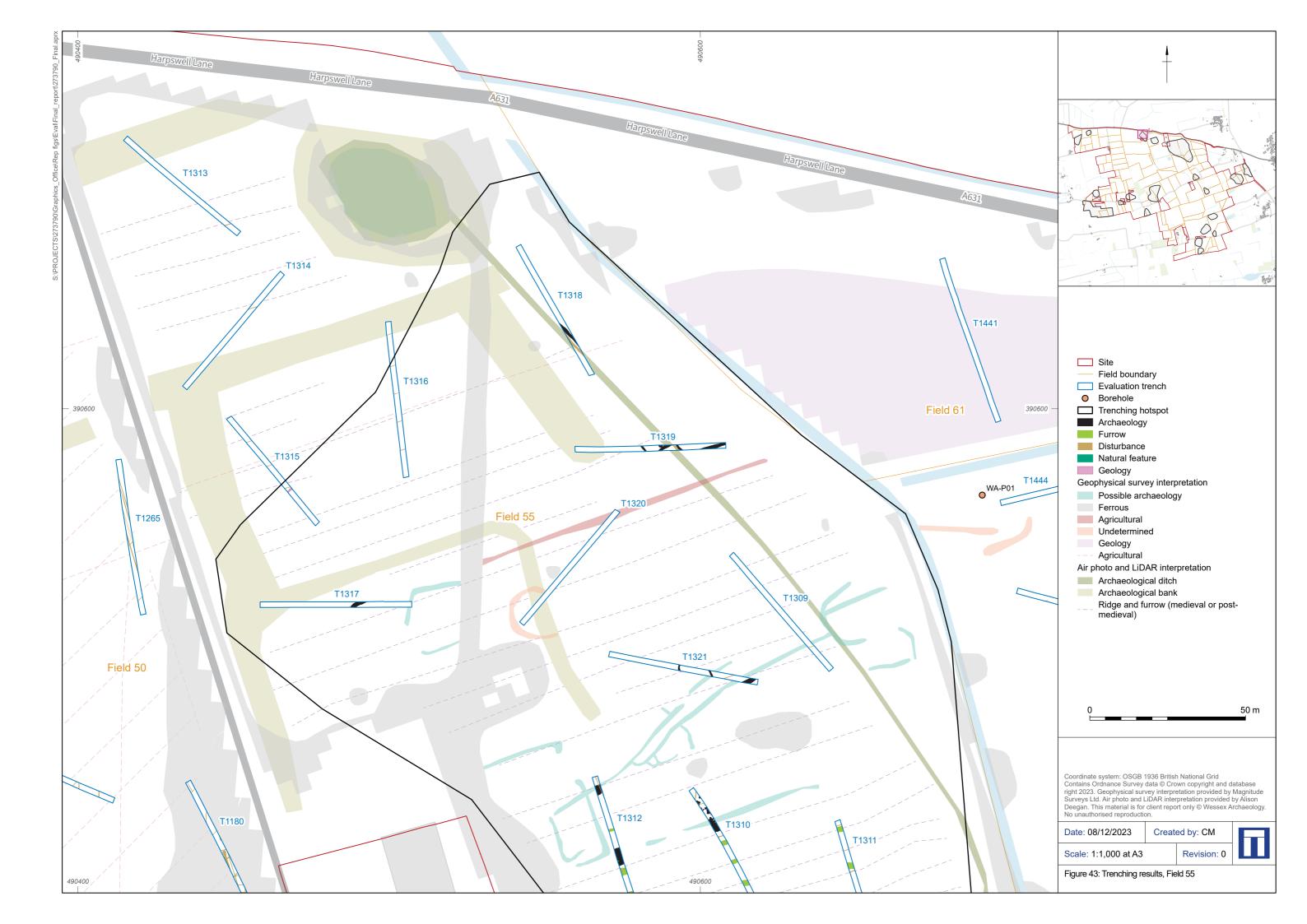


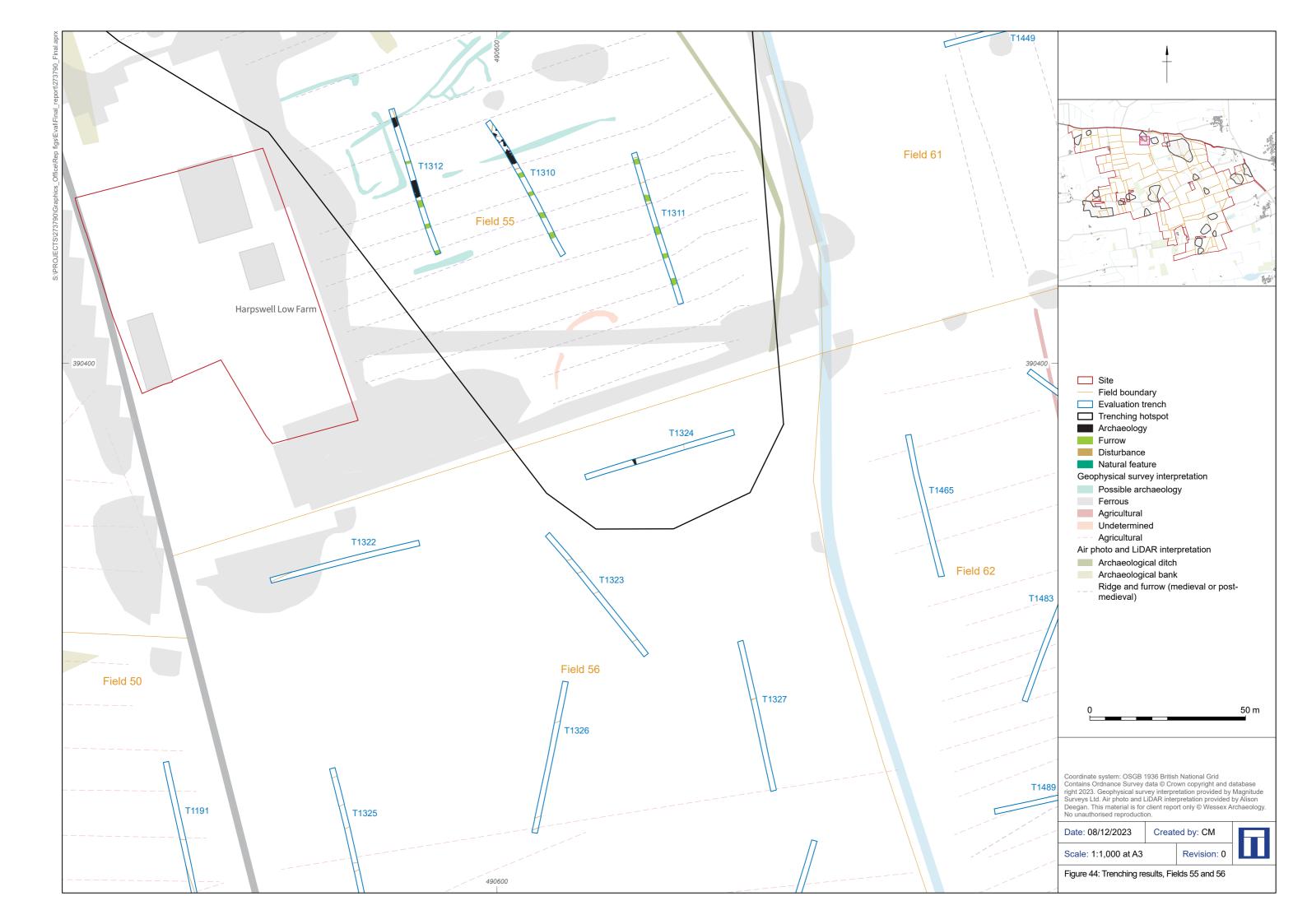


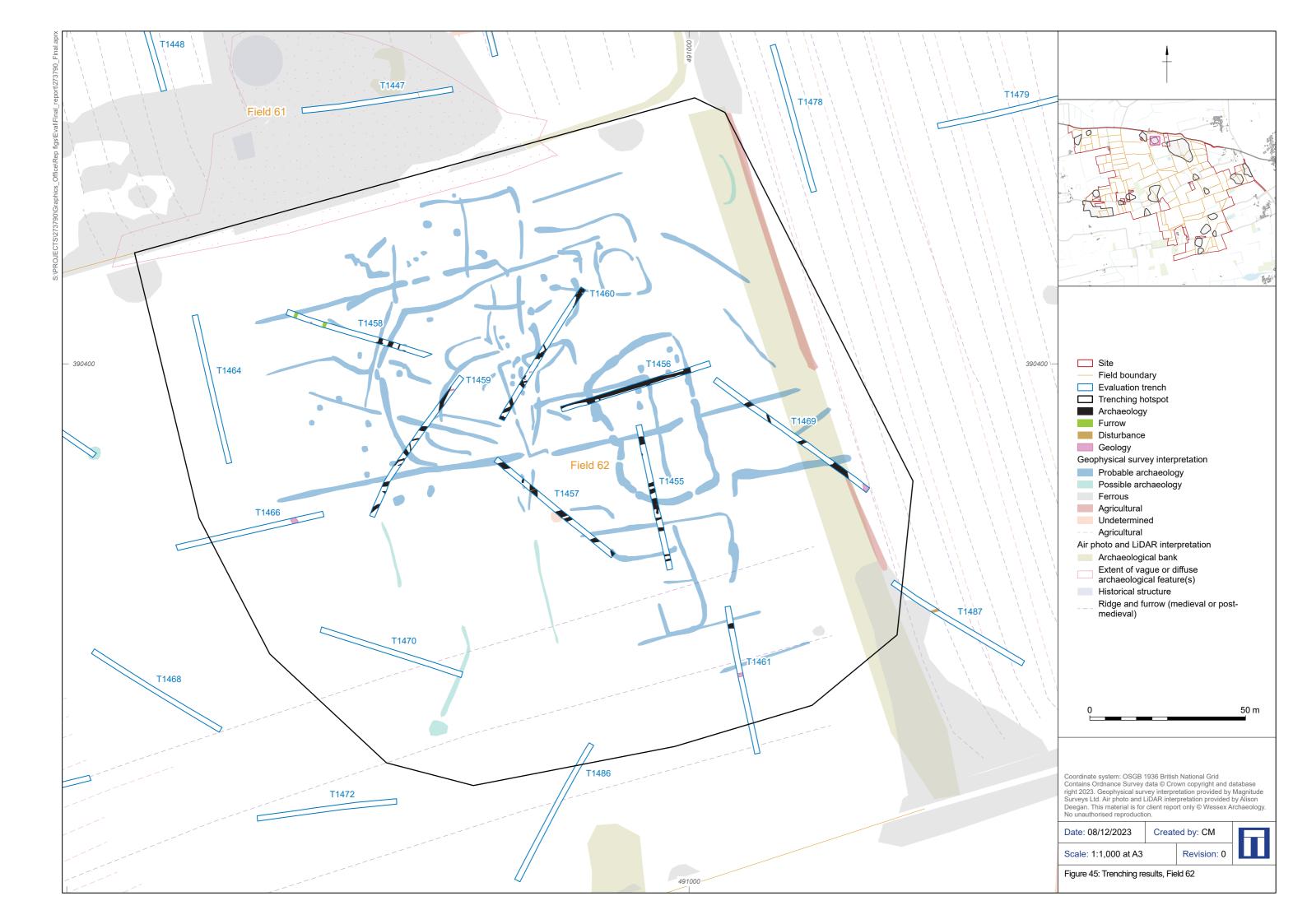








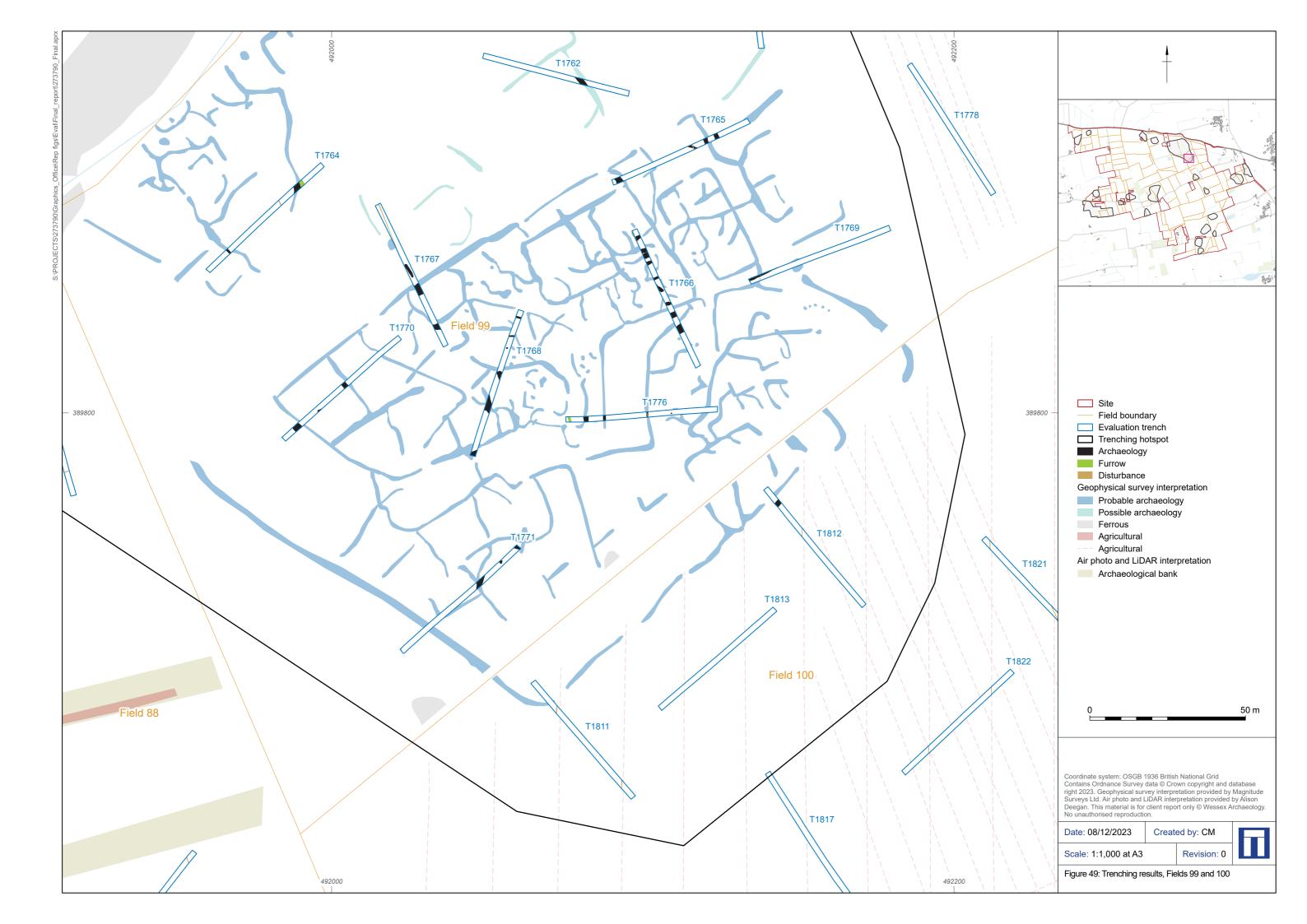




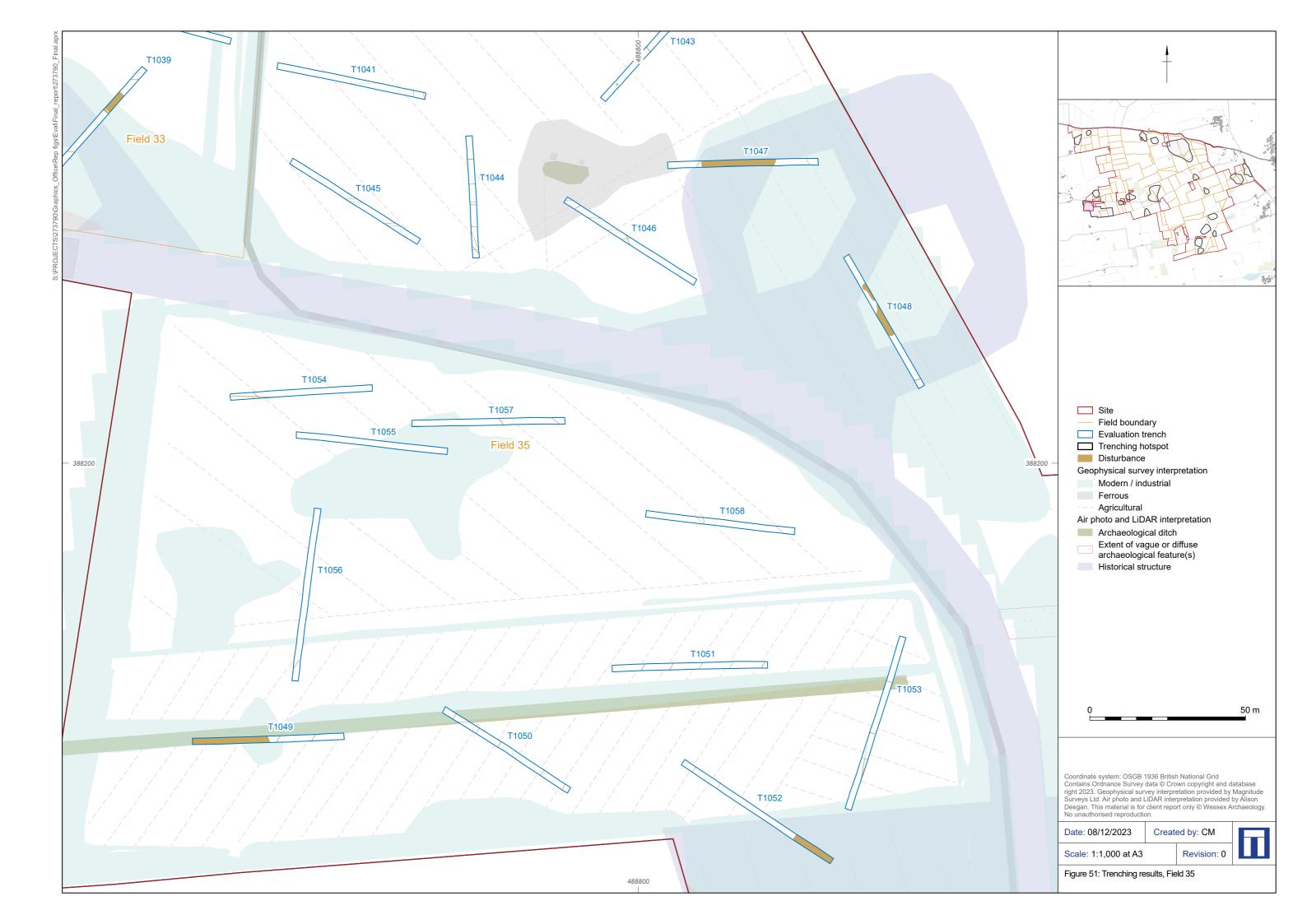


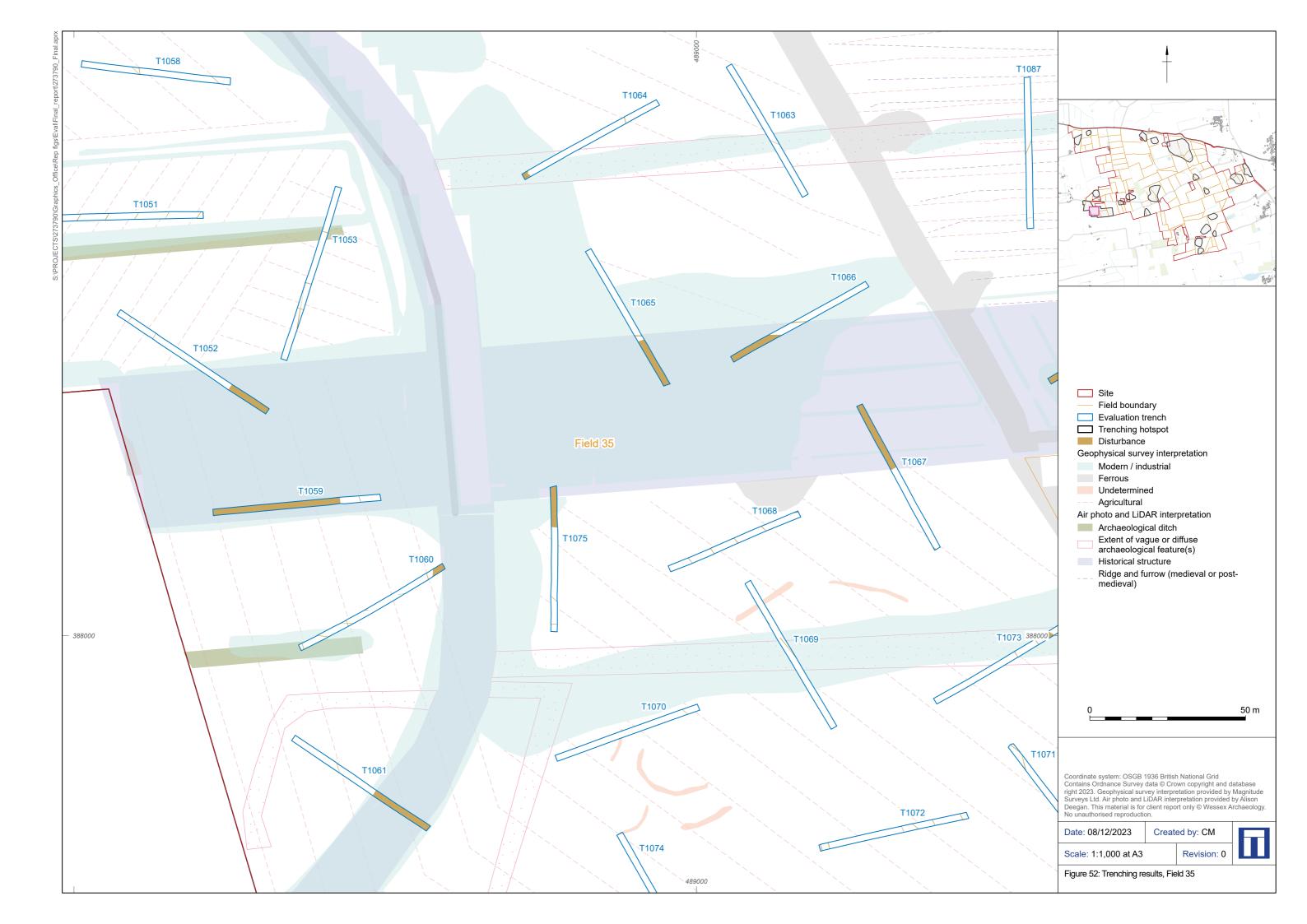


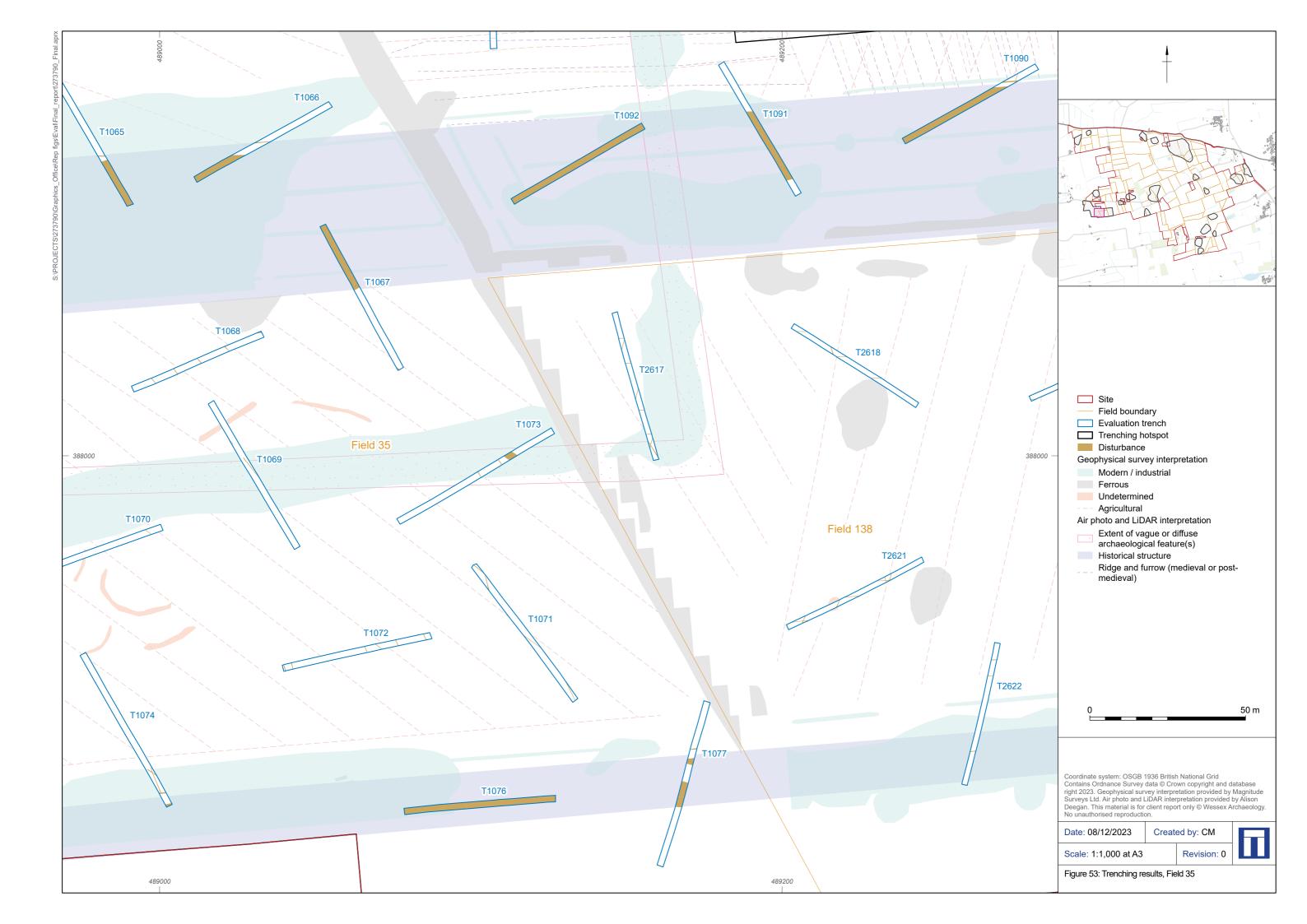


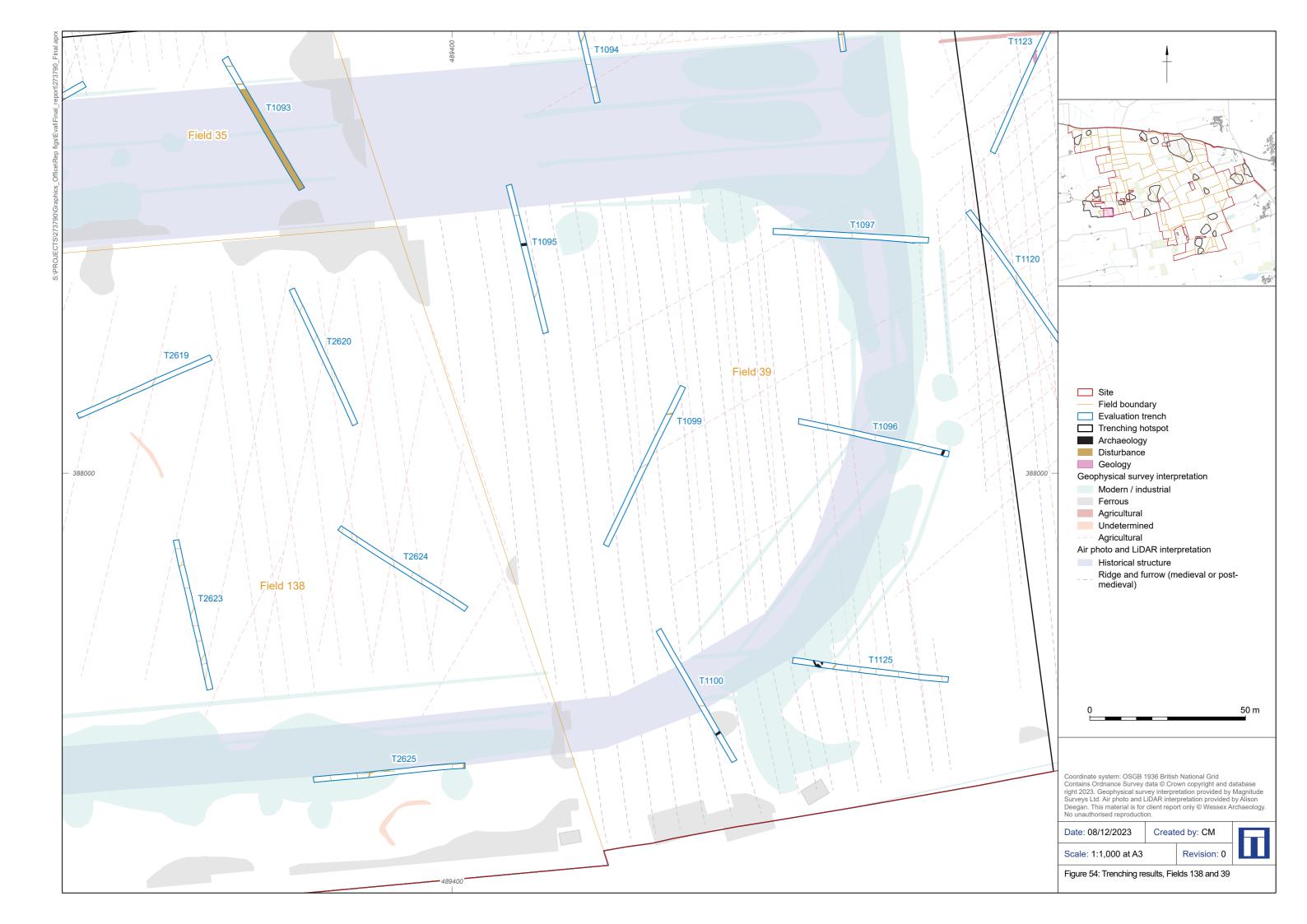


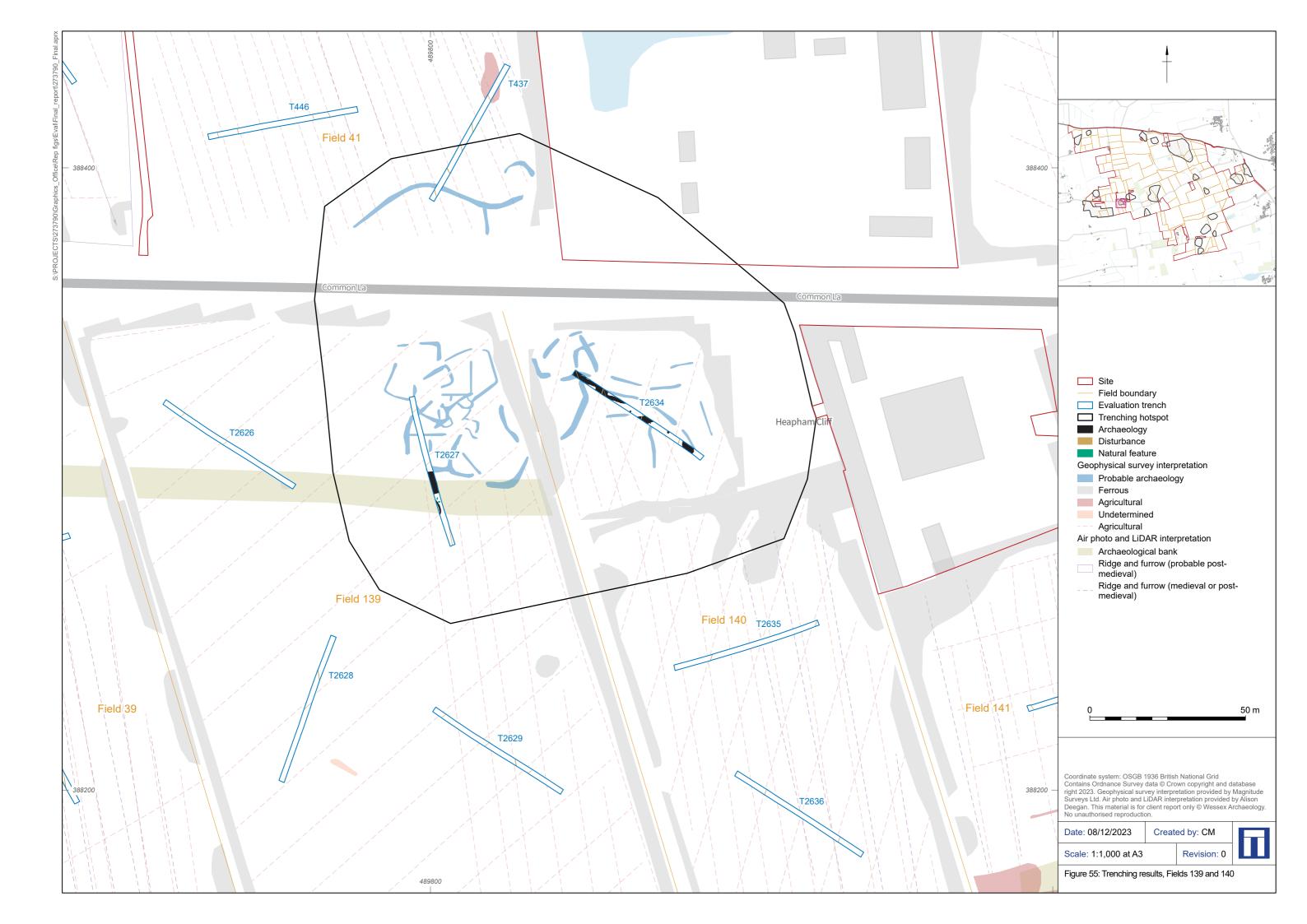


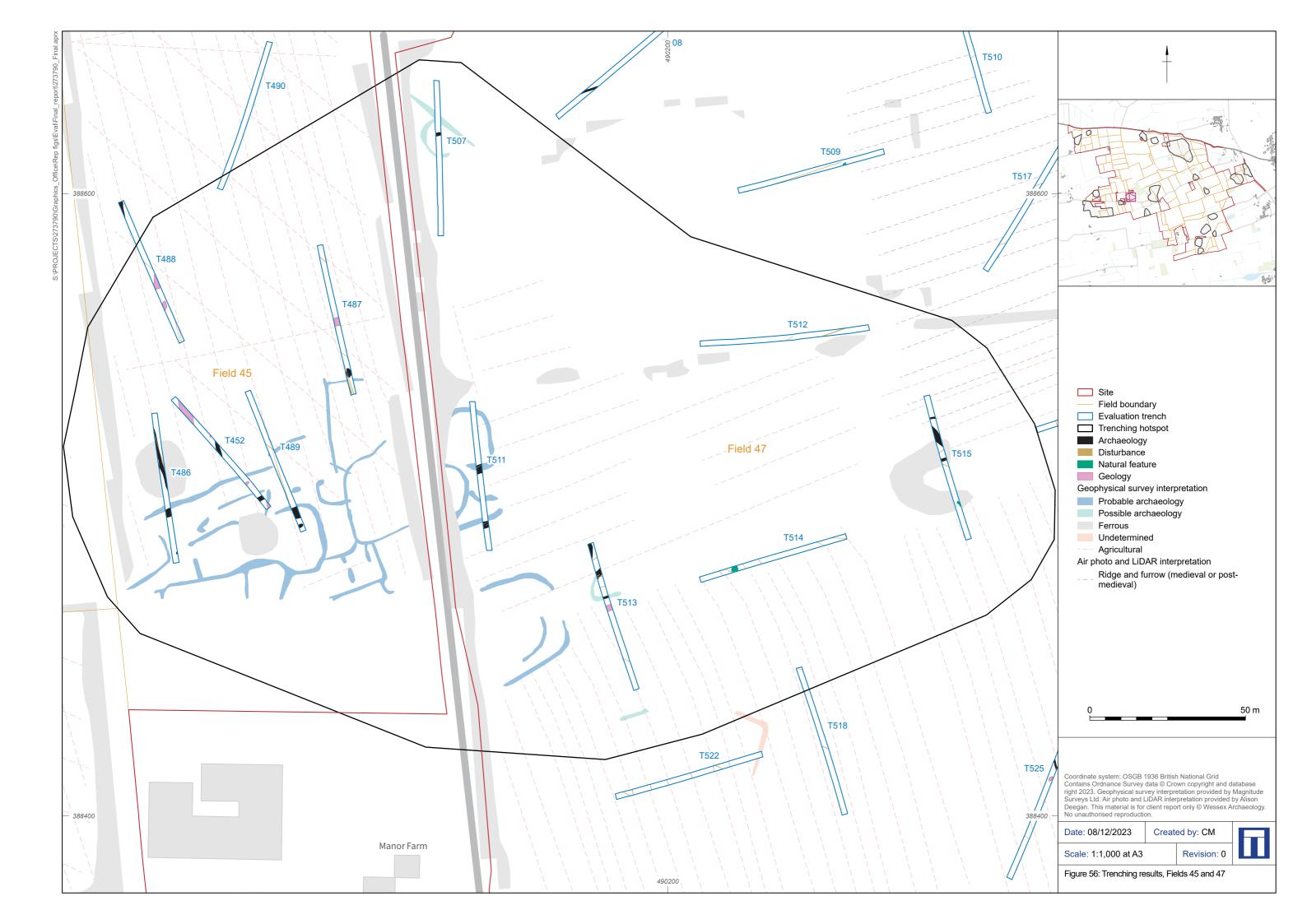




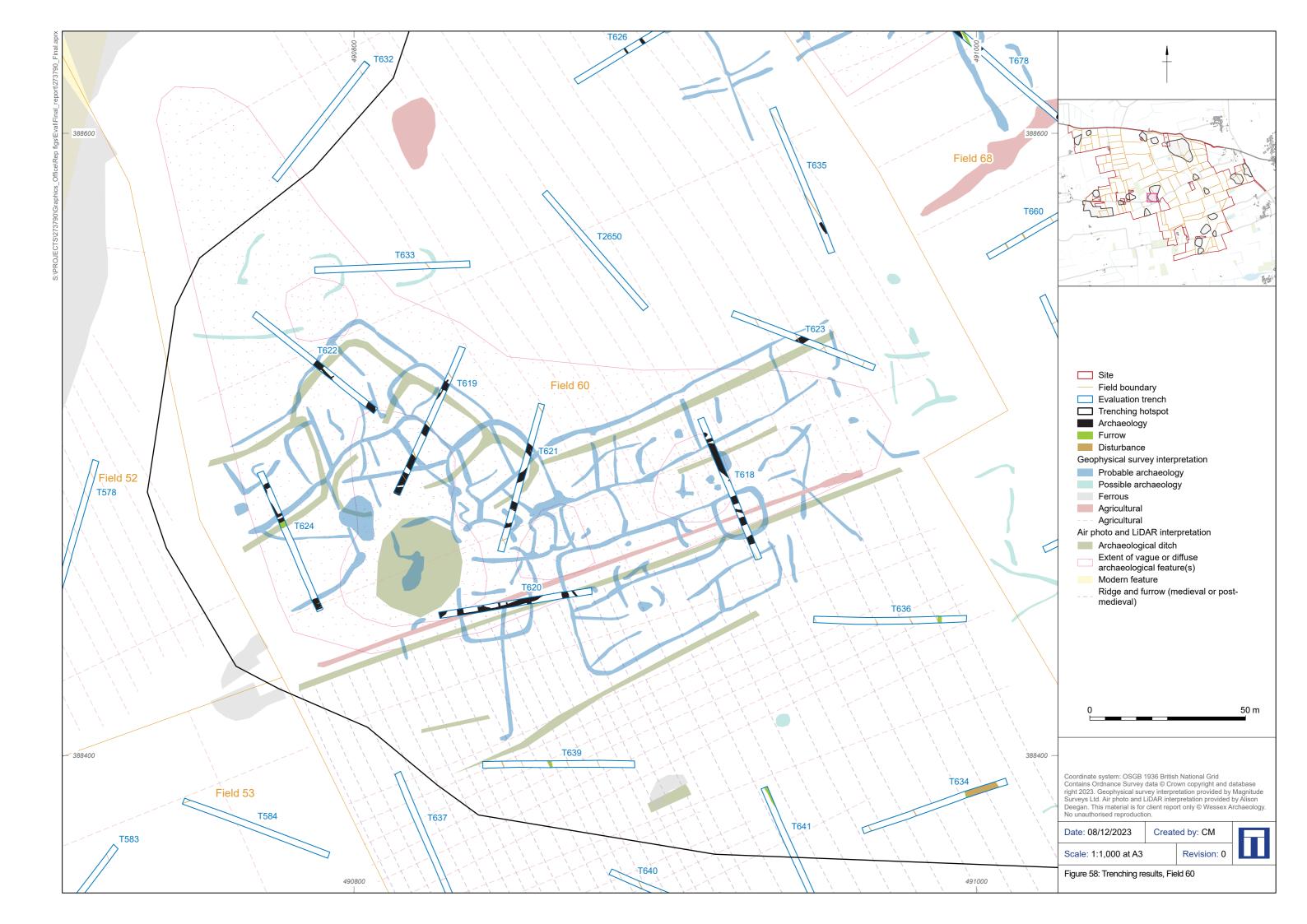


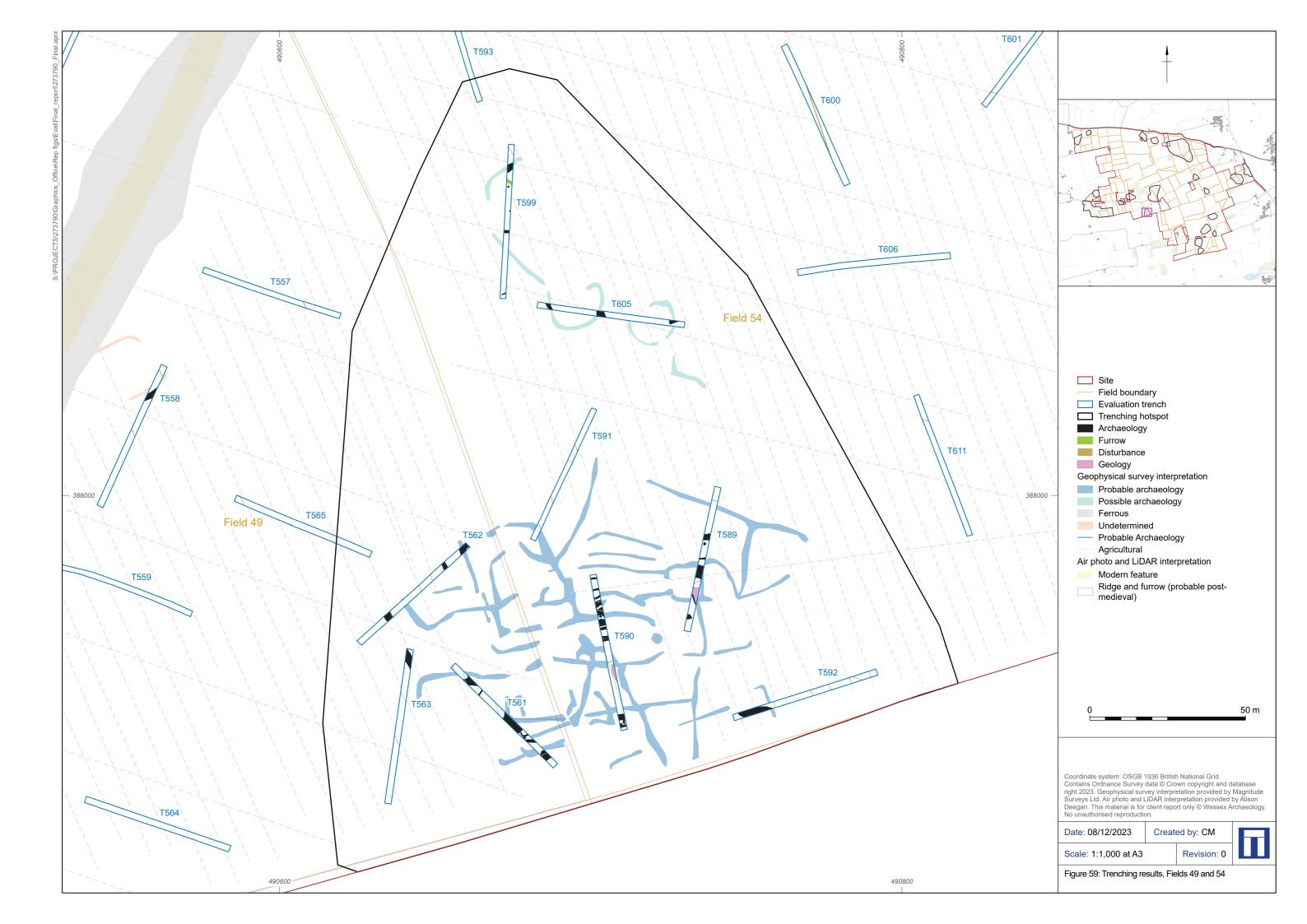


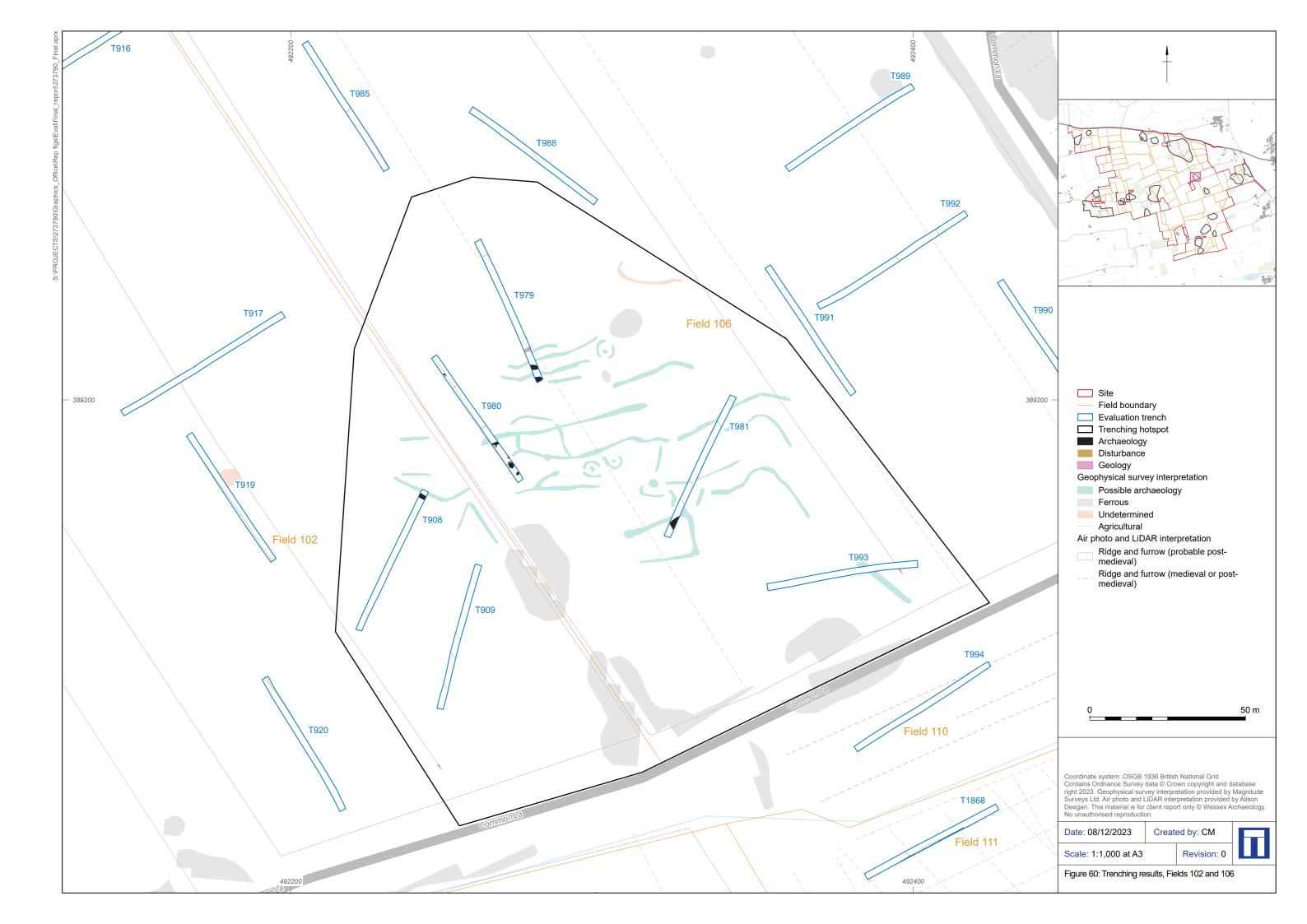


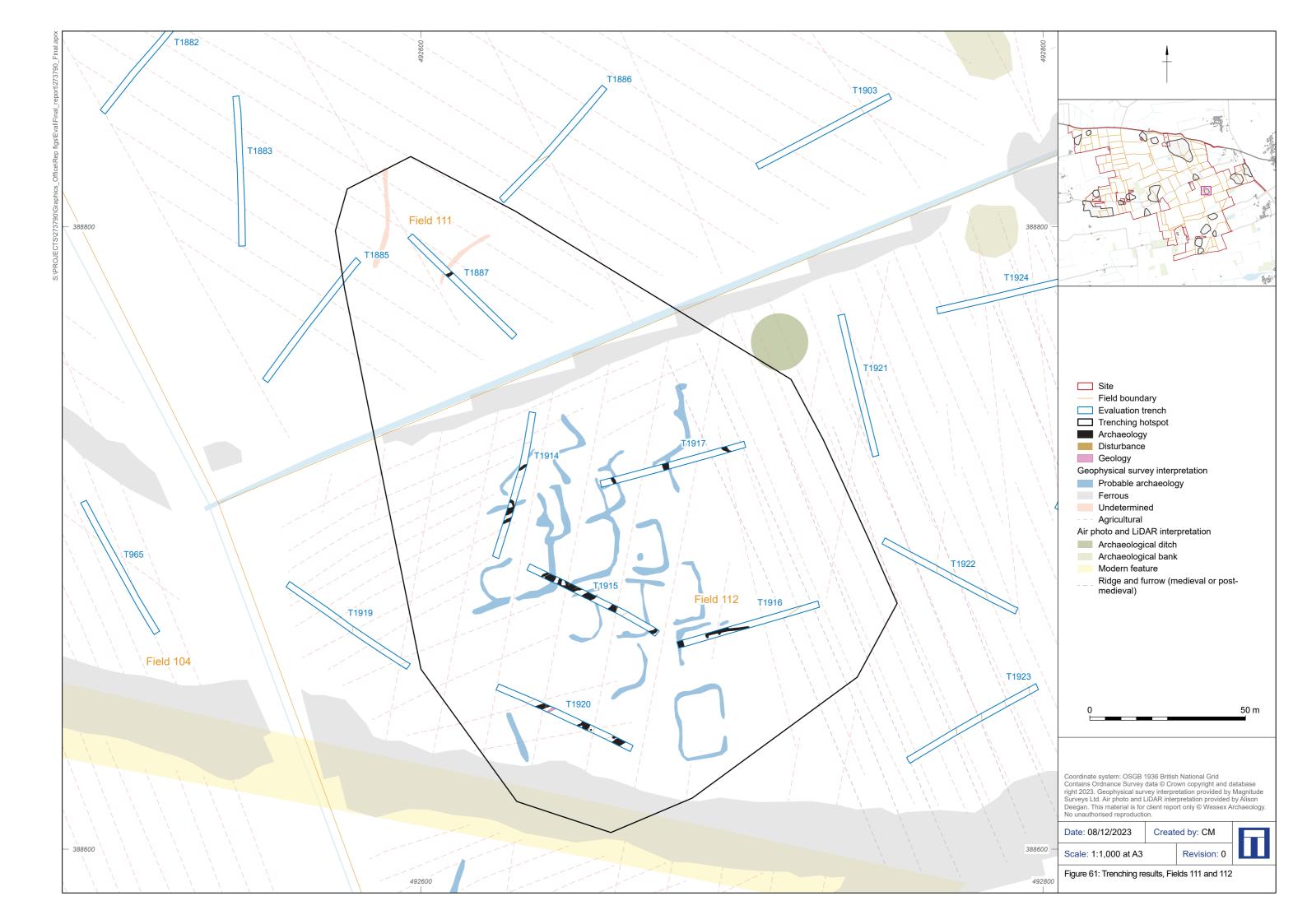


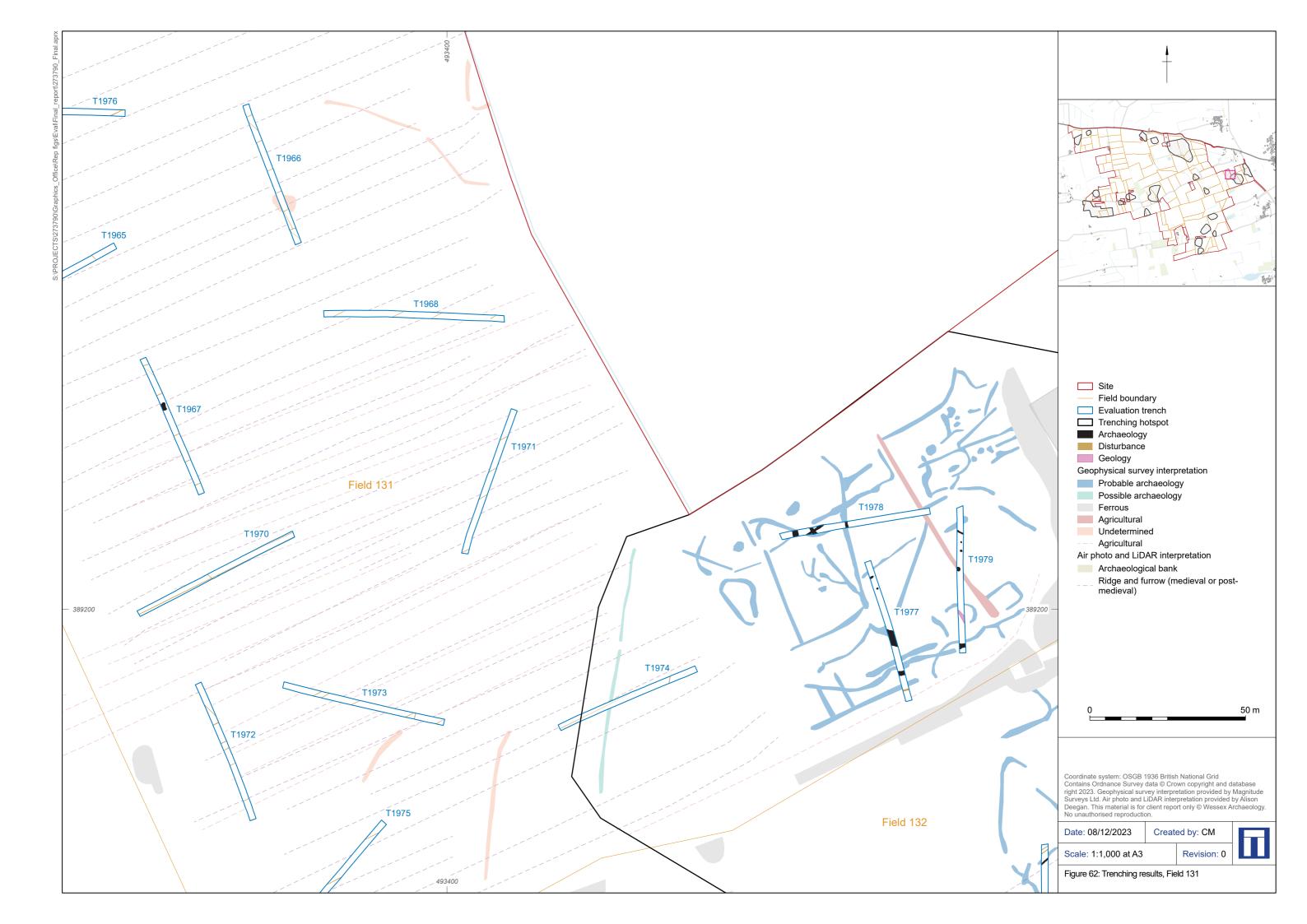


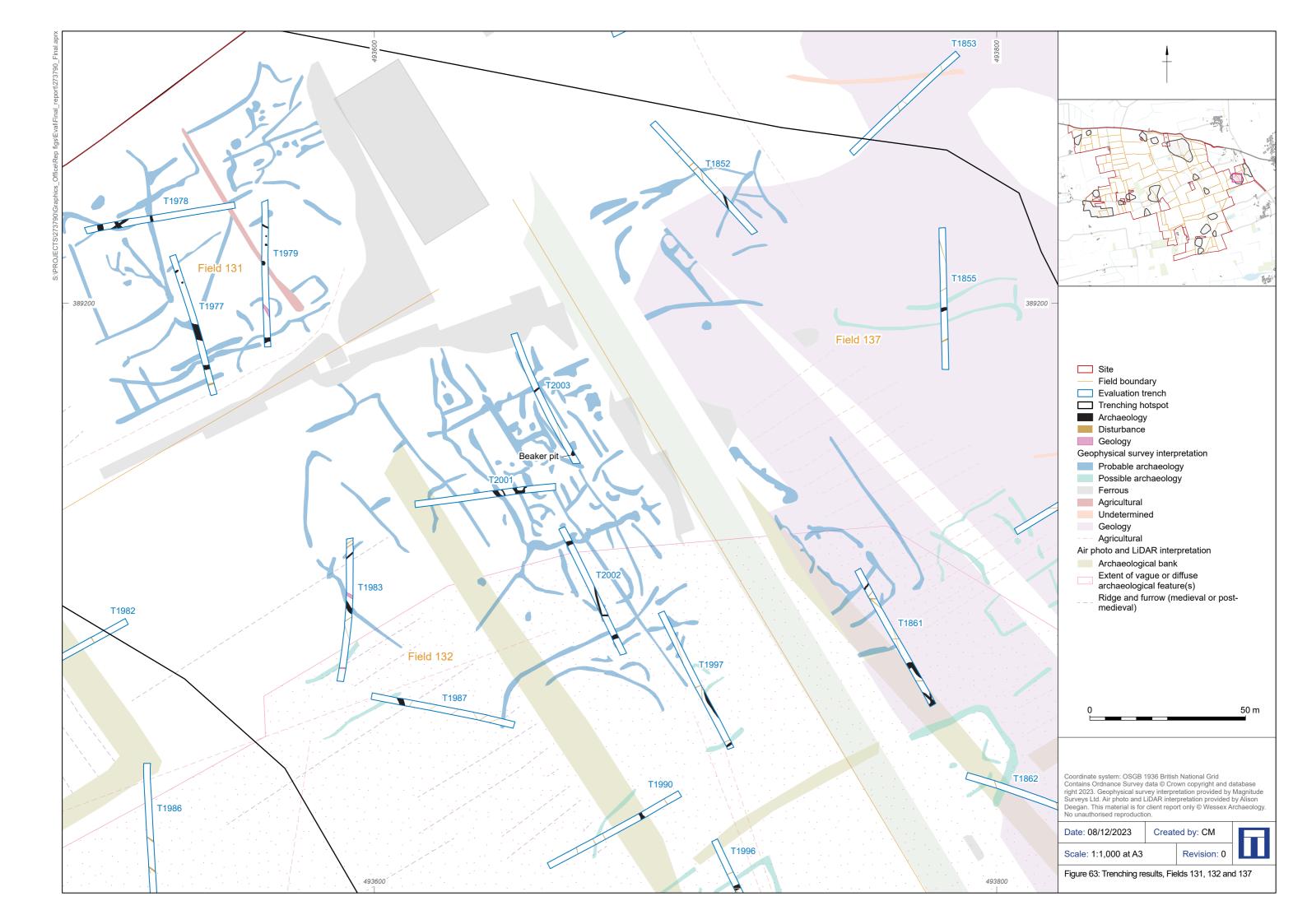


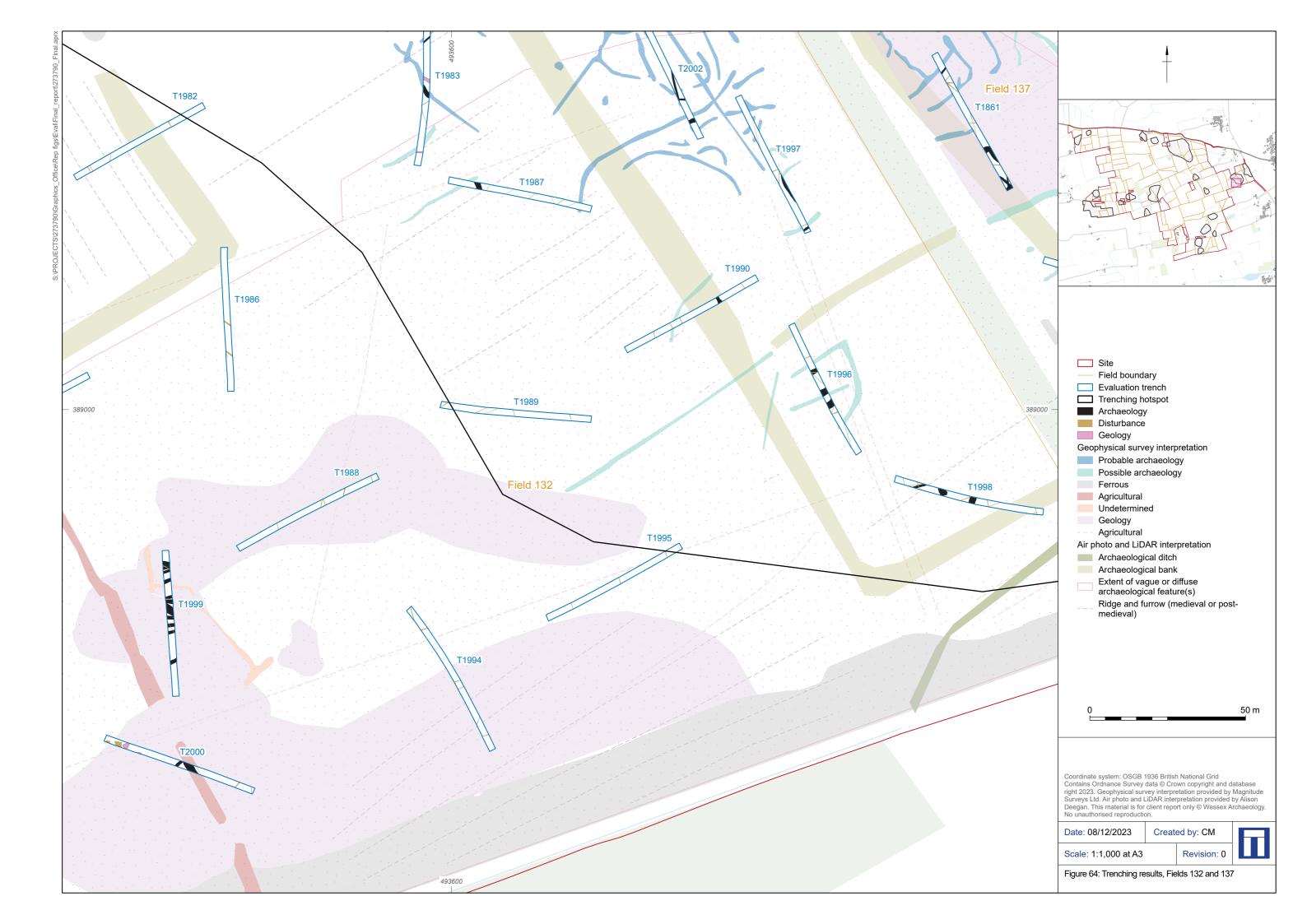


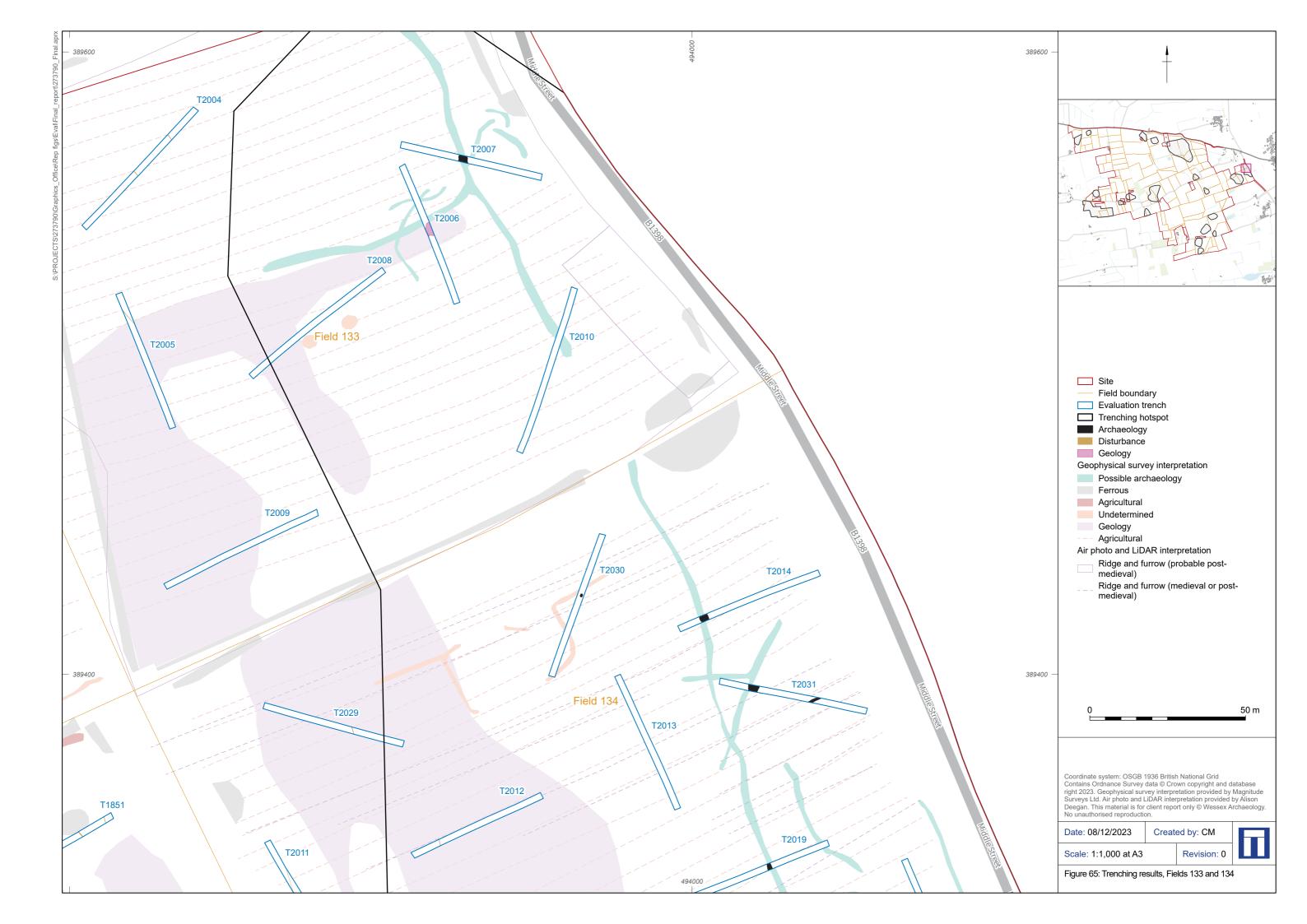


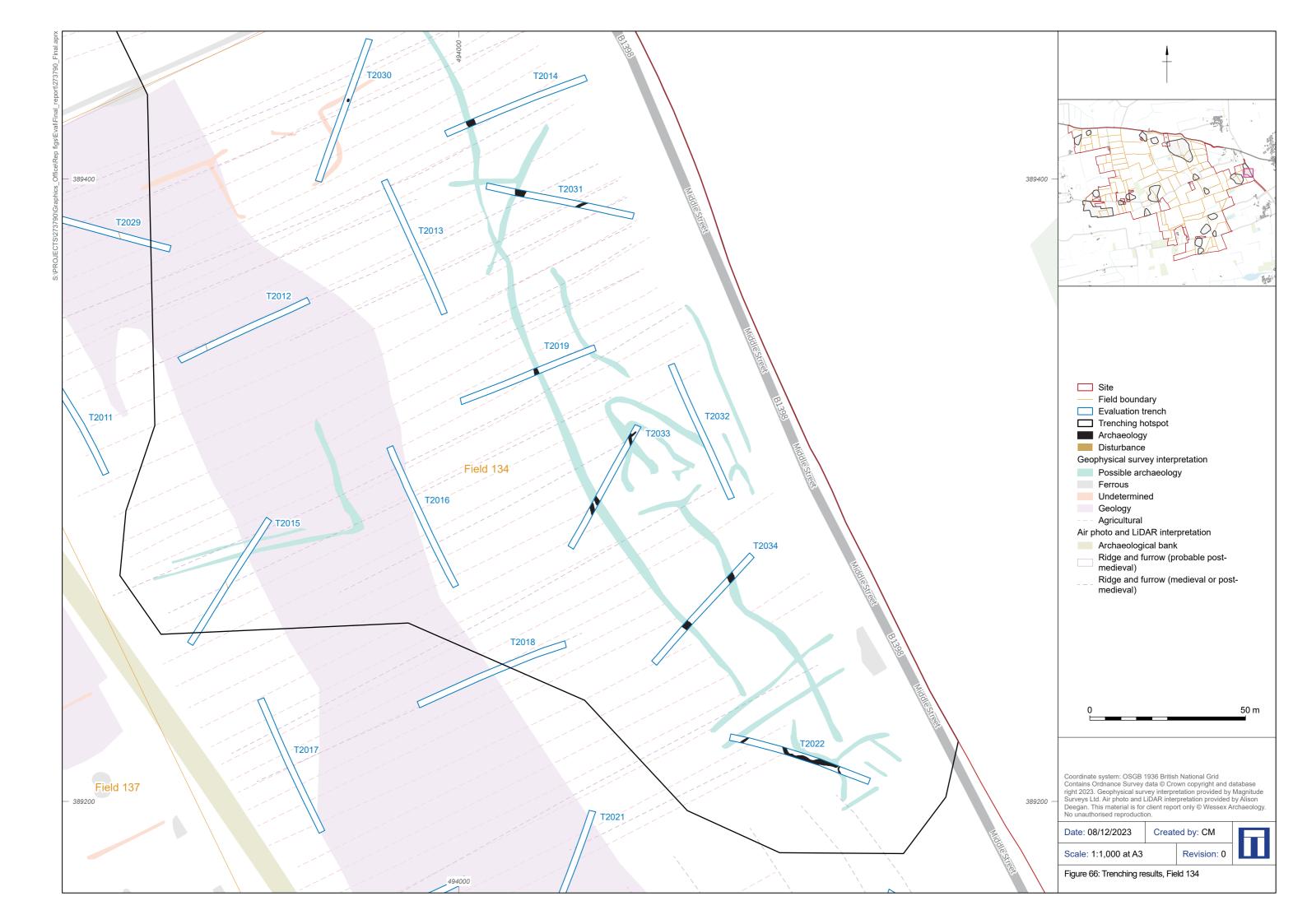


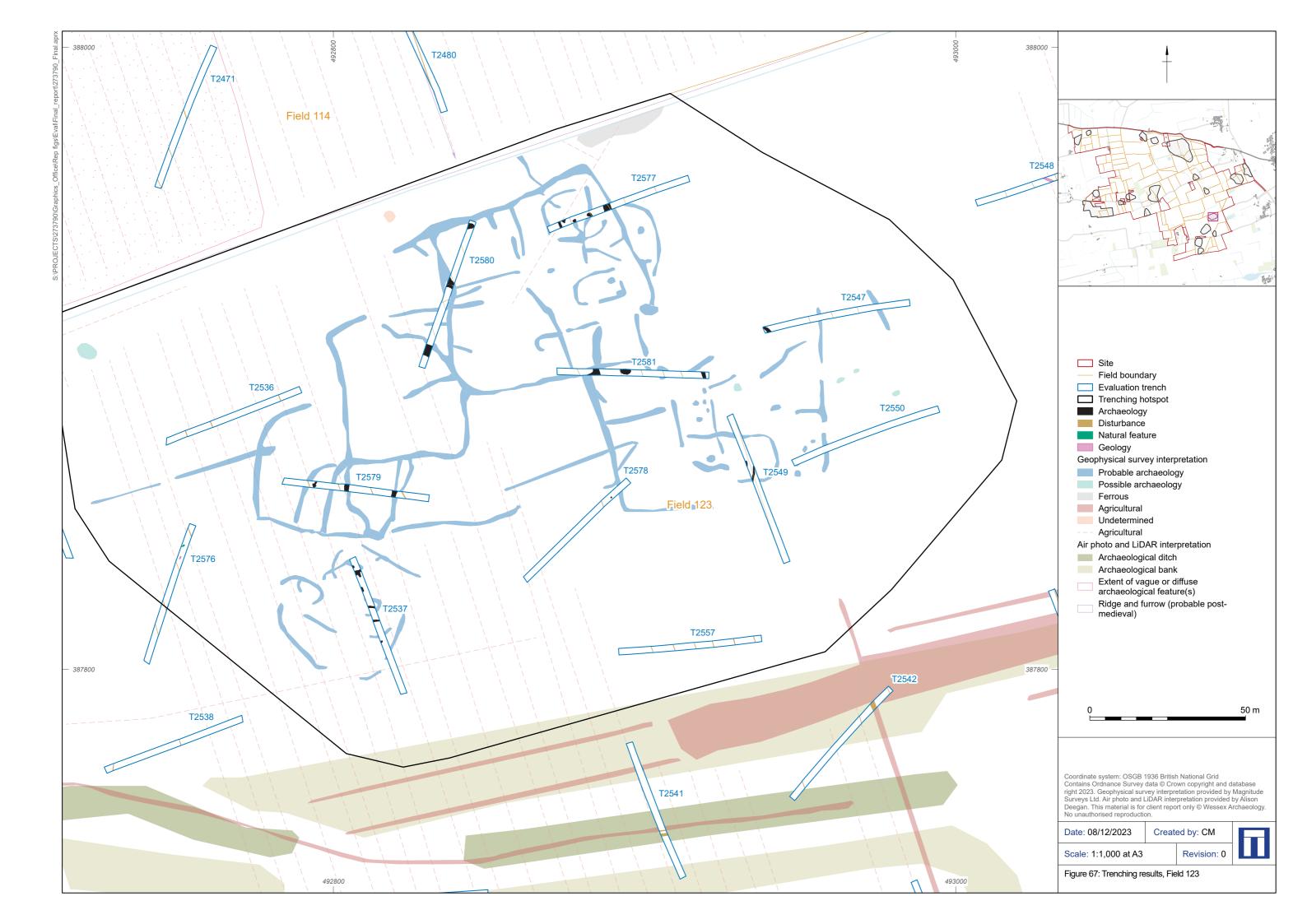


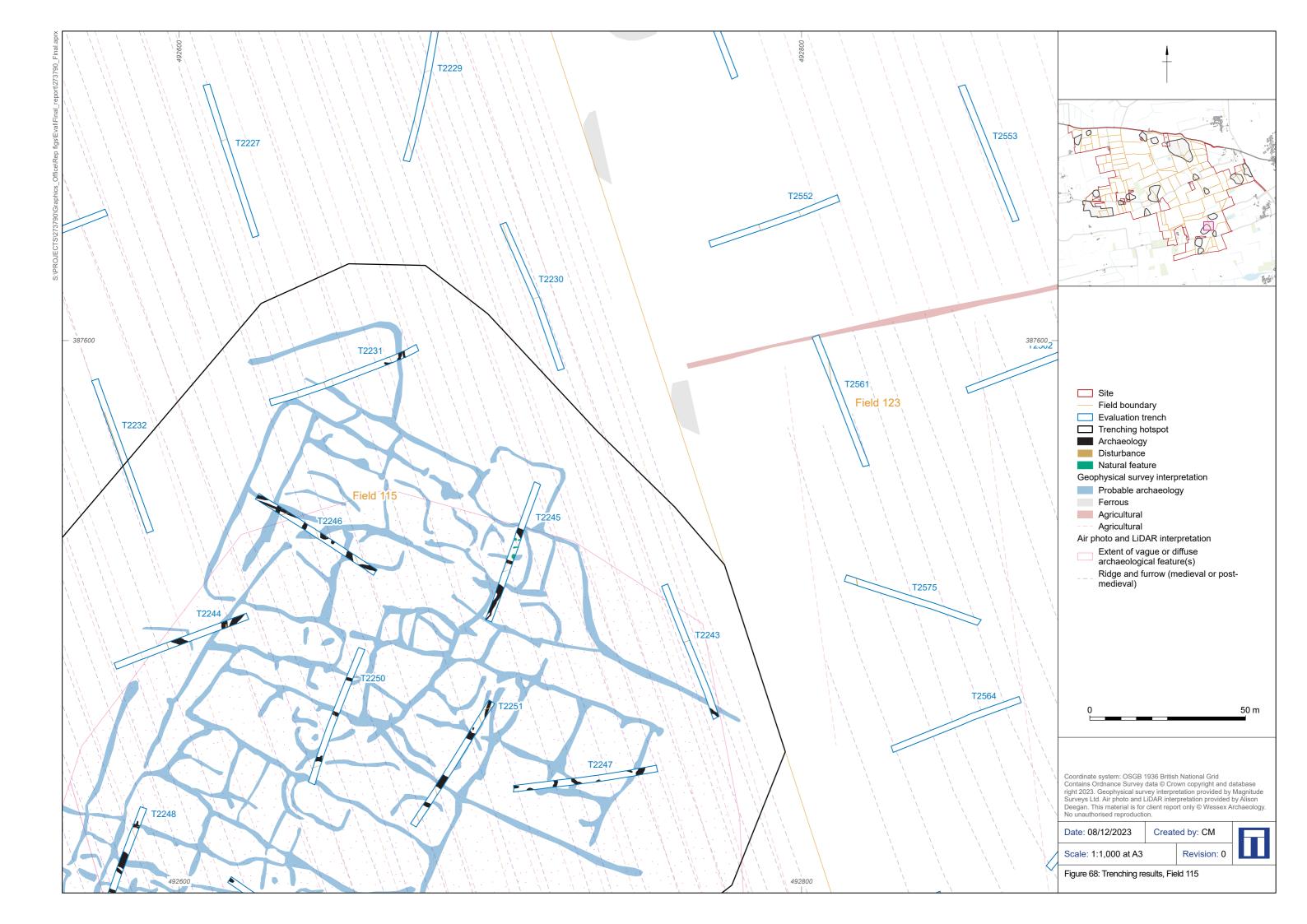


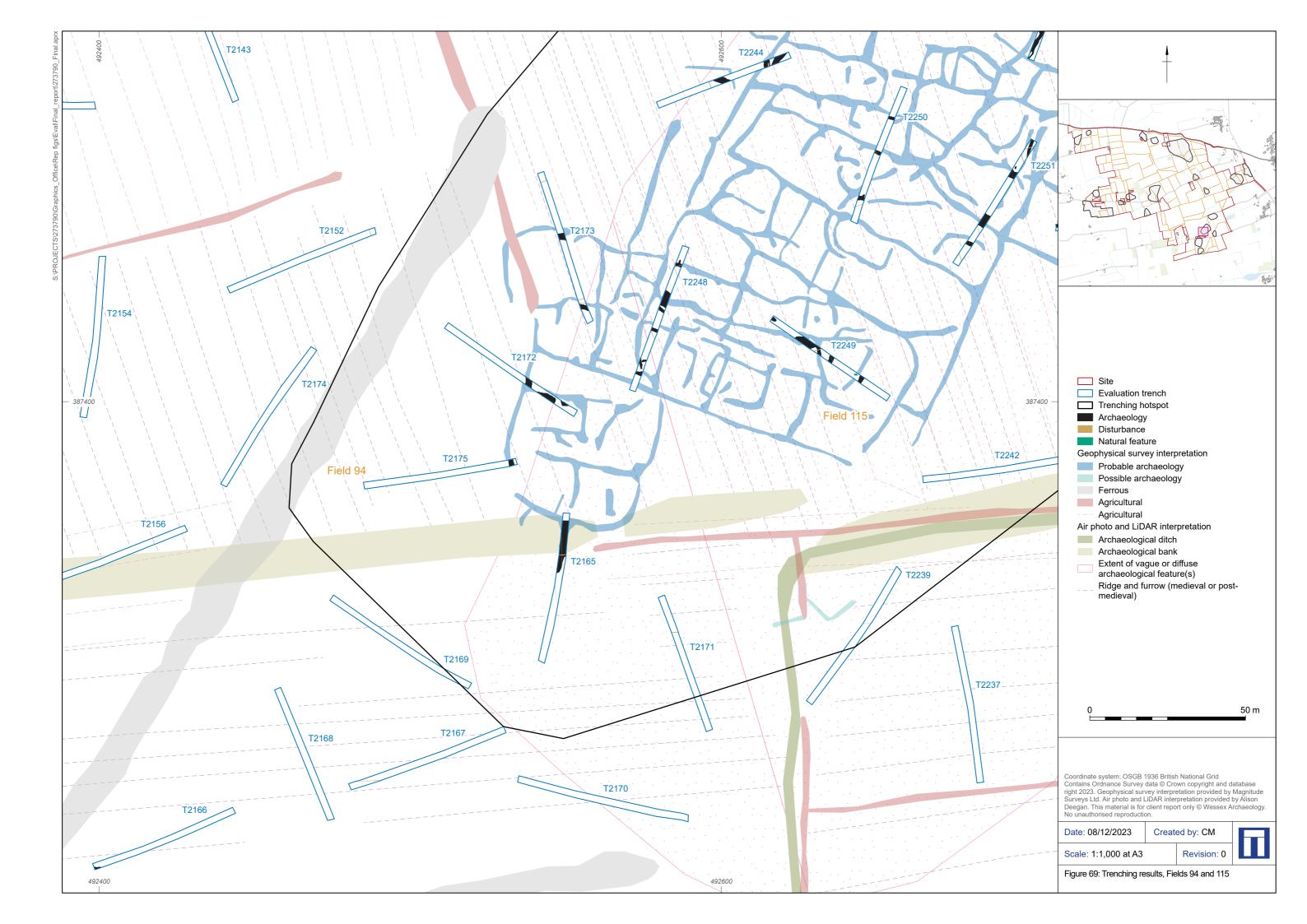


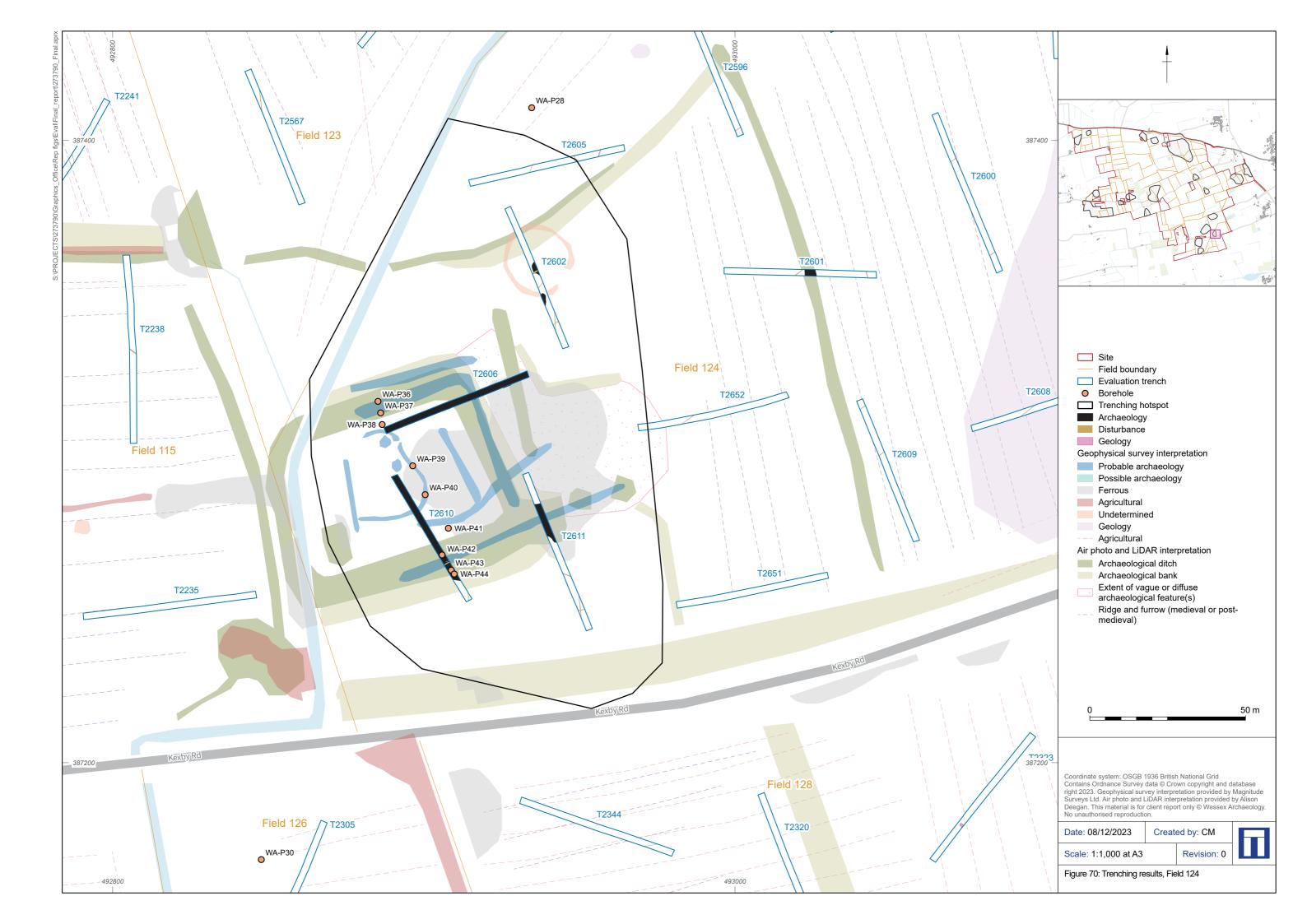


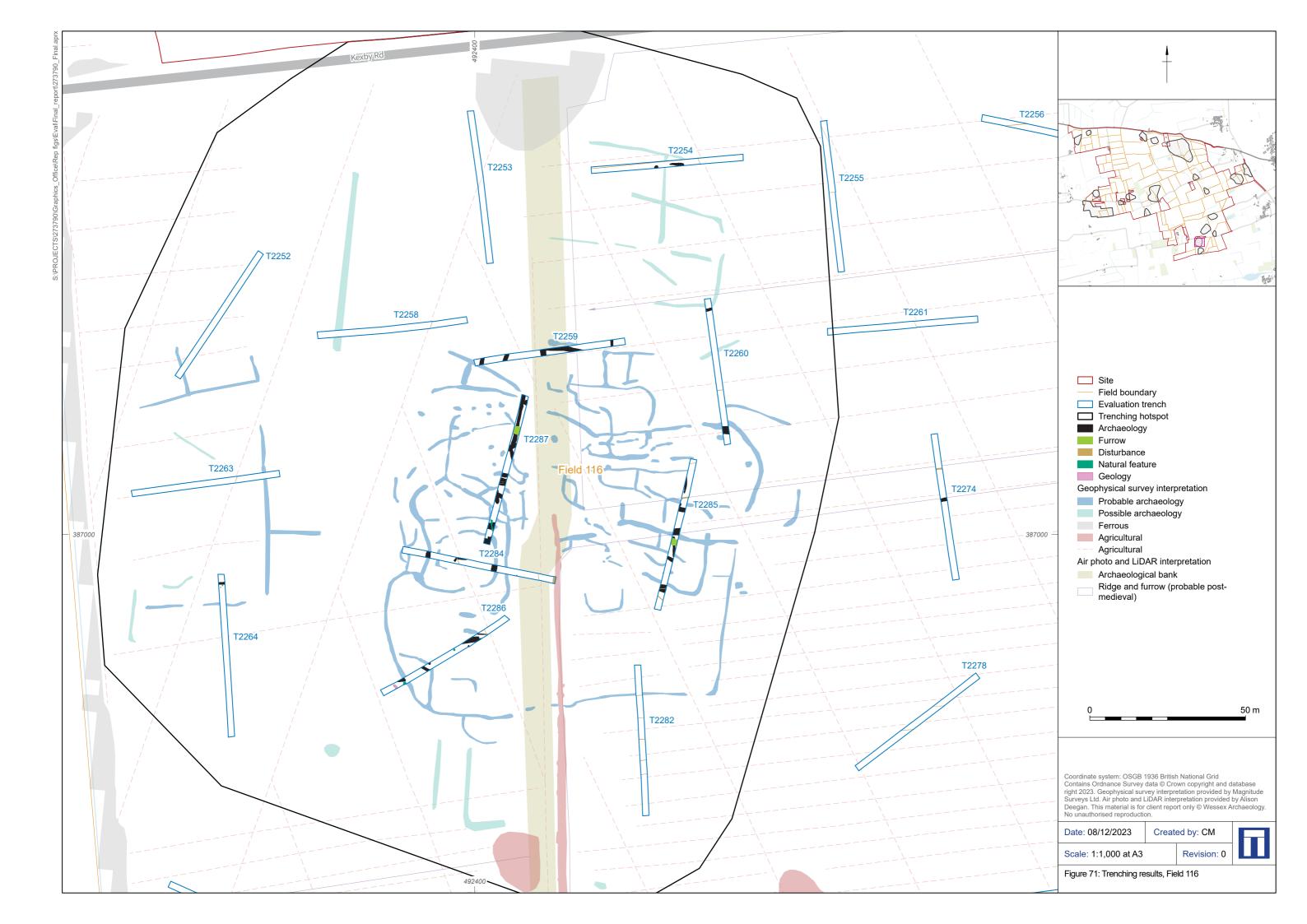












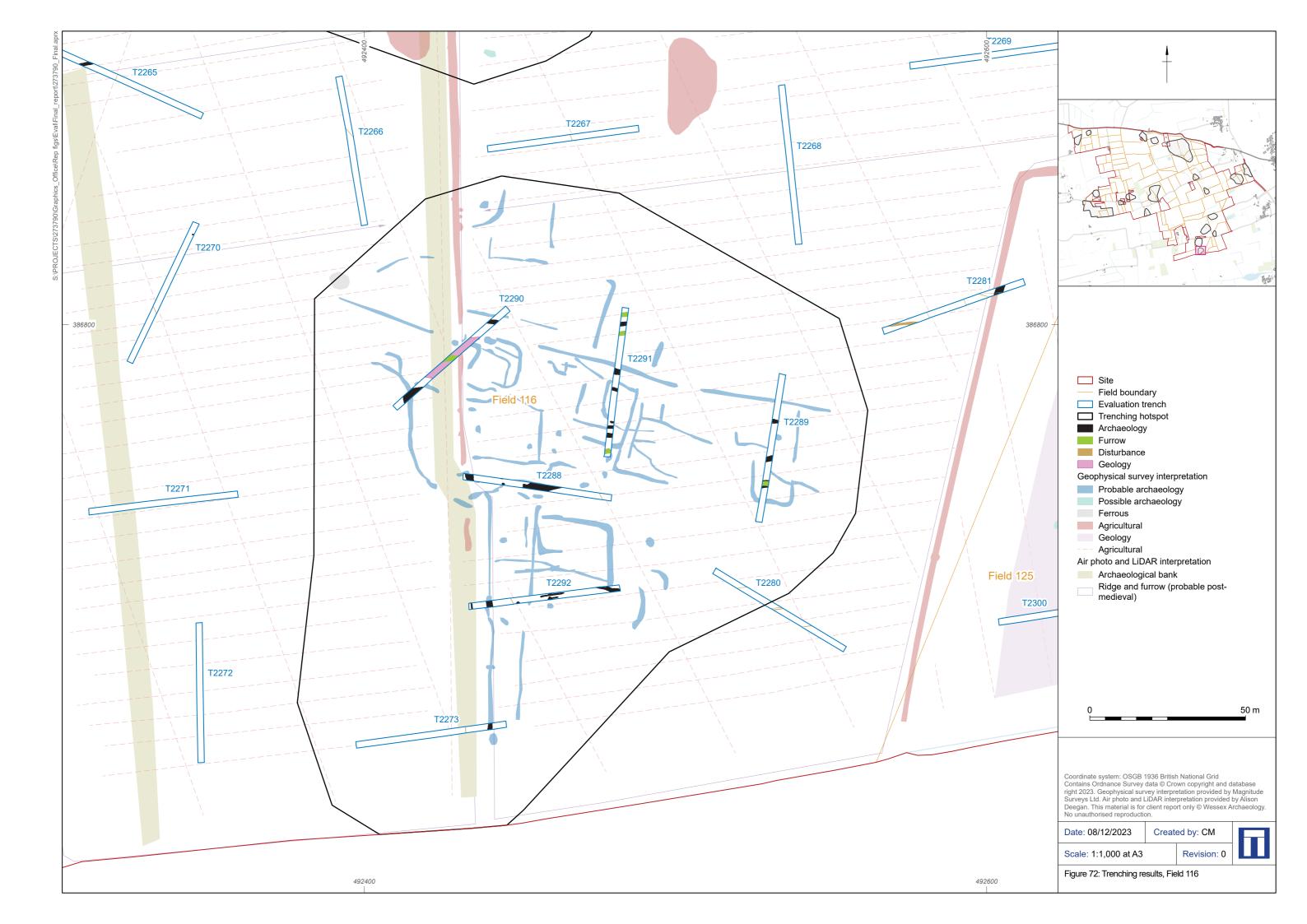




Figure 73: Beaker pit, trench 2003, view from the north-west, scale: 1 \mbox{m}



Figure 74: Ditch, trench 24, oblique view of north facing section, scale: 1 m

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Figure 75: Crop drying oven, trench 635, viewed from the south-east, scale: 1 $\mbox{\ensuremath{m}}$



Figure 76: Trench 675, viewed from north

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Figure 77: Ditch, trench 675, oblique view of north-east facing section, scale: 1 m



Figure 78: Ditches, trench 1310, view from east, scale: 1 m

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Figure 79: Ditches, trench 2251, view from south-east, scale: 1 m



Figure 80: Layers, trench 2606, view from south-west, scale: 2 m

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Figure 81: Wall, trench 2606, view from the north-east, scale: 1 m



Figure 82: Tank and drain, trench 1125, view from north-west, scale: 1 m

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