ARCHAEOLOGICAL EVALUATION ON LAND AT MILL FARM, KIRKSTEAD LINCOLNSHIRE (KSMF07)

Work Undertaken For
C&G Concrete Limited

May 2007

Report Compiled by
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National Grid Reference: **TF 1945 6045**
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A.P.S. Report No.: **65/07**

ARCHAEOLOGICAL PROJECT SERVICES

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1. SUMMARY

An archaeological evaluation was carried out on land at Mill Farm, Kirkstead as part of an Environmental Impact Assessment. The land is subject to pre-existing planning consent for the extraction of mineral deposits (sand and gravel).

The site lies in an area of archaeological potential, with a presumed Iron Age enclosure or hillfort immediately to the north. A geophysical survey revealed potential archaeological remains within the proposed area of quarrying. Cropmarks also indicate the presence of potential ditches in the western half of the site.

During the course of this evaluation, which was targeted on the cropmarks and geophysical anomalies, a number of archaeological features were identified. These were predominantly undated ditches and could potentially be associated with agricultural activity from the prehistoric period onwards.

2. INTRODUCTION

2.1 Definition of an Evaluation

An archaeological evaluation is defined as, *'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present Field Evaluation defines their character and extent, quality and preservation, and it enables an assessment of their worth in a local, regional, national or international context as appropriate'* (IFA 1999).

2.2 Planning Background

Archaeological Project Services was commissioned by C & G Concrete Limited to undertake an archaeological evaluation on land at Mill Farm, Kirkstead, Lincolnshire. This was in order to determine the archaeological implications of re-commencing mineral (sand and gravel) extraction at the site.

The fieldwork was undertaken between the 30th April and the 11th May 2007.

2.3 Topography and Geology

Kirkstead is located 11km southwest of Horncastle and 24km southeast of Lincoln in the administrative district of East Lindsey, Lincolnshire (Fig. 1).

The quarry is located 1.3km south of the scattered village of Kirkstead at National Grid Reference TF 1945 6045 (Fig. 2) with part of the quarry area in the parish of Tattershall Thorpe. Situated on a river terrace overlooking the River Witham on generally level ground at a height of *c*. 5m OD, the site comprises some 32.78 hectares (Plates 1 and 2).

The site is located on groundwater gley soils of the Blackwood and Quorndon Series (Robson *et al*. 1974, 47, 48). These soils overlie drift geology of sands and gravels of upper river terrace deposits overlying glacially derived till which in turn seal a solid geology of Jurassic Ampthill Group (BGS 1995).

Geotechnical borehole logs were also provided by the client. These generally showed topsoil with a thickness of between 0.2m and 0.35m and overburden (subsoils etc.) between 0.6m and 1.8m thick (Fielding 1980).

2.4 Archaeological Setting

Sites dating from the prehistoric period to the present day have been identified within the immediate area. Prehistoric remains include a possible hillfort identified from cropmarks which may date to the Iron Age period (800 BC-AD 43) and is a scheduled ancient monument. A few areas of extensive cropmarks may also be prehistoric or possibly Romano-British (AD 42-410) in date, and one such complex falls within the consented area of the quarry.

Located to the north of the site are the remains of the medieval (AD 1066-1540) Kirkstead Abbey. These survive as earthworks. Cropmarks indicating enclosures around the abbey have been identified, although the closest to the site lies some 800m away. The site perhaps lay in an extensive park associated with Tattershall Castle.

The abbey was dissolved in 1537 and it is possible that a large post-medieval (AD 1540-1900) house was constructed on the site. It was also during this time that pottery was being produced at Kirkstead, perhaps also within the former monastic precinct.

Cartographic sources indicate the site was woodland during the 18th century, though this was gradually replaced by fields during the 19th century. The site has undergone little change since the late 19th century.

Geophysical survey identified anomalies which could potentially relate to archaeological features.

3. AIMS

The aim of the evaluation was to gather information to establish the presence or absence, extent, condition, character, quality and date of any archaeological deposits in order to enable the Archaeological Curator to formulate a policy for the management of archaeological resources present on the site.

4. METHODS

4.1 Trial Trenching

The evaluation program consisted of two trenches 50m long x 1.8m wide and four trenches 100m long x 1.8m wide (Appendix 2). These were positioned to investigate geophysical anomalies and crop marks within the investigation area (Fig. 6 and 7).

Removal of topsoil and other overburden was undertaken by a tracked mechanical excavator using a toothless ditching bucket. The exposed surfaces of the trenches were then inspected for archaeological remains.

Each deposit exposed during the evaluation was allocated a unique reference number (context number) with an individual written description. A photographic record was compiled. Sections and plans were drawn at scales of 1:10 or 1:20, as appropriate. Recording of deposits encountered was undertaken according to standard Archaeological Project Services practice.

The location of the excavated trenches was surveyed using a differential GPS system.

4.2 Post-excavation

Following excavation, all records were checked and ordered to ensure that they constituted a complete Level II archive and a stratigraphic matrix of all identified deposits was produced. A list of all contexts and interpretations appears as

Appendix 2. Context numbers are identified in the text by brackets.

5. RESULTS

Of the six trenches excavated, all contained evidence of archaeological remains. All the trenches showed considerable root disturbance with many root boles being identified and investigated although not recorded.

5.1 Trench 1 (Figs. 4, 6, 8, 9, 13 and 14. Plate 3)

The earliest deposit uncovered within Trench 1 was (1003), a firm light brownish yellow silty sand with frequent small stones and gravel. This deposit formed the natural horizon.

Six undated ditches [1008], [1012], [1015], [1017], [1020], [1022] and a single undated pit [1004] truncated [1008].

[1008] a north south linear 0.6m wide x 0.09m deep was filled with a soft dark greyish brown silty sand with moderate small stones (1009). Pit [1004] truncated [1008] and was filled with (1007) a soft mid grey sand with frequent small stones measuring 0.25m in thickness and representing the primary infilling, (1006) a soft mid greyish brown silty sand with frequent small stones, 0.25m thick and (1005) a soft dark greyish brown silty sand containing frequent small stones, 0.2m thick, both secondary infilling episodes.

Ditch [1012] aligned northeast southwest measured 2.85m wide x 0.75m deep and contained two secondary fills, (1014) a soft dark grey sand with occasional small stones, measuring 0.33m thick and (1013) a friable mid slightly brownish grey silty sand and gravel, 0.42m thick.

[1015] a ditch measuring 0.8m wide x 0.24m deep on an east west alignment contained a single soft dark brownish grey sand and gravel fill (1016).

[1017] an east west linear measuring 0.8m wide x 0.53m deep contained two fills, both secondary infilling events, (1019) a soft mid grey sand with very occasional gravel, 0.28m thick and (1018) a soft mid grey slightly silty sand with yellow mottling and frequent gravel inclusions measuring 0.25m thick.

Ditch [1020], a northeast southwest aligned linear measured 1.15m wide x 0.35m deep. A single fill (1021) of soft mid brownish grey slightly silty sand with frequent small stones was recorded.

The undated ditch [1022] measured 0.6m wide x 0.13m deep. Aligned northeast southwest it contained a single fill of hard mid grey silty sand with frequent small stones (1023).

Overlying the undated features deposit (1002) a 0.2m thick firm mid brownish grey sandy silt contained frequent small stones and represents a subsoil horizon. A modern field drain [1010] was the only feature to truncate (1002) and all deposits were subsequently sealed by topsoil (1001) a firm mid grey sandy silt with frequent small stones that averaged 0.3m thick across the trench.

5.2 Trench 2 (Figs. 4, 6, 10, 11, 12 and 13. Plates 4-7)

A firm, light brownish yellow silty sand with frequent small stones and gravel (2021) was identified as constituting the natural horizon in Trench 2. No subsoil horizon was identified. Six linear features, two with evidence of recutting and a single pit were recorded in this trench. Only ditch [2014] contained datable artefacts – a single

fragment of post medieval glass (Rachel Hall pers.comm.).

Ditches [2001] and [2005] are potentially contemporary, both showing similar alignment and recutting episodes. [2001] an east west linear 0.55m wide x 0.33m deep was filled by (2000), a firm laminated dark blackish grey slightly silty sand with occasional small angular pebbles. Recut as [2003] and infilled with a firm blackish brown silty sand with greyish laminations with occasional small angular pebbles (2002).

[2005] approximately 6m to the north of [2001] showed a similar east west alignment measuring 0.83m wide x 0.36m deep and filled with a firm dark blackish brown silty sand with orange mottling with occasional small angular pebbles (2004). This was recut as [2007] and infilled with (2006) a firm brownish black silty sand with grey laminations containing occasional angular pebbles, 0.56m thick. Ditch [2001] and recut [2003] showed as a linear cropmark and may form part of a field system or possible drove way (Fig. 6).

Linears [2011] and [2016] showed very similar profiles. Ditch [2011] on a northwest southeast alignment, measured 1.3m wide x 0.47m deep and ditch [2016] 1.19m wide x 0.39m deep orientated northeast to southwest.

Two fills were contained within [2011]. The first (2010) was a firm black sandy silt with greyish mottling with moderate small angular pebbles measuring 0.52m thick. The upper fill (2020) was firm dark greyish brown silty sand with moderate small angular pebbles, 0.18m thick. [2016] contained a single fill of firm dark blackish brown silty sand with mid grey mottling, occasional small angular pebbles and measuring 0.39m thick (2015).

Ditch [2011] potentially relates to a linear geophysical anomaly extending to the northwest (Fig. 6) and may form part of a wider field system contemporary with the cropmarks to the southwest.

Two further undated features were identified within Trench 2. East west ditch [2018] measured 0.86m wide x 0.27m deep and contained firm dark blackish brown silty sand with light yellow mottling (2017). Sub circular pit [2009] 0.64m in diameter was filled with firm light grey and black sand with occasional angular small pebbles, 0.64m thick (2008).

East west linear [2014] contained the only dating evidence recovered from Trench 2. Notably larger than the other linears, measuring 3.28m wide x 0.83m deep, the tertiary fill (2012) of firm black sandy silt with greyish mottling with moderate small angular pebbles contained post medieval glass. A secondary fill (2013) of firm dark greyish brown clayey sand and small angular pebbles, 0.46m thick underlay (2012).

A layer of firm very dark brown silty sand with occasional inclusions of small pebbles (2019) sealed the above deposits. This was a layer of topsoil varying between 0.3m and 0.4m thick.

5.3 Trench 3 (Figs. 4, 6 and 14)

The natural deposit encountered within Trench 3 was (3008), a firm light brownish yellow silty sand containing frequent small stones and gravel patches. Three linears cut (3008), these remain undated.

Ditches [3000] and [3002] intersect at approximate right angles; their fills were indistinguishable from one another suggesting either contemporary infilling or subsequent transformation of the deposits. Potentially they may form part of a contemporary field system or enclosure.

Aligned northwest southeast [3000] measured 0.9m wide x 0.11m deep and contained a single fill of loose mid to dark brown silty sand with occasional small stones (3001). [3002] aligned northeast southwest, 0.46m wide x 0.22m deep was filled by (3003) a firm mid to light brown sandy silt and occasional small stones.

Linear [3004] 5.5m to the north of [3000] was aligned east west, 1.25m wide and 0.2m deep. A single fill (3005) of loose dark brown sandy silt with occasional small angular and rounded stones was recorded.

A subsoil of firm mid brownish grey sandy silt containing frequent small stones, 0.2m thick (3007), sealed the above deposits. A layer of topsoil (3006) 0.3-0.4m thick constituted the latest deposit within Trench 3.

5.4 Trench 4 (Figs. 5, 6, 15, 16 and 17. Plates 8-10)

Trench 4 contained the largest concentration of archaeological features identified during the evaluation. The majority of these remain undated except for three modern field drains and linear [4029], tentatively dated to the prehistoric period. The southern third of the trench lay within an area previously stripped of topsoil and subsoil. Therefore stratigraphic relationships between features [4003], [4006], [4026] and these deposits have been lost.

A loose, yellow and yellowish brown sand containing occasional to frequent angular and rounded pebbles in patches and seams (4002) constituted the natural horizon in Trench 4.

Ditch [4029] represented the earliest datable phase of activity within Trench 4, a prehistoric flint waste flake was recovered from secondary fill (4032) (Tom Lane pers.comm.). Aligned east west [4029] measured 1.3m wide x 0.62m deep with steep concave side to a flat base. Five infilling episodes were recorded suggesting different depositional processes. The primary fill consisted of firm greenish grey silty sand, 0.02m thick (4030). The secondary fills (4031), (4032), (4033) and (4034) were sandy silts and silty sands. Recut as [4043] a final infilling of firm greyish brown sandy silt 0.27m thick with occasional rounded stones was recorded (4035).

The southernmost feature in Trench 4, an east west linear [4003], which measured 0.42m wide x 0.36m deep, contained a primary fill of firm light grey slightly silty sand with occasional rounded pebbles and iron panning, 0.08m thick (4004) and a secondary infill (4005) of firm yellowish brown silty sand with frequent rounded pebbles, 0.3m thick. At right angles to the majority of the ditches in Trench 4, [4003] may be contemporary with one or more and represent the return of a rectilinear enclosure.

Ditch [4006] was aligned ENE-WSW and measured 0.75m wide x 0.48m deep. Two secondary infilling episodes were recorded, (4007) a firm to hard dark brownish grey silt with occasional rounded pebbles and iron panning, 0.18m thick was sealed by a hard yellowish brown sandy silt containing frequent rounded pebbles and occasional iron panning, 0.3m thick (4008).

North south ditch [4015] showed an extended period of use with two phases of recutting [4018] and [4021] on the same alignment. [4015] measured 2m wide x 0.6m deep with a basal secondary fill of firm dark grey silty clay containing occasional rounded pebbles, 0.35m thick (4016), overlain by a dump deposit (4017)

of firm to loose mid grey silty clay mixed with yellowish sand.

The initial recut [4018], 1.05m wide and 0.3m deep was infilled with a secondary fill of dark grey clayey silt (4019) and a final tertiary fill (4020) of yellowish brown sandy silt. The final recutting episode measured 0.72m wide x 0.22m deep [4021] and contained two sandy silt fills (4022) and (4023).

Both [4015] and recut [4021] were truncated by broadly northwest southeast orientated ditches [4024] and [4026]. Measuring 0.5m wide x 0.22m deep ditch [4024] contained a single fill of firm grey silt with occasional rounded pebbles (4025). [4026], 0.8m wide x 0.2m deep, had secondary (4027) and tertiary infilling (4028) and notably terminated within the trench limits.

Two meters to the north of the prehistoric ditch [4029] linear [4036] consisted of a 0.6m wide x 0.25m deep cut aligned northwest southeast with two secondary fills. (4037), firm yellowish brown silty sand with occasional rounded pebbles, was sealed by a firm mid grey silty sand containing occasional angular pebbles, 0.04m thick (4038).

A further two ditches were recorded to the north of [4029] and [4036] both with a similar east west alignment. Linear [4039] contained a single fill of hard mid to light orange brown silty sand with occasional small rounded stones, 0.06m thick (4040) and measured 0.45m in width. [4041] was the most northerly feature identified in Trench 4, measuring 0.26m wide x 0.04m deep it had been heavily truncated by modern agriculture. The single fill (4042) consisted of firm mid to dark orange brown silty sand with occasional sub angular to rounded stones.

Subsoil (4001) sealed the majority of the linear features above. Firm greyish brown silty sand with occasional rounded pebbles, (4001) measured up to 0.2m thick where visible. Truncating the subsoil deposit field drains [4011], [4013] and mole drain [4009] represent the latest activity within Trench 4.

Topsoil (4000) sealed all deposits where remaining. This consisted of firm dark brown silty sand with occasional rounded pebbles measuring 0.3m thick.

5.5 Trench 5 (Figs. 5, 6, 17 and 18. Plates 11 and 12) 4 and 6, Sections 7 and 8)

Trench 5 was positioned to investigate a series of geophysical anomalies. These largely represent changes in the natural geology in particular areas of iron panning. Six modern field drains orientated either northeast southwest or northwest southeast were investigated but not recorded except for their position in plan (Fig. 5). A larger field drain [5001] and an undated linear [5005] were recorded.

A series of natural deposits was identified in Trench 5. (5007) an indurated mid brownish red iron pan, (5009) a soft to loose light yellow gravelly sand, (5010) a soft to loose light grey sand with moderate gravel inclusions and (5011) a soft to loose dark brown sand and gravel. The iron panning deposit (5007) probably represents at least in part the anomalies noted during the geophysical survey (Fig. 6).

Linear [5005] lies on the similar northeast southwest alignment to the unrecorded field drains to the west (Fig. 5). Measuring 0.3m wide x 0.2m deep, it contained a soft dark brownish grey sand and silt with occasional small stones (5004). However no ceramic drain was identified and the feature remains undated.

Field drain [5001] consisted of a large northeast southwest cut 3m wide and in excess of 0.5m deep with steep sloping

sides. Two episodes of backfilling were identified, the lower fill (5003) a soft very dark grey sandy silt with rare small stones, and at least 0.3m thick, contained a large diameter ceramic drain. The upper fill (5002) was firm dark greyish brown sandy silt containing moderate small stones, 0.2m thick. The proportions of the cut suggest perhaps a pre-existing ditch was utilised.

A layer of subsoil, (5008) sealed the above deposits. This was a soft dark brownish grey sand and silt containing moderate small stones measuring 0.1m thick. This was in turn overlain by (5006), a topsoil of loose mid brownish grey silt and sand with moderate small stones, 0.25m thick.

5.6 Trench 6 (Figs. 5, 7 and 18. Plate 13)

The earliest deposit identified in Trench 6 consisted of a loose mixed yellowish brown to dark brown sand showing frequent iron panning and containing occasional to frequent angular and rounded pebbles (6006). This deposit formed the natural horizon.

Two undated ditches on a similar north south alignment were revealed [6002] and [6004]. The westernmost [6002] measured 1.22m wide x 0.5m deep with steep concave sides to a rounded base. A single fill (6003) was recorded, a firm to loose mixed yellowish brown to dark greyish brown slightly silty sand with occasional angular and rounded pebbles and frequent iron panning.

To the east ditch [6004] contained a loose dark grey slightly silty sand fill with occasional rounded and angular pebbles (6005). Measuring 1.23m wide x 0.38m deep, [6004] had moderate sloping sides that gave way to a slightly concave base.

No evidence of subsoil was noted, with all the above deposits being sealed by (6001) a topsoil of firm to loose dark brownish grey sandy silt with occasional rounded and angular pebbles and varying in thickness between 0.3m and 0.45m.

6. DISCUSSION

The natural horizon encountered across the site was composed of silty sand to the south east with sand being predominant to the north and west. Fairly frequent stony inclusions and isolated patches of gravel were noted throughout the whole area.

Six trenches were excavated, of which all revealed evidence of archaeological remains, albeit mostly undated. The most intense evidence of archaeological activity was focused towards the south of the evaluation area specifically in Trenches 1, 2 and 4.

Although not clearly corresponding with excavated features the cropmarks do appear to show the areas where archaeological activity is present. A decrease in the number of identified archaeological deposits to the east adds weight to this hypothesis.

Linear features were identified in all the trenches. At least one of these, in Trench 2, is likely to be a post-Medieval field boundary ditch and another in Trench 4 was potentially prehistoric in date. The remainder are undated and likely to be related to agricultural utilisation of the land in the archaeological past.

The series of re-cut ditches in Trenches 2 and 4 may be regularly re-instated boundaries. These ditches were of greater scale than many of the single ditches elsewhere within the evaluation area, and the effort invested in keeping these features open indicates a continuity of purpose.

The form of the linear cuts may provide tentative evidence for the possibility of contemporary ditch systems. At least two distinct forms of ditch cut were identified, those with steep sides to a rounded base and others with shallower sloping sides to a narrower base (Figs 8-18). However no datable artefacts were recovered from two similar ditches to confirm this hypothesis and therefore are not discussed further.

These factors combine to suggest that the area around Trenches 1, 2 and 4 was more intensively utilised that the rest of the investigation area. The presence of artefacts from the features within Trenches 2 and 4, as opposed to features elsewhere on site, also indicates a greater emphasis of human activity in this area.

7. CONCLUSIONS

An archaeological evaluation was undertaken on land at Mill Farm, Kirkstead in order to determine the archaeological implications of re-commencing mineral (sand and gravel) extraction at the site. The site lies in close proximity to a presumed Iron Age enclosure or hillfort, whilst geophysical survey and cropmarks identified the potential for archaeological remains to survive within the proposed development area.

Trenches 1, 2, 3, 4 and 6 targeted cropmarks and Trenches 2 and 5 geophysical anomalies in order to assess the validity of these potential archaeological remains and to collect evidence to their form, function and date should they be archaeological in origin.

The majority of the trenches revealed the cropmarks did not correspond to identifiable archaeological features. Notable exceptions in Trench 2 were ditch [2001] and recut [2003]. These are probably related to agricultural activity. A larger number of the recorded ditches and couple of undated pits were not visible on the plots. It is also clear that the geophysical survey largely identified changes in the natural geology, the exception being a single linear feature [2011] in Trench 2.

The western half of the site, revealed a relatively concentrated spread of archaeological features. Intrusive works will definitely have a negative impact on these remains.

The limitations of the trenching method means the conclusions drawn remain speculative especially regarding the date of the identified features. Further investigation would have the potential to provide greater understanding of the purpose and form of these archaeological remains.

8. ACKNOWLEDGEMENTS

Archaeological Project Services wishes to acknowledge the assistance of C+G Concrete Limited, who commissioned the work. Mark Williams coordinated the project; Mark Williams and Tom Lane edited the report.

9. PERSONNEL

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Surveyors: Mark Dymond, Chris Moulis and Mary Nugent
Photographic reproduction: Sue Unsworth
CAD Illustration: Ray Holt
Post-excavation Analyst: Ray Holt

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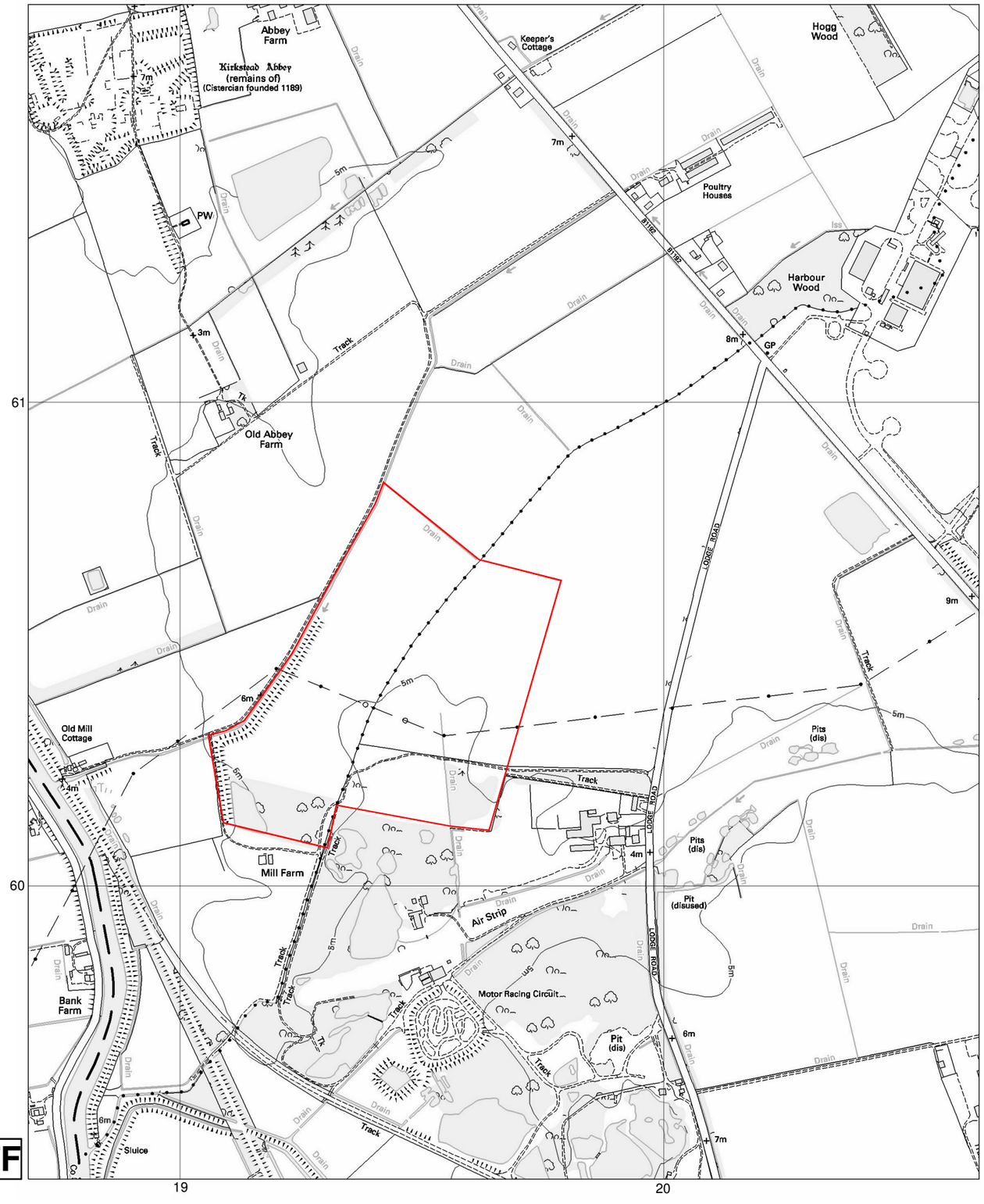
11. ABBREVIATIONS

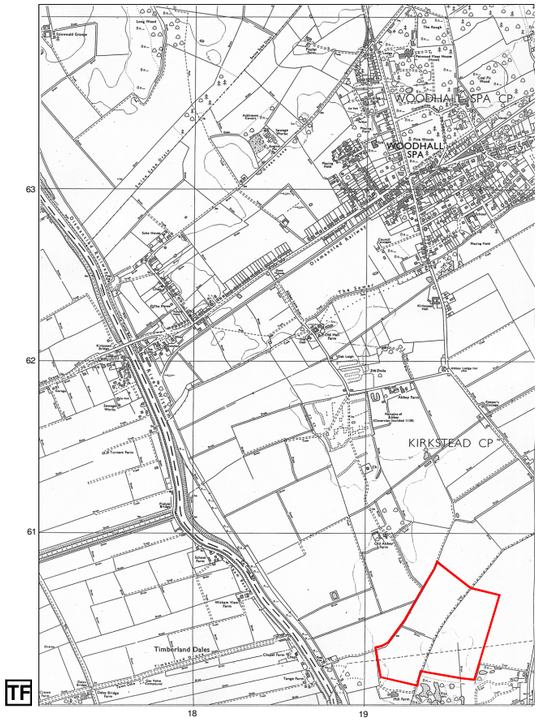
APS Archaeological Project Services

IFA Institute of Field Archaeologists

Figure 1 - General location plan



Extent of Site



0 500m

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Figure 2 - Site location

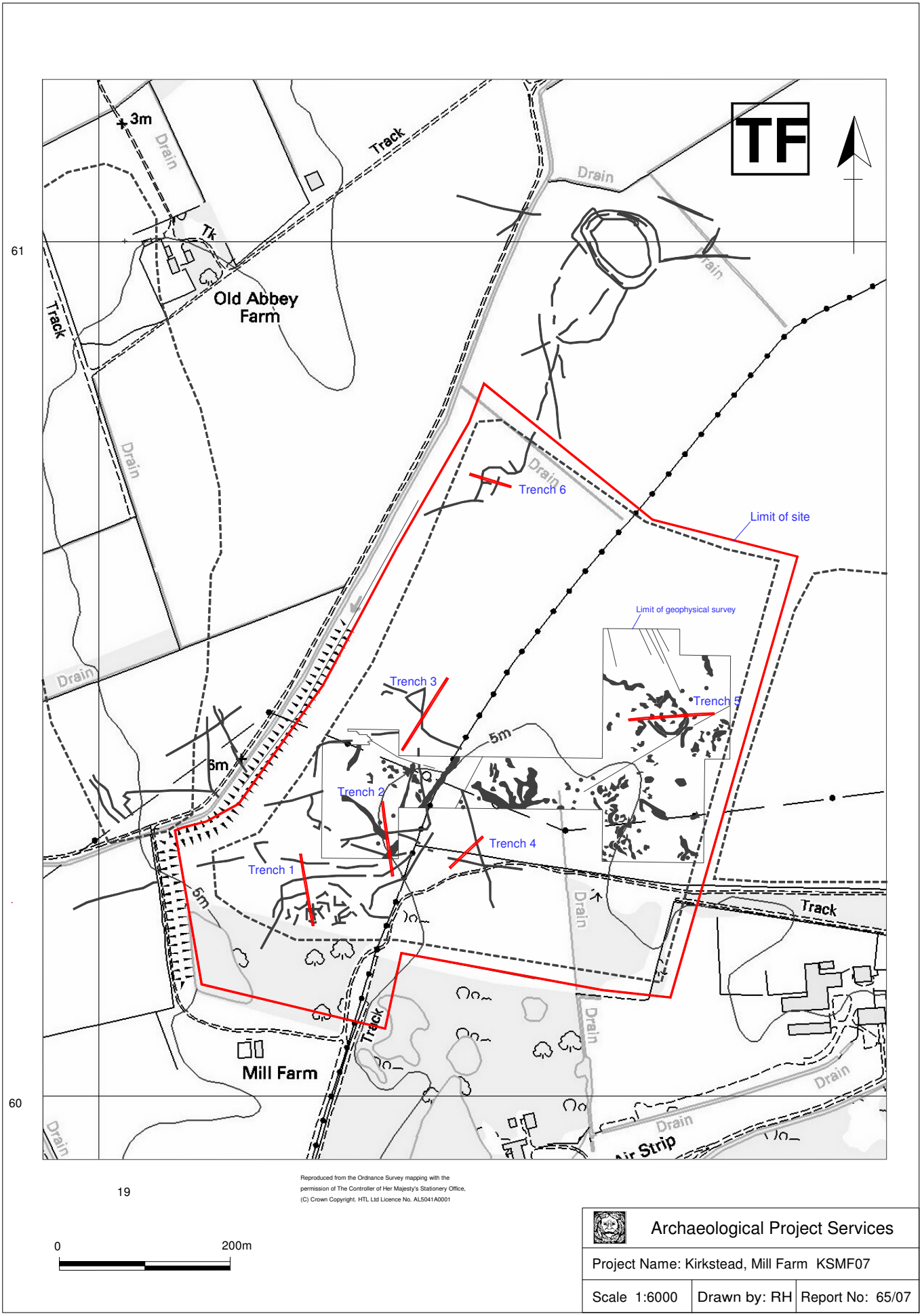

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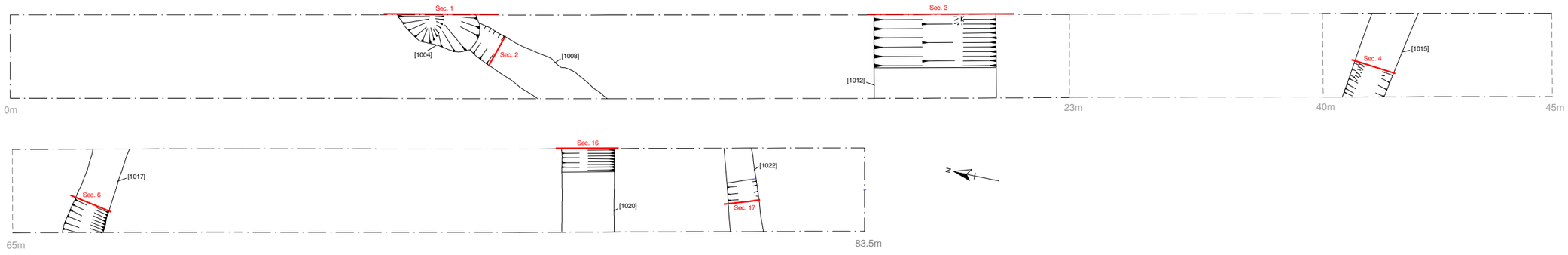
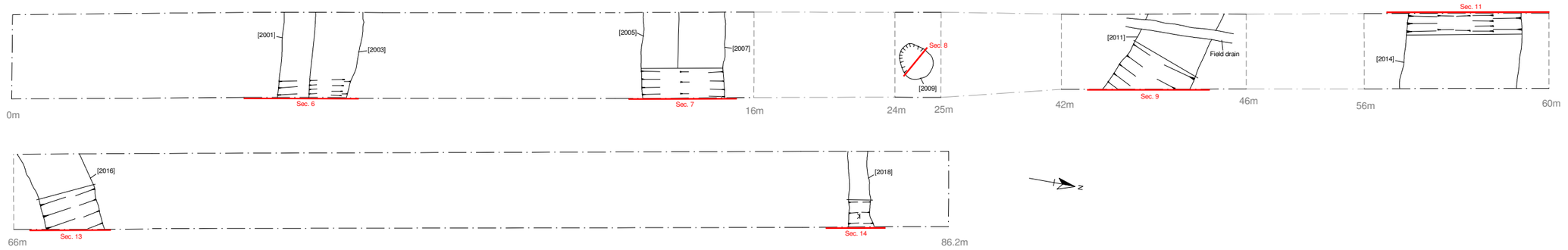
Figure 3 Layout of trenches

Trench 1



Trench 2



Trench 3

0 5m

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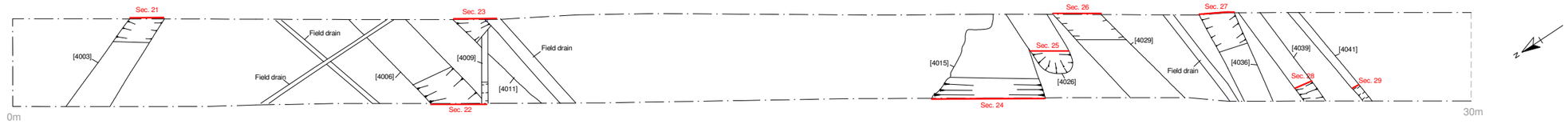
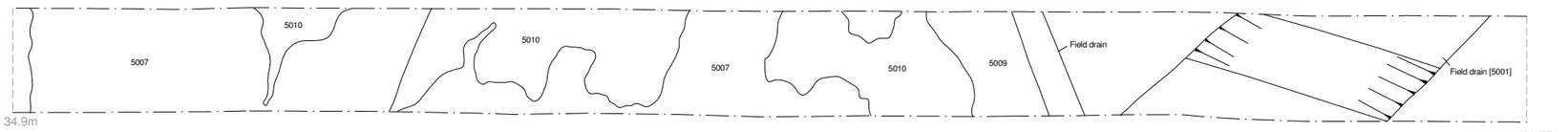
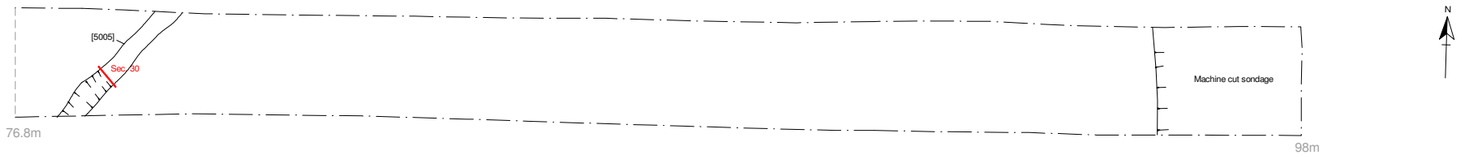
Figure 4 Post excavation plans Trenches 1-3

Trench 4



Trench 5





Trench 6

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Figure 5 Post excavation plans Trenches 4-6

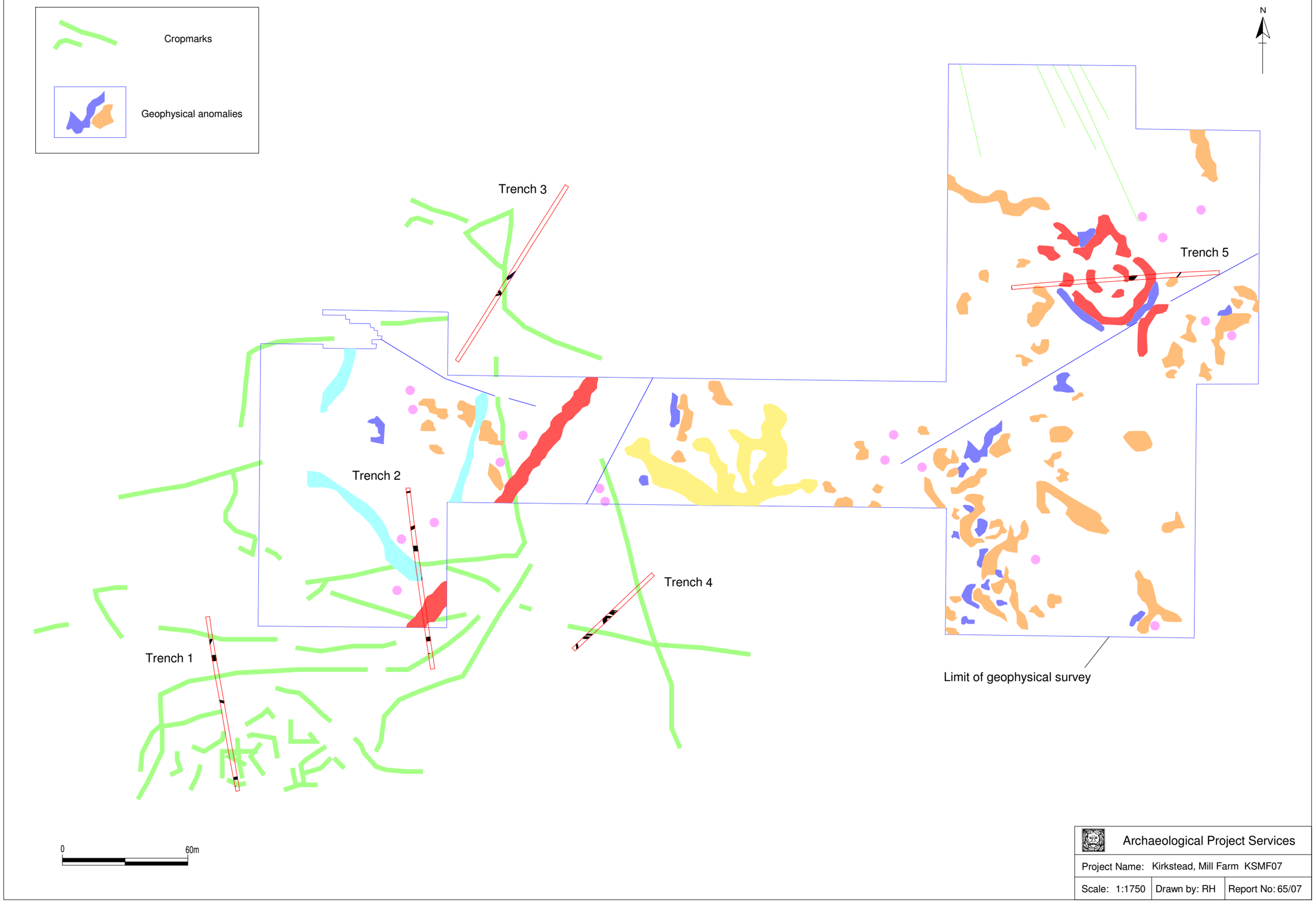


Figure 6 Trenches 1-5 showing cropmarks and geophysics plots

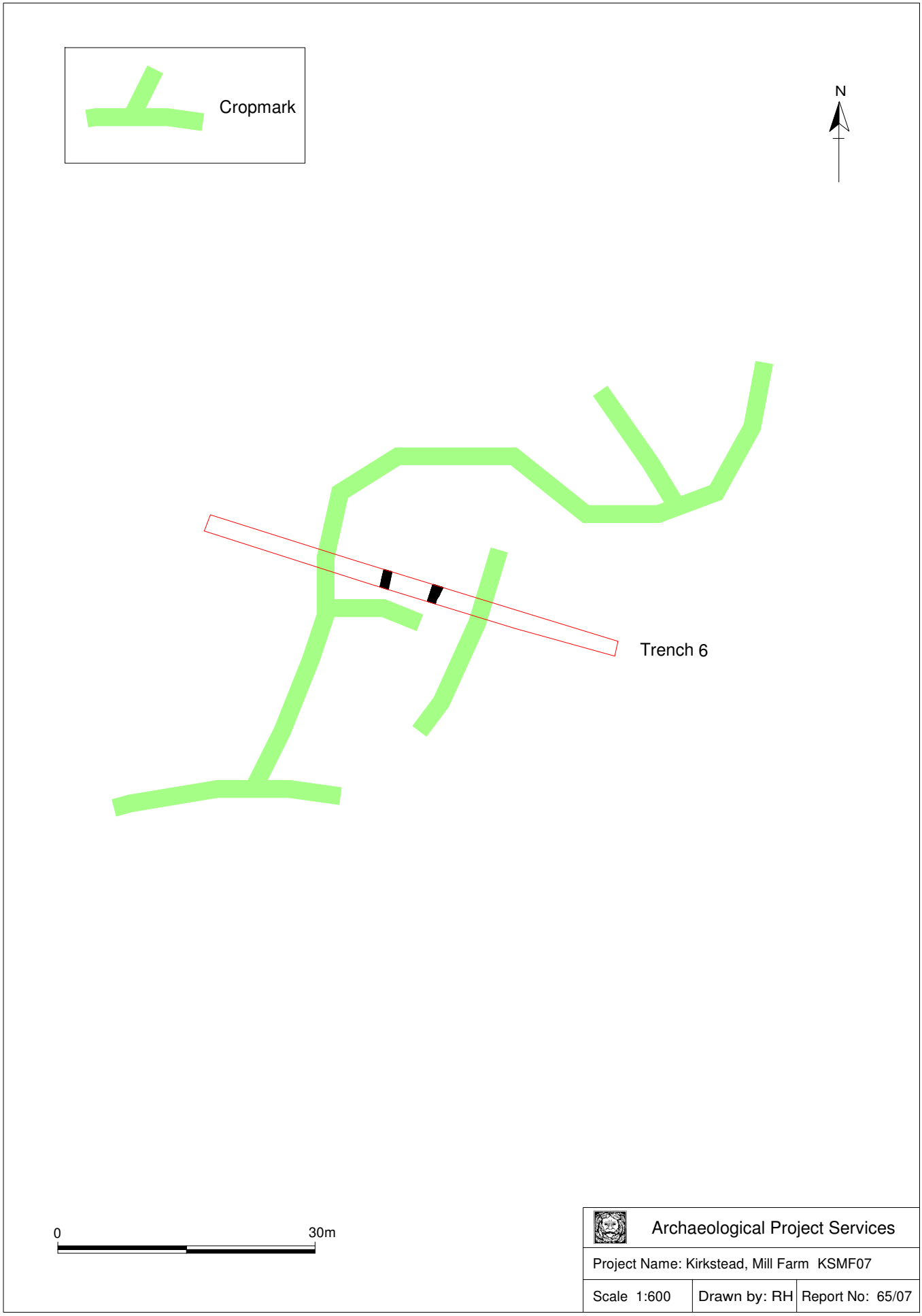
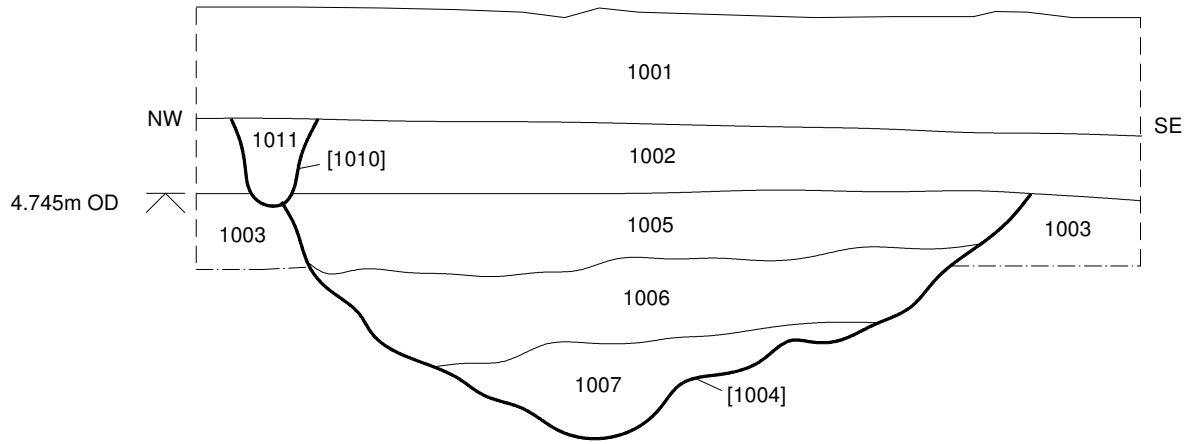
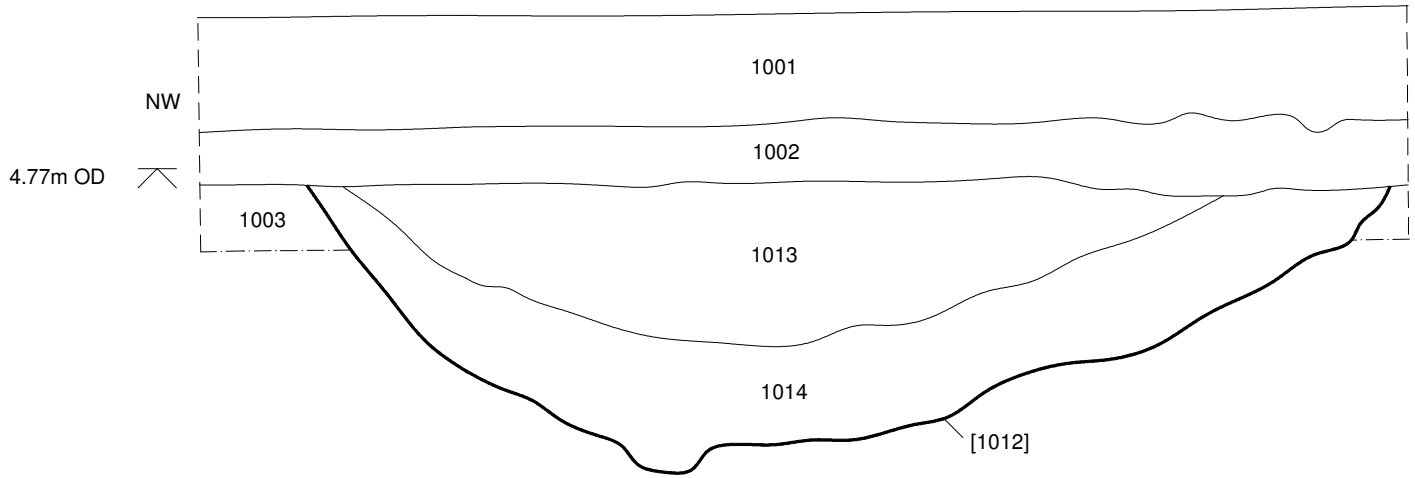


Figure 7 Trench 6 showing cropmark plot



Section 1



Section 3

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Figure 8 Sections 1 and 3

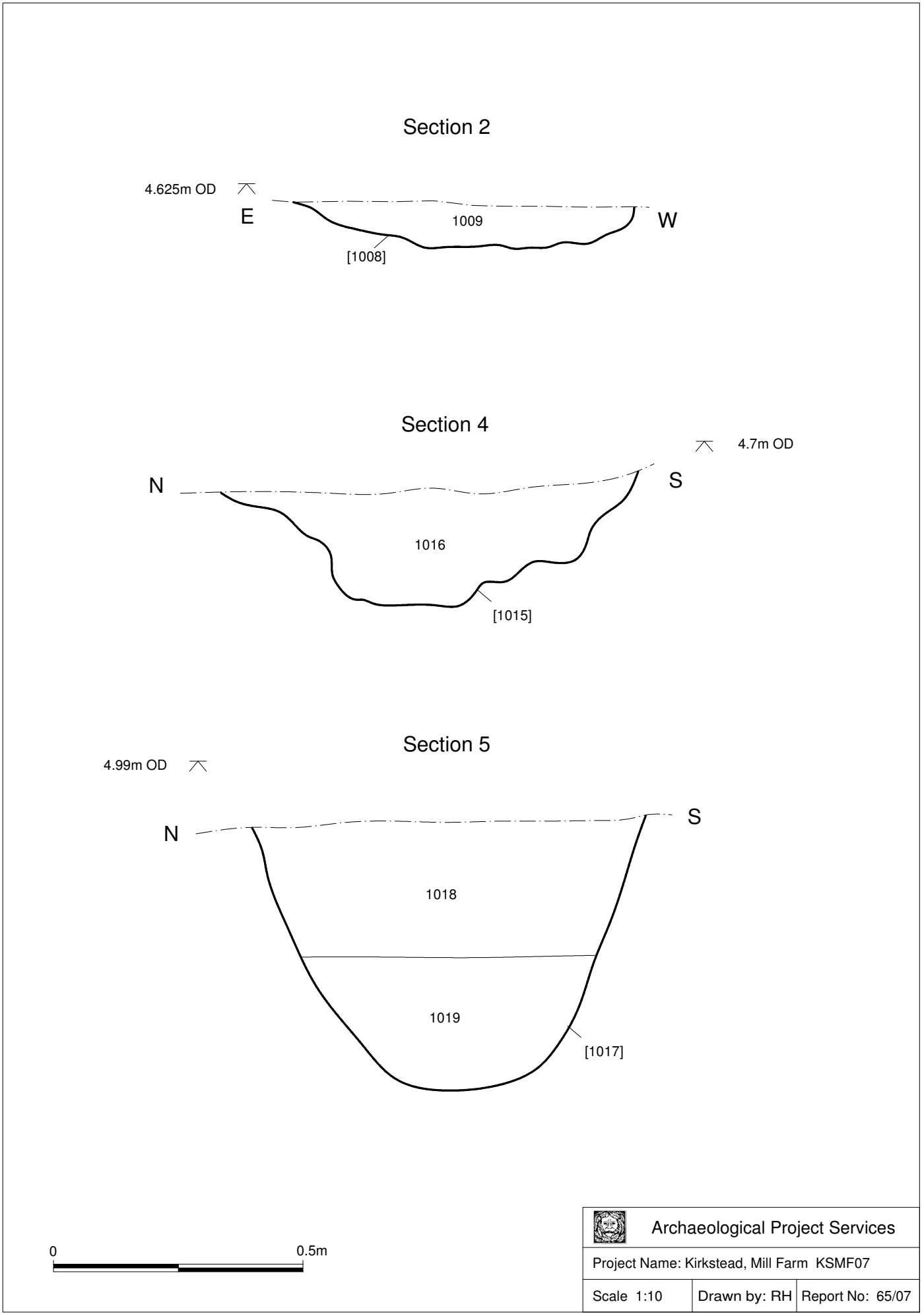


Figure 9 Sections 2, 4, 5

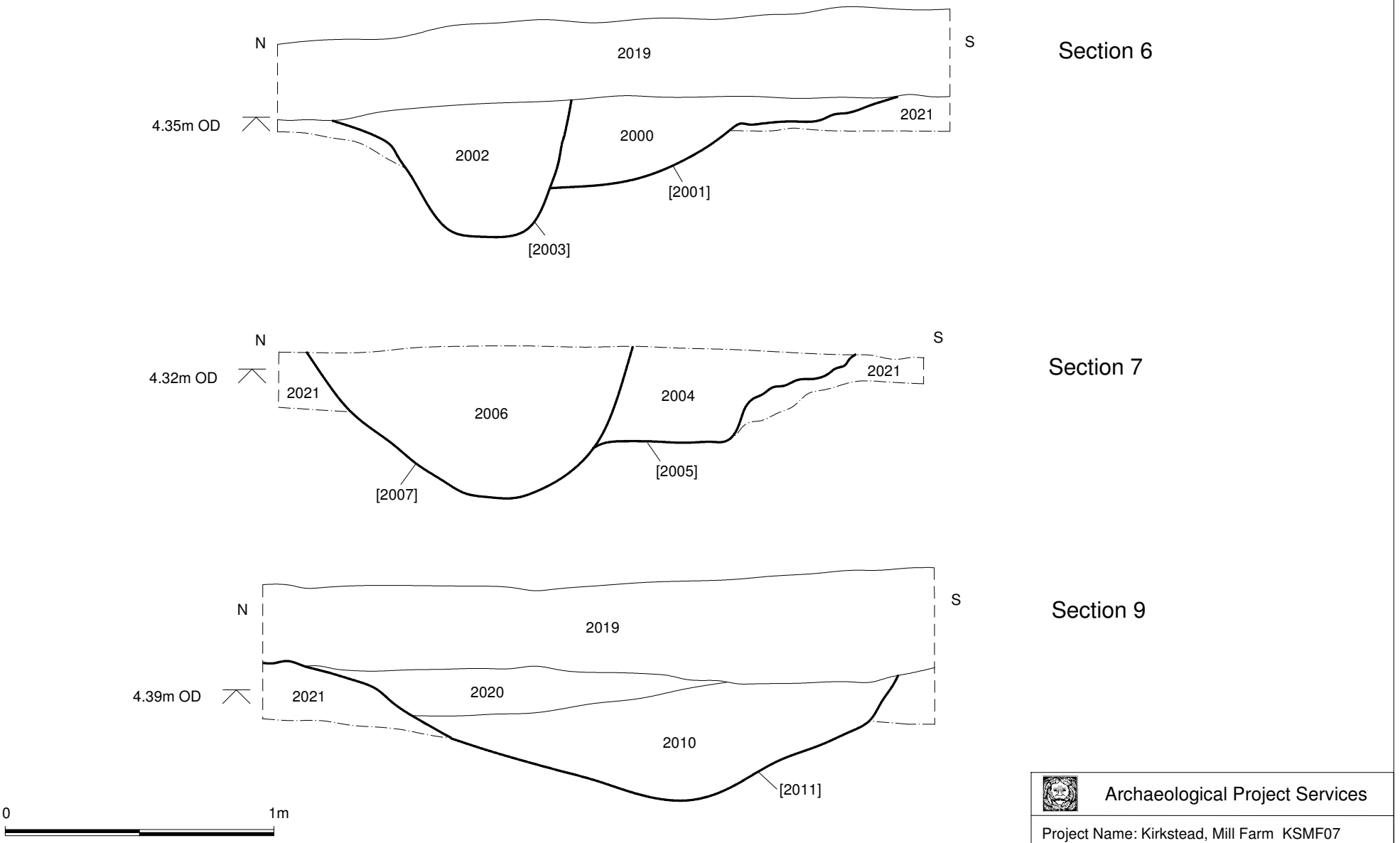


Figure 10 Sections 6, 7 and 9

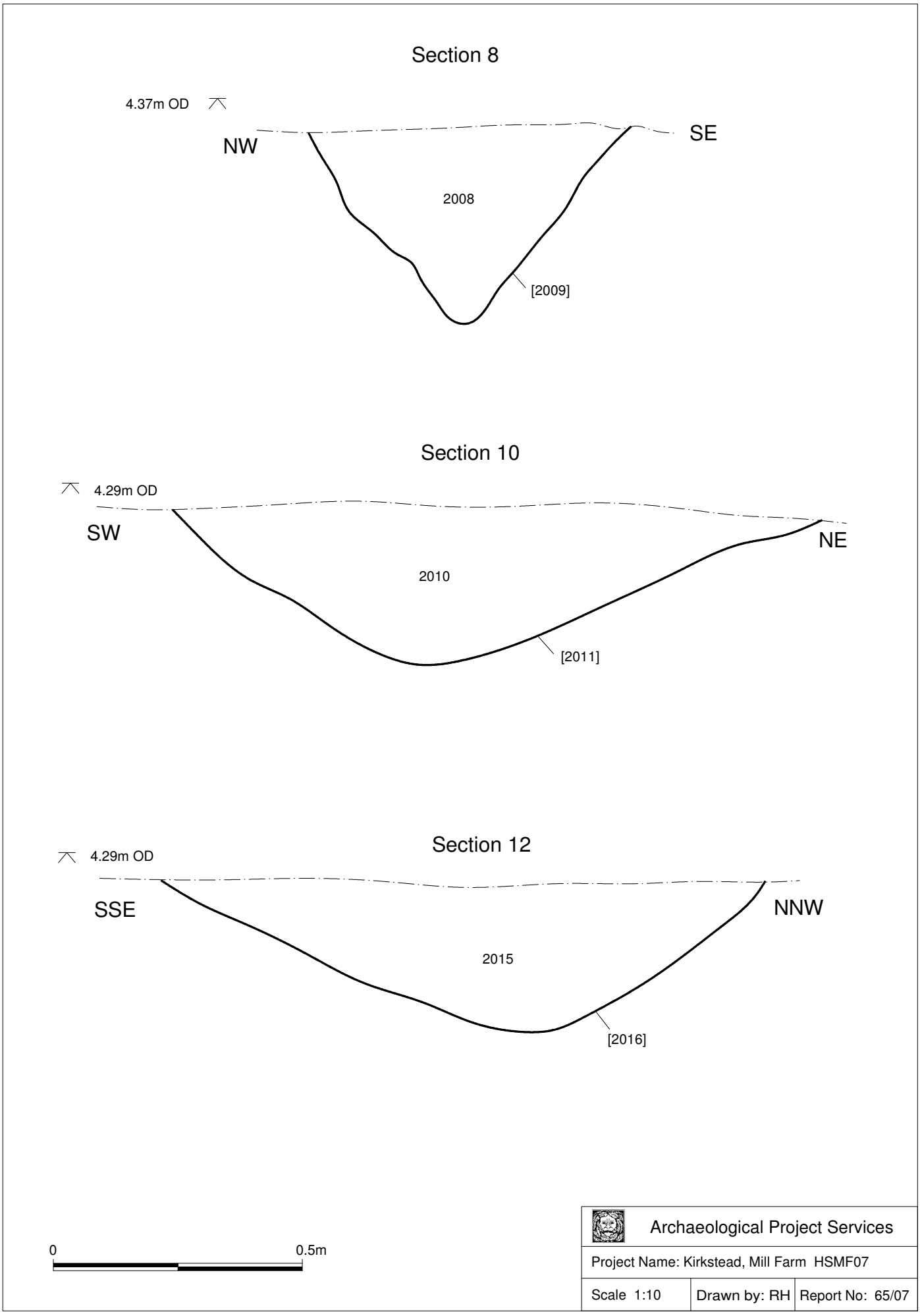
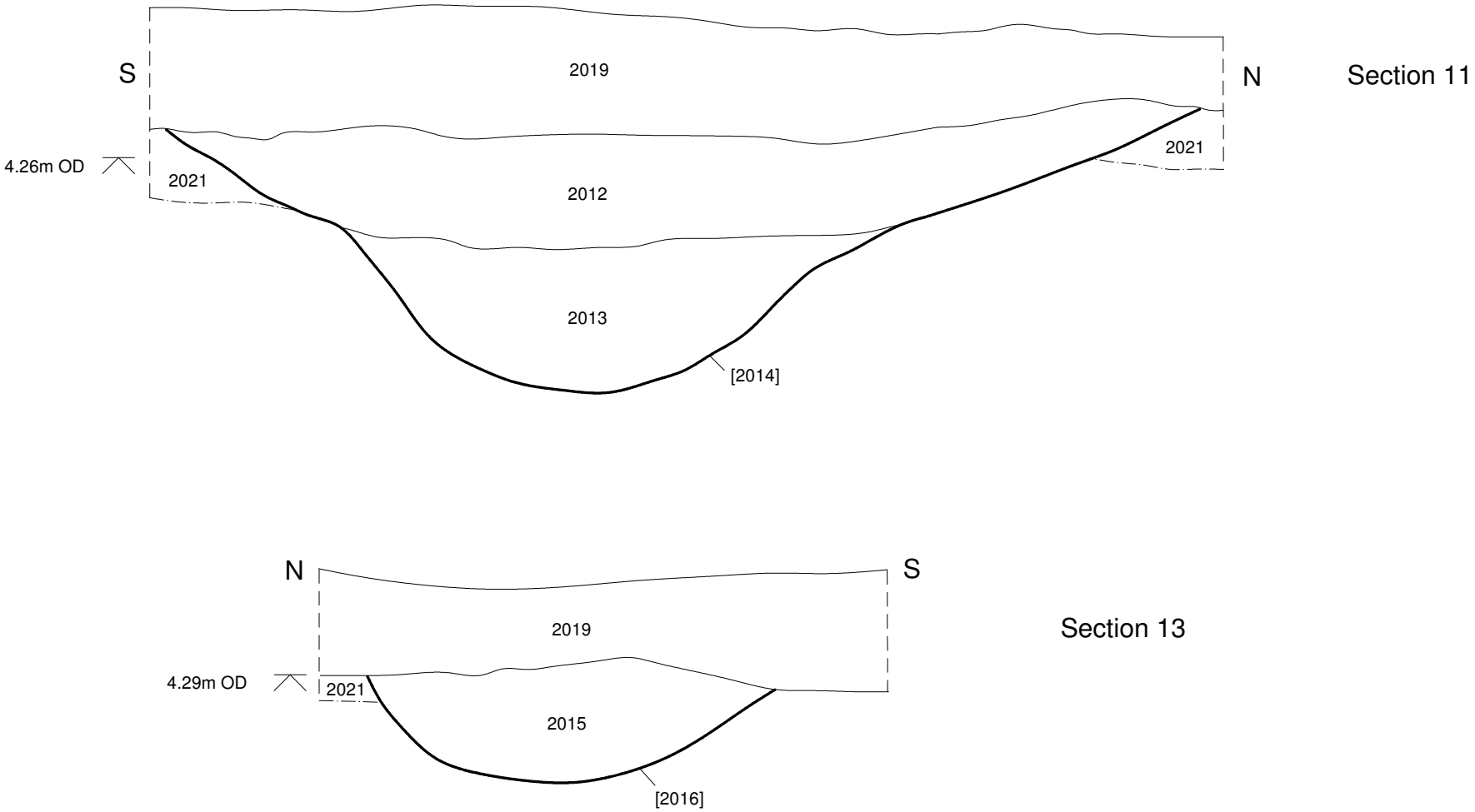


Figure 11 Sections 8, 10 and 12



Archaeological Project Services		
Project Name: Kirkstead, Mill Farm KSMF07		
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Figure 12 Sections 11 and 13

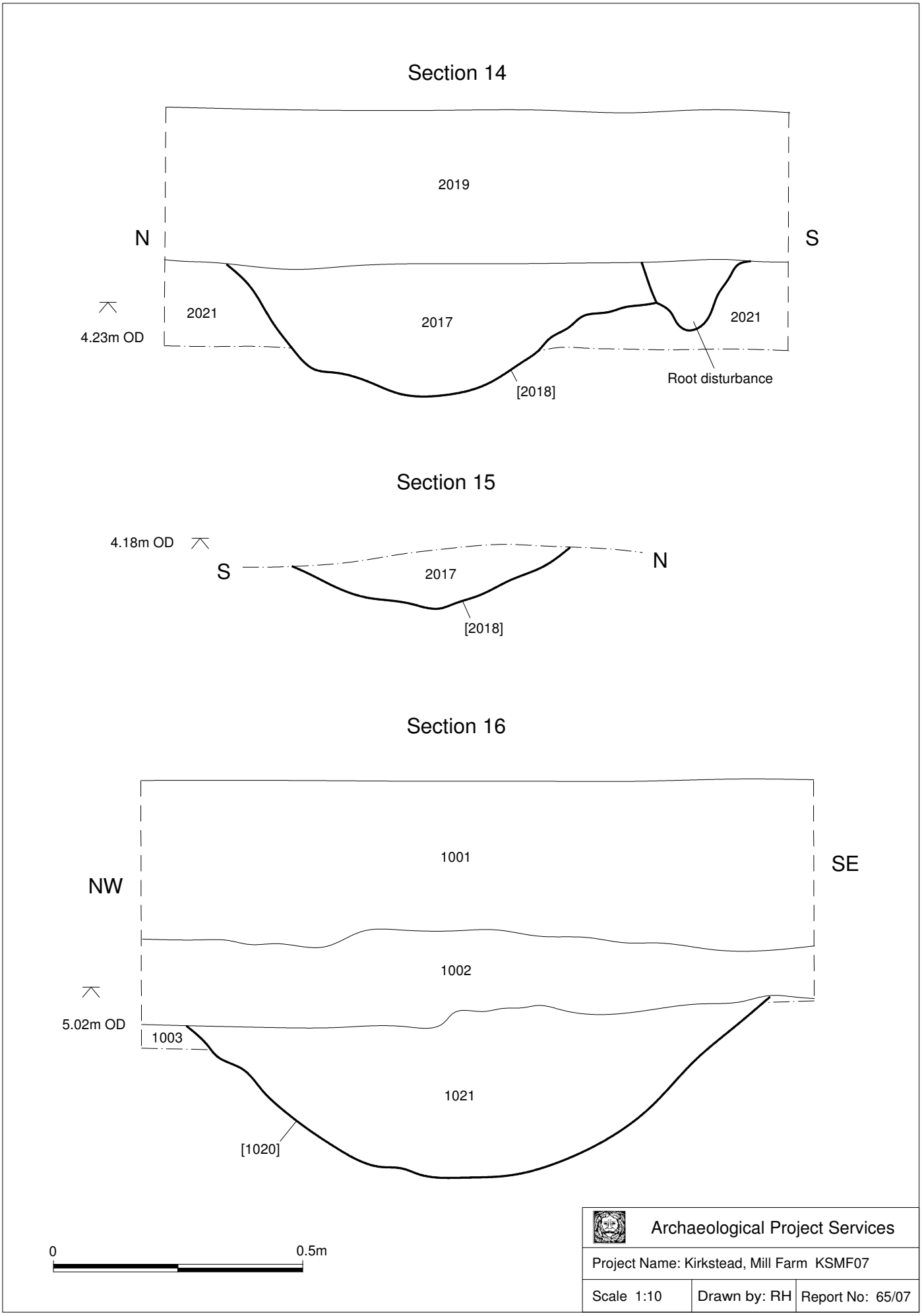


Figure 13 Sections 14, 15 and 16

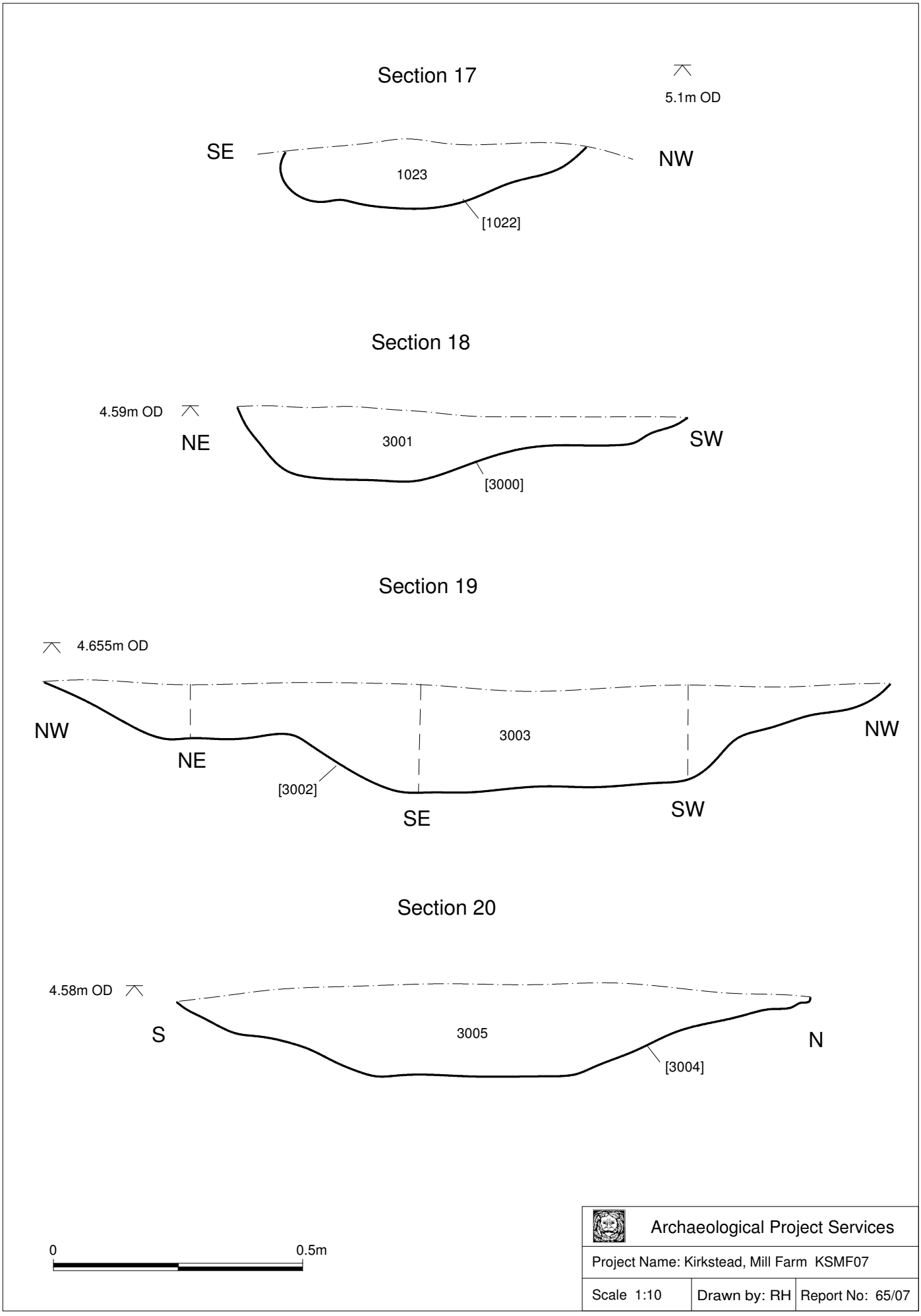


Figure 14 Sections 17, 18, 19 and 20

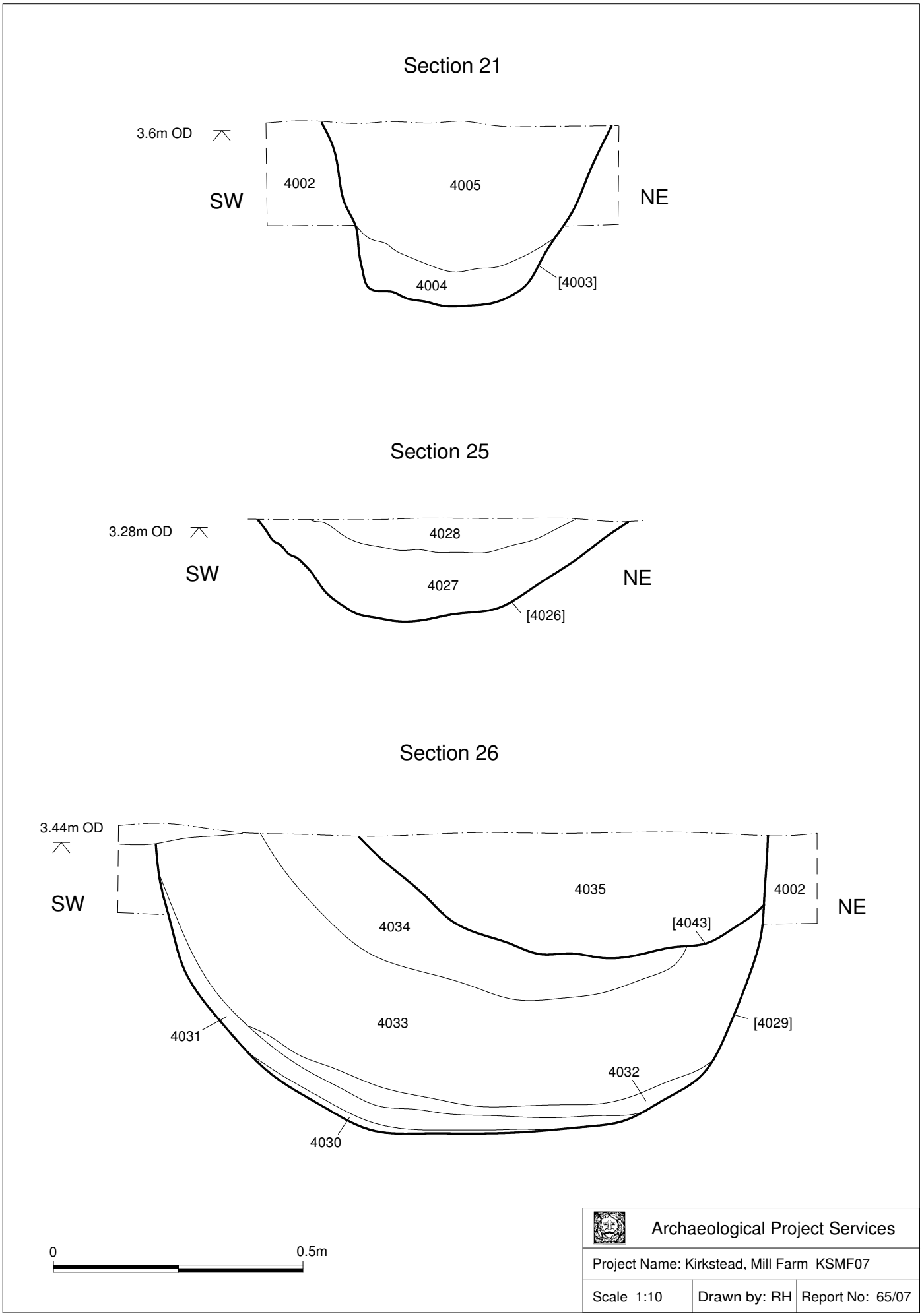
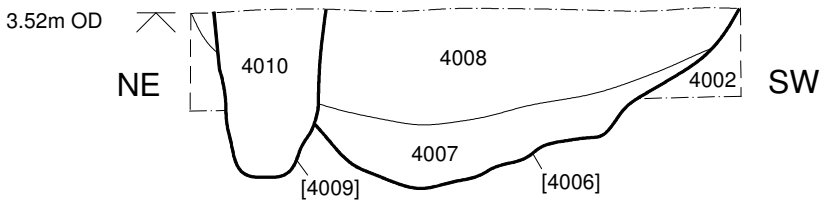


Figure 15 Sections 21, 25 and 26

Section 22



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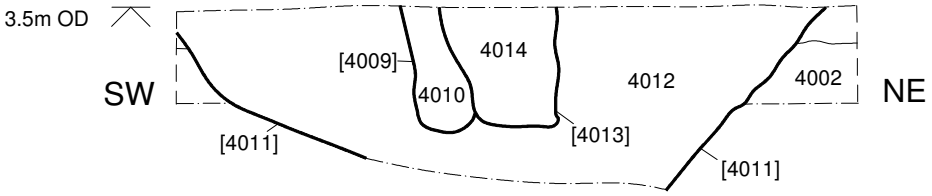

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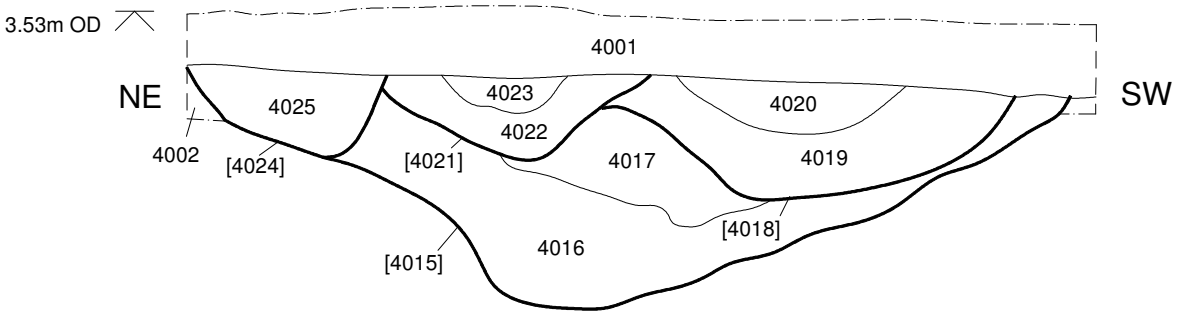

Archaeological Project Services		
Project Name: Kirkstead, Mill Farm KSMF07		
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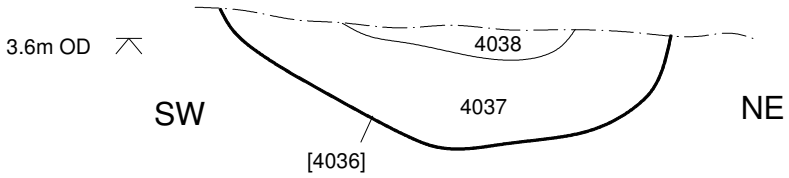
Figure 16 Sections 22, 23 and 24

Section 27



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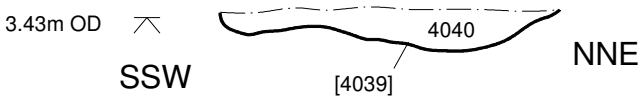
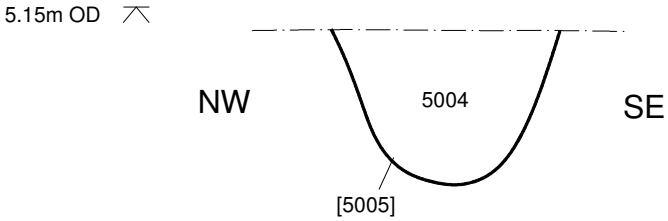


Section 29

Section 30



Archaeological Project Services		
Project Name: Kirkstead, Mill Farm KSMF07		
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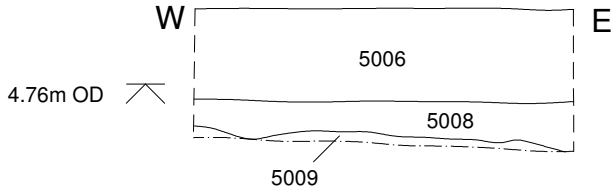
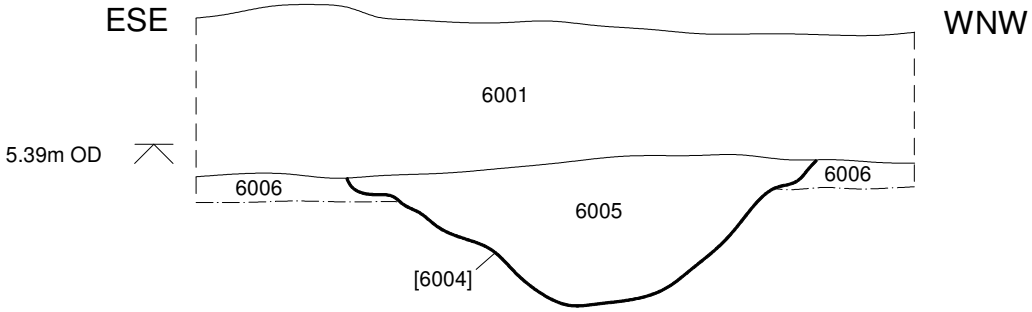
Figure 17 Sections 27, 28, 29 and 30

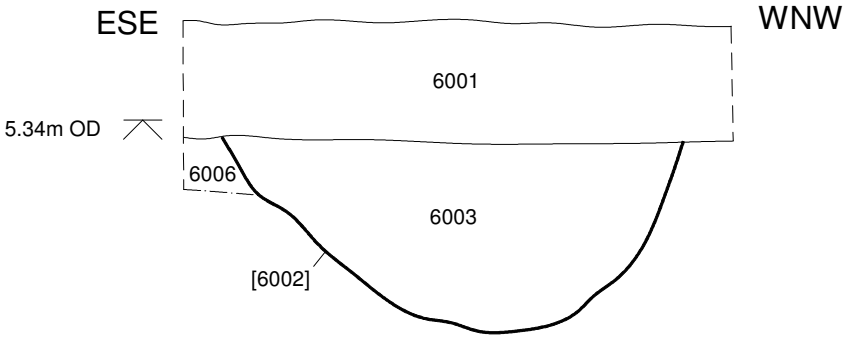
Section 31



Section 32



Section 33



Archaeological Project Services		
Project Name: Kirkstead, Mill Farm KSMF07		
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Figure 18 Sections 31, 32 and 33

Plate 1 General view of site, looking N

Plate 2 General view of site, looking W

Plate 4 Trench 2 general view, looking NNW

Plate 3 Trench 1 general view, looking NNW

Plate 5 Ditch [2001] and recut [2003], looking E

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Plate 12 Iron pan deposits in Trench 5, looking E

Plate 13 Trench 6 general view, looking W

LAND AT MILL FARM
KIRKSTEAD
LINCOLNSHIRE

SPECIFICATION FOR ARCHAEOLOGICAL EVALUATION

PREPARED FOR

C + G cONCRETE

BY
ARCHAEOLOGICAL PROJECT SERVICES
Institute of Field Archaeologists' Registered Archaeological Organisation No. 21

APRIL 2007

ARCHAEOLOGICAL PROJECT SERVICES

TABLE OF CONTENTS

1 SUMMARY

1.1 *This document comprises a specification for the archaeological evaluation of land at Mill Farm Kirkstead, Lincolnshire.*

1.2 *The site lies in an area of archaeological interest lying immediately south of a scheduled ancient monument. Geophysical survey has revealed archaeological*

1.3 *Quarrying is proposed on the site and an archaeological evaluation has been requested on the site to aid Lincolnshire County Council in determining a suitable mitigation program.*

1.4 *On completion of the fieldwork a report will be prepared detailing the findings of the investigation. The report will consist of a text describing the nature of the archaeological deposits located and will be supported by illustrations and photographs.*

2 INTRODUCTION

2.1 This document comprises a specification for the archaeological evaluation of land at Mill Farm Kirkstead, Lincolnshire.

2.1.1 The document contains the following parts:

2.1.2 Overview

2.1.3 The archaeological and natural setting

2.1.4 Stages of work and methodologies to be used

2.1.5 List of specialists

2.1.6 Programme of works and staffing structure of the project

3 SITE LOCATION

3.1 Kirkstead is located 11km southwest of Horncastle and 24km southeast of Lincoln in the administrative district of East Lindsey, Lincolnshire (Fig. 1).

3.2 The quarry is located 1.3km south of the scattered village of Kirkstead at National Grid Reference TF 1945 6045 (Fig. 2) with part of the quarry area in the parish of Tattershall Thorpe. Situated on a river terrace overlooking the River Witham on generally level ground at a height of *c*. 5m OD, the site comprises some 32.78 hectares.

4 PLANNING BACKGROUND

4.1 Archaeological Project Services was commissioned by C & G Concrete Limited to undertake a desk-based assessment of land at Mill Farm, Kirkstead and Tattershall Thorpe, Lincolnshire. This was in order to determine the archaeological implications of re-commencing mineral (sand and gravel) extraction at the site.

5 SOILS AND TOPOGRAPHY

5.1 The site is located on groundwater gley soils of the Blackwood and Quorndon Series (Robson *et al*. 1974, 47, 48). These soils overlie a drift geology of sands and gravels of upper river terrace deposits overlying glacially derived till which in turn seal a solid geology of Jurassic Ampthill Group (BGS 1995).

5.2 Geotechnical borehole logs were also provided by the client. These generally show topsoil with a thickness of between 0.2m and 0.35m thick and overburden (subsoils etc.) between 0.6m and 1.8m thick (Fielding 1980).

6 ARCHAEOLOGICAL OVERVIEW

6.1 Sites dating from the prehistoric period to the present day have been identified within the assessment area. Prehistoric remains include a probable hillfort identified from cropmarks which may date to the Iron Age period (800 BC-AD 43) and is a scheduled ancient monument. A few areas of extensive cropmarks may also be prehistoric or possibly Romano-British (AD 42-410) in date, and one such complex falls within the consented area of the quarry.

6.2 Located to the north of the site are the remains of the medieval (AD 1066-1540) Kirkstead Abbey. These survive as earthworks, although cropmarks indicating enclosures around the abbey have been identified, though the closest to the site lies some 800m away. The site perhaps lay in an extensive park associated with Tattershall Castle.

6.3 The abbey was dissolved in 1537 and it is possible that a large post-medieval (AD 1540-1900) house was constructed on the site. It was also during this time that pottery was being produced at Kirkstead, perhaps also within the former monastic precinct.

6.4 Cartographic sources indicate the site was woodland during the 18th century, though this was gradually replaced by fields during the 19th century. The site has undergone little change since the late 19th century.

6.5 Geophysical survey identified anomalies which could relate to archaeological features.

7 AIMS AND OBJECTIVES

7.1 The aim of the work will be to gather sufficient information for the archaeological curator to be able to formulate a policy for the management of the archaeological resources present on the site.

7.2 The objectives of the work will be to:

7.2.1 Establish the type of archaeological activity that may be present within the site.

7.2.2 Determine the likely extent of archaeological activity present within the site.

7.2.3 Determine the date and function of the archaeological features present on the site.

7.2.4 Determine the state of preservation of the archaeological features present on the site.

7.2.5 Determine the spatial arrangement of the archaeological features present within the site.

7.2.6 Determine the extent to which the surrounding archaeological features extend into the application area.

7.2.7 Establish the way in which the archaeological features identified fit into the pattern of occupation and land-use in the surrounding landscape.

8 TRIAL TRENCHING

8.1 Reasoning for this technique

8.1.1 Trial trenching enables the *in situ* determination of the sequence, date, nature, depth, environmental potential and density of archaeological features present on the site.

8.1.2 The program consists of 2 (Two) trenches 50m X 1.8 and 4 (four) trenches 100m x 1.8. These are positioned to investigate geophysical anomalies within the area.

8.2 General Considerations

8.2.1 All work will be undertaken following statutory Health and Safety requirements in operation at the time of the investigation.

8.2.2 The work will be undertaken according to the relevant codes of practice issued by the Institute of Field Archaeologists (IFA). *Archaeological Project Services* is an IFA Registered Archaeological Organisation (No. 21).

8.2.3 Any and all artefacts found during the investigation and thought to be 'treasure', as defined by the Treasure Act 1996, will be removed from site to a secure store and promptly reported to the appropriate coroner's office.

8.2.4 Excavation of the archaeological features exposed will only be undertaken as far as is required to determine their date, sequence, density and nature. All archaeological features exposed will be excavated and recorded unless otherwise agreed with the Lincolnshire County Council Archaeological Advisor. The investigation will, as far as is reasonably practicable, determine the level of the natural deposits to ensure that the depth of the archaeological sequence present on the site is established.

8.2.5 Open trenches will be marked by hazard tape attached to road irons or similar poles. Subject to the consent of the archaeological curator, and following the appropriate recording, the trenches, particularly those of excessive depth, will be backfilled as soon as possible to minimise any health and safety risks.

8.3 Methodology

8.3.1 Removal of the topsoil and any other overburden will be undertaken by mechanical excavator using a toothless ditching bucket. To ensure that the correct amount of material is removed and that no archaeological deposits are damaged, this work will be supervised by Archaeological Project Services. On completion of the removal of the overburden, the nature of the underlying deposits will be assessed by hand excavation before any further mechanical excavation that may be required. Thereafter, the trenches will be cleaned by hand to enable the identification and analysis of the archaeological features exposed.

8.3.2 Investigation of the features will be undertaken only as far as required to determine their date, form and function. The work will consist of half- or quarter-sectioning of features as required and, where appropriate, the removal of layers. Should features be located which may be worthy of preservation *in situ*, excavation will be limited to the absolute minimum, (*ie* the minimum disturbance) necessary to interpret the form, function and date of the features.

8.3.3 The archaeological features encountered will be recorded on Archaeological Project Services pro-forma context record sheets. The system used is the single context method by which individual archaeological units of stratigraphy are assigned a unique record number and are individually described and drawn.

8.3.4 Plans of features will be drawn at a scale of 1:20 and sections at a scale of

1:10. Should individual features merit it, they will be drawn at a larger scale.

8.3.5 Throughout the duration of the trial trenching a photographic record consisting of black and white prints (reproduced as contact sheets) and colour slides will be compiled. The photographic record will consist of:

- the site before the commencement of field operations.
- the site during work to show specific stages of work, and the layout of the archaeology within individual trenches.
- individual features and, where appropriate, their sections.
- groups of features where their relationship is important.
- the site on completion of field work

8.4 Should human remains be encountered, they will be left *in situ* with excavation being limited to the identification and recording of such remains. If removal of the remains is necessary the appropriate Home Office licences will be obtained and the local environmental health department informed. If relevant, the coroner and the police will be notified.

8.5 Finds collected during the fieldwork will be bagged and labelled according to the individual deposit from which they were recovered ready for later washing and analysis.

8.6 The spoil generated during the investigation will be mounded along the edges of the trial trenches with the top soil being kept separate from the other material excavated for subsequent backfilling.

8.7 The precise location of the trenches within the site and the location of site recording grid will be established by an EDM / GPS survey.

8.8 Should evidence of pottery kilns be found, these will be excavated only so far as necessary to identify the feature as such and give an indication of level of preservation. Pottery will be sampled in order to give a broad indication of form and date.

9 ENVIRONMENTAL ASSESSMENT

9.1 During the investigation specialist advice will be obtained from an environmental archaeologist. If necessary the specialist will visit the site and will prepare a report detailing the nature of the environmental material present on the site and its potential for additional analysis should further stages of archaeological work be required. The

results of the specialist's assessment will be incorporated into the final report.

9.2 Samples will be taken from all waterlogged feature fills of pre-18th century date. Otherwise, samples will be taken from primary and secondary fills of ditches and pits, the level of sampling being appropriate to the content of the individual feature. Samples to characterise the survival of plant remains, molluscs and small faunal remains will be taken from suitable archaeological contexts. The samples will be extracted and recorded in accordance with Murphy & Wiltshire 1994. Bulk samples for small faunal remains will be wet-sieved through 0.5mm collecting meshes.

10 POST-EXCAVATION AND REPORT

10.1 Stage 1

10.1.1 On completion of site operations, the records and schedules produced during the trial trenching will be checked and ordered to ensure that they form a uniform sequence constituting a level II archive. A stratigraphic matrix of the archaeological deposits and features present on the site will be prepared. All photographic material will be catalogued: the colour slides will be labelled and mounted on appropriate hangers and the black and white contact prints will be labelled, in both cases the labelling will refer to schedules identifying the subject/s photographed.

10.1.2 All finds recovered during the trial trenching will be washed, marked, bagged and labelled according to the individual deposit from which they were recovered. Any finds requiring specialist treatment and conservation will be sent to the Conservation Laboratory at the City and County Museum, Lincoln.

10.2 Stage 2

10.2.1 Detailed examination of the stratigraphic matrix to enable the determination of the various phases of activity on the site.

10.2.2 Finds will be sent to specialists for identification and dating.

11.3 Stage 3

11.3.1 On completion of stage 2, a report detailing the findings of the investigation will be prepared. This will consist of:

- A non-technical summary of the results of the investigation.
- A description of the archaeological setting of the site.
- Description of the topography and geology of the investigation area.

- Description of the methodologies used during the investigation and discussion of their effectiveness in the light of the results
- A text describing the findings of the investigation.
- Plans of the trenches showing the archaeological features exposed. If a sequence of archaeological deposits is encountered, separate plans for each phase will be produced.
- Sections of the trenches and archaeological features.
- Interpretation of the archaeological features exposed and their context within the surrounding landscape.
- Specialist reports on the finds from the site.
- Appropriate photographs of the site and specific archaeological features or groups of features.
- A consideration of the significance of the remains found, in local, regional, national and international terms, using recognised evaluation criteria.

11 ARCHIVE

12.1 The documentation, finds, photographs and other records and materials generated during the evaluation will be sorted and ordered in accordance with the procedures in the Society of Museum Archaeologists' document *Transfer of Archaeological Archives to Museums* (1994), and any additional local requirements, for long term storage and curation. This work will be undertaken by the Finds Supervisor, an Archaeological Assistant and the Conservator (if relevant). The archive will be deposited within an approved County store as soon as possible after completion of the post-excavation and analysis.

12.2 If required, microfilming of the archive will be carried out at Lincolnshire Archives. The silver master will be transferred to the RCHME and a diazo copy will be deposited with the Lincolnshire County Council HER.

12.3 Prior to the project commencing, the Lincolnshire Museum Service will be contacted to obtain their agreement to receipt of the project archive and to establish their requirements with regards to labelling, ordering, storage, conservation and organisation of the archive.

12.4 Upon completion and submission of the evaluation report, the landowner will be contacted to arrange legal transfer of title to the archaeological objects retained during the investigation from themselves to the receiving museum. The transfer of

title will be effected by a standard letter supplied to the landowner for signature.

13 REPORT DEPOSITION

13.1 An unbound draft copy of the report will be supplied initially to the County Archaeological Office for comment. Copies of the final report will be sent to: the client; Lincolnshire County Council Archaeology Office (2 copies); and the Lincolnshire County Historic Environment Record.

14 PUBLICATION

14.1 A report of the findings of the investigation will be submitted for inclusion in the appropriate local journal. Notes or articles describing the results of the investigation will also be submitted for publication in the appropriate national journals: *Medieval Archaeology* and *Journal of the Medieval Settlement Research Group* for medieval and later remains, and *Britannia* for discoveries of Roman date.

14.2 A entry will be submitted to Online Access to the Index of Archaeological Investigation (OASIS) and the final report uploaded as a PDF.

15 CURATORIAL MONITORING

15.1 Curatorial responsibility for the project lies with Lincolnshire County Council Archaeology Office. As much notice as possible will be given in writing to the curator prior to the commencement of the project to enable them to make appropriate monitoring arrangements.

16 VARIATIONS TO THE PROPOSED SCHEME OF WORKS

16.1 Variations to the scheme of works will only be made following written confirmation from the archaeological curator.

16.2 Should the archaeological curator require any additional investigation beyond the scope of the brief for works, or this specification, then the cost and duration of those supplementary examinations will be negotiated between the client and the contractor.

17 SPECIALISTS TO BE USED DURING THE PROJECT

17.1 The following organisations/persons will, in principle and if necessary, be used as subcontractors to provide the relevant specialist work and reports in respect of any objects or material recovered during the investigation that require their expert knowledge and input. Engagement of any particular specialist subcontractor is also dependent on their availability and ability to meet programming requirements.

Task	Body to be undertaking the work

Air Photograph plotting	Roger Palmer, independent specialist
Conservation	Conservation Laboratory, City and County Museum, Lincoln.
Pottery Analysis	Prehistoric: Dr F Pryor, Soke Archaeological Services Ltd or Dr Carol Allen, independent specialist Roman: M Darling, independent specialist (formerly City of Lincoln Archaeological Unit), or local specialist if required Anglo-Saxon: J Young, independent specialist (formerly City of Lincoln Archaeological Unit), or local specialist if required Medieval and later: David Hall, independent specialist, or local specialist if required
Other Artefacts	J Cowgill, independent specialist
Human Remains Analysis	R Gowland, independent specialist
Animal Remains Analysis	J Kitch, APS
Environmental Analysis	Val Fryer, independent specialist
Soil Assessment	Dr Charly French, independent specialist
Pollen Assessment	Pat Wiltshire, independent specialist
Radiocarbon dating	Beta Analytic Inc., Florida, USA
Dendrochronology dating	University of Sheffield Dendrochronology Laboratory

18 PROGRAMME OF WORKS AND STAFFING LEVELS

18.1 The Senior Archaeologist, Archaeological Project Services, Tom Lane, MIFA, will have overall responsibility and control of all aspects of the work.

18.2 Site work will be undertaken by a Project Officer with experience of archaeological excavations of this type, assisted by 1-2 appropriately experienced archaeological technicians. The archaeological works are programmed to take 3 days days.

18.3 Post-excavation Assessment report production is expected to take up to 10 person-days. Post-excavation analysis will be undertaken by the Project Officer, or post-excavation analyst as appropriate, with assistance from a finds supervisor, illustrator and external specialists.

18.4 Contingency

18.4.1 A contingency allowance has been included in the costing in the event of delays due to adverse weather conditions; of discoveries necessitating special analyses or dating; or of other unexpected discoveries, requiring additional site time and/or post-excavation resources or conservation.

18.4.2 The activation of any contingency requirement will be by agreement with the client and in consultation with the County Archaeology Office.

19 INSURANCES

19.1 Archaeological Project Services, as part of the Heritage Trust of Lincolnshire, maintains Employers Liability insurance to £10,000,000. Additionally, the company maintains Public and Products Liability insurances, each with indemnity of £5,000,000. Copies of insurance documentation can be supplied on request.

20 COPYRIGHT

20.1 Archaeological Project Services shall retain full copyright of any commissioned reports under the *Copyright, Designs and Patents Act* 1988 with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Specification.

20.2 Licence will also be given to the archaeological curators to use the documentary archive for educational, public and research purposes.

20.3 In the case of non-satisfactory settlement of account then copyright will remain fully and exclusively with Archaeological Project Services. In these circumstances it will be an infringement under the *Copyright, Designs and Patents Act* 1988 for the client to pass any report, partial report, or copy of same, to any third party. Reports submitted in good faith by Archaeological Project Services to any Planning Authority or archaeological curator will be removed from said Planning Authority and/or archaeological curator. The Planning Authority and/or archaeological curator will be notified by Archaeological Project Services that the use of any such information previously supplied constitutes an infringement under the *Copyright, Designs and Patents Act* 1988 and may result in legal action.

20.4 The author of any report or specialist contribution to a report shall retain intellectual copyright of their work and may make use of their work for educational or research

purposes or for further publication.

Specification: Version 1, 8th March 2007

Appendix 2 Context Summary

Context	Description	Interpretation
Tr.1	100m length x 1.8m wide x 0.7m deep	Evaluation trench
1001	Firm mid grey sandy silt, frequent small stones, 0.3m thick	Topsoil
1002	Firm mid brownish grey sandy silt, frequent small stones, 0.2m thick	Subsoil
1003	Firm light brownish yellow silty sand, frequent small stones and gravel	Natural
1004	Circular pit cut, 2m in diameter x 0.65m deep with concave sides to a rounded base	Pit – undated
1005	Soft dark grayish brown silty sand, frequent small stones, 0.2m thick	Secondary fill of [1004]
1006	Soft mid grayish brown silty sand, frequent small stones, 0.25m thick	Secondary fill of [1004]
1007	Soft mid grey sand, frequent small stones, 0.25m thick	Basal fill of [1004], probably a primary infilling episode
1008	Cut of N-S linear, 0.6m wide x 0.09m deep with concave sides to an uneven base	Ditch – undated. Truncated by pit [1004]
1009	Soft dark grayish brown silty sand, moderate small stones, 0.6m thick	Single fill of [1008]
1010	Cut of linear, 0.45m wide x 0.4m deep with steep sides to a rounded base	Modern field drain
1011	Friable mid grey silt and sand, 0.4m thick containing ceramic land drain	Backfill of [1010]
1012	NE-SW linear cut, 2.85m wide x 0.75m deep with concave sides to a rounded base	Ditch – undated
1013	Friable mid slightly brownish grey silty sand and gravel, 0.42m thick	Secondary fill of [1012]
1014	Soft dark grey sand, occasional small stones, 0.33m thick	Basal fill of [1012], secondary infilling episode
1015	Cut of E-W linear, 0.8m wide x 0.24m deep with stepped concave sides to a moderately flat base	Ditch – undated
1016	Soft dark brownish grey sand and gravel, 0.24m thick	Single fill of [1015]
1017	Cut of E-W linear, 0.8m wide x 0.53m deep with concave sides to a rounded base	Ditch – undated
1018	Soft mid grey slightly silty sand with yellow mottling, frequent gravel, 0.25m thick	Secondary fill of [1017]
1019	Soft mid grey sand, very occasional gravel, 0.28m thick	Basal fill of [1017], secondary infilling episode
1020	Cut of NE-SW linear, 1.15m wide x 0.35m deep with	Ditch – undated

Context	Description	Interpretation
	concave sides to a rounded base	
1021	Soft mid brownish grey slightly silty sand, frequent small stones, 0.35m thick	Single fill of [1020]
1022	Cut of NE-SW linear, 0.6m wide x 0.13m deep with concave sides to a flat base	Ditch – undated
1023	Hard mid grey silty sand, frequent small stones, 0.13m thick	Single fill of [1022]
Tr. 2	100m length x 1.8m width x 0.6m deep	Evaluation trench
2000	Firm laminated dark blackish grey slightly silty sand, occasional small angular pebbles, 0.32m thick	Single fill of [2001]
2001	Cut of E-W linear, at least 0.55m wide x 0.33m deep with concave sides to a slightly concave base	Ditch – undated. Truncated by ditch [2003]
2002	Firm blackish brown silty sand with grayish laminations, occasional small angular pebbles, 0.5m thick	Single fill of [2003]
2003	Cut of E-W linear, 0.75m wide x 0.48m deep with concave sides to a slightly concave base	Undated recut of ditch [2001]
2004	Firm dark blackish brown silty sand with orange mottling, occasional small angular pebbles, 0.36m thick	Single fill of [2005]
2005	Cut of E-W linear, at least 0.83m wide x 0.36m deep with moderate to steep sloping sides to a flat base	Ditch – undated. Truncated by ditch [2007]
2006	Firm brownish black silty sand with grey laminations, occasional angular pebbles, 0.56m thick	Single fill of [2007]
2007	Cut of E-W linear, 1.22m wide x 0.56m deep with steep concave sides to a slightly concave base	Undated recut of [2005]
2008	Firm light grey and black sand, occasional angular small pebbles, 0.64m thick	Backfill of pit [2009]
2009	Cut of sub circular pit, 0.64m in diameter x 0.4m deep with steep slightly concave sides to a rounded, pointed base	Pit – undated
2010	Firm black sandy silt with grayish mottling, moderate small angular pebbles, 0.52m thick	Secondary infilling of [2011]
2011	Cut of NW-SE linear, 1.3m wide x 0.47m deep with concave sides to a slightly concave base	Ditch – undated. Potentially forming a rectilinear enclosure with [2016]
2012	Firm mid reddish brown slightly silty sand, moderate small angular pebbles, 0.36m thick	Upper fill of [2014]. Potentially a tertiary infill deposit containing a Post-medieval glass fragment
2013	Firm dark grayish brown clayey sand, moderate small angular pebbles, 0.46m thick	Secondary infilling of [2014]
2014	Cut of E-W linear, 3.28m wide x 0.83m deep with concave sides to a concave base	Ditch – Possibly Post-medieval. Glass fragment recovered from tertiary fill
2015	Firm dark blackish brown silty sand with mid grey	Single fill of [2016]

Context	Description	Interpretation
	mottling, occasional small angular pebbles, 0.39m thick	
2016	Cut of NE-SW linear, 1.19m wide x 0.39m deep with concave sides to a concave base	Ditch – undated. Potentially forming a rectilinear enclosure with [2011]
2017	Firm dark blackish brown silty sand with light yellow mottling, 0.27m thick	Single fill of [2018]
2018	Cut of E-W linear, 0.86m wide x 0.27m deep with concave sides to a concave base	Ditch – undated
2019	Firm very dark brown silty sand, occasional small pebbles, 0.3-0.4m thick	Topsoil
2020	Firm dark grayish brown silty sand, moderate small angular pebbles, 0.18m thick	Secondary infilling of [2010]
2021	Firm light brownish yellow silty sand, frequent small stones and gravel	Natural
Tr. 3	100m length x 1.8m width x 0.5m deep	Evaluation trench
3000	Cut of NW-SE linear, 0.9m wide x 0.11m deep with moderate sloping sides to a flat base with a flat step along the SW side	Ditch – undated. Potentially forming a rectilinear enclosure with [3002]
3001	Loose mid to dark brown silty sand, occasional small stones, 0.11m thick	Single fill of [3000]. Merges with (3003)
3002	Cut of NE-SW linear, 0.46m wide x 0.22m deep with moderate sloping sides to a flat base	Ditch – undated. Potentially forming a rectilinear enclosure with [3000]
3003	Firm mid to light brown sandy silt, occasional small stones, 0.21m thick	Single fill of [3002]. Merges with (3001)
3004	Cut of E-W linear, 1.25m wide x 0.2m deep with shallow sides to a flat base	Ditch – undated
3005	Loose dark brown sandy silt, occasional small angular and rounded stones, 0.2m thick	Single fill of [3004]
3006	Firm vary dark brown silty sand, occasional small pebbles, 0.3-0.4m thick	Topsoil
3007	Firm mid brownish grey sandy silt, frequent small stones, 0.2m thick	Subsoil
3008	Firm light brownish yellow silty sand, frequent small stones and gravel	Natural
Tr. 4	50m length x 1.8m wide x 0.5m deep	Evaluation trench
4000	Firm dark brown silty sand, occasional rounded pebbles, 0.3m thick	Topsoil
4001	Firm greyish brown silty sand, occasional rounded pebbles, 0.2m thick	Subsoil. This deposit was intermittent across the trench due to modern stripping
4002	Loose yellow and yellowish brown sand, occasional to frequent angular and rounded pebbles in patches and seams	Natural

Context	Description	Interpretation
4003	Cut of E-W linear, 0.42m wide x 0.36m deep with steep sides to a concave base	Ditch – undated
4004	Firm light grey slightly silty sand, occasional rounded pebbles and iron panning, 0.08m thick	Primary fill of [4003]
4005	Firm yellowish brown silty sand, frequent rounded pebbles, 0.3m thick	Secondary fill of [4003]
4006	Cut of ENE-WSW linear, 0.75m wide x 0.48m deep with moderate sloping sides to a rounded concave base	Ditch – undated
4007	Firm to hard dark brownish grey silt, occasional rounded pebbles and iron panning, 0.18m thick	Secondary fill of [4006]
4008	Hard yellowish brown sandy silt, frequent rounded pebbles and occasional iron panning, 0.3m thick	Secondary fill of [4006]
4009	Cut of NW-SE linear, 0.15m wide x 0.45m deep with steep to vertical sides to a flat base	Modern mole drain
4010	Hard grey silty sand, occasional rounded pebbles, 0.45m thick	Backfill of [4009]
4011	Cut of E-W linear, 1.7m wide x at least 0.5m deep with moderate sloping sides. Not fully excavated	Modern field drain
4012	Firm to hard mid grey silty sand, occasional to frequent rounded pebbles, at least 0.5m deep. Contained ceramic field drain	Backfill of [4011]
4013	Cut of E-W linear, 0.3m wide x 0.32m deep with steep to vertical sides to a flat base	Modern field drain. Truncated field drain [4011] – possible replacement
4014	Firm yellowish brown silty sand, frequent rounded pebbles, 0.32m thick. Contained ceramic field drain	Backfill to [4013]
4015	Cut of N-S linear, 2m wide x 0.6m deep with moderate sloping sides to a slightly concave base	Ditch – undated. Two phases of recutting were noted [4018] and [4021]
4016	Firm dark grey silty clay, occasional rounded pebbles, 0.35m thick	Secondary fill of [4015]
4017	Firm to loose mid grey silty clay and yellowish sand, occasional angular pebbles, 0.2m thick	Dump deposit in [4015]
4018	Cut of N-S linear, 1.05m wide x 0.3m deep with moderate to shallow sloping sides to a slightly concave base	Recut of [4015], subsequently recut by [4021]
4019	Firm dark grey clayey silt, occasional rounded pebbles, 0.16m thick	Secondary fill of [4018]
4020	Firm yellowish brown sandy silt, occasional rounded pebbles, 0.13m thick	Secondary or tertiary infilling of [4018]
4021	Cut of NW-SE linear, 0.72m wide x 0.22m deep with moderate sloping sides to a rounded concave base	Recut of [4015] and [4018]
4022	Firm mid brownish grey sandy silt, occasional rounded pebbles, 0.18m thick	Secondary fill of [4021]

Context	Description	Interpretation
4023	Firm yellowish brown sandy silt, occasional rounded pebbles, 0.09m thick	Secondary or tertiary infilling of [4021]
4024	Cut of approximately NW-SE linear, 0.5m wide x 0.22m deep with moderate to steep sloping sides to a flat base sloping to the SW	Ditch – undated
4025	Firm grey silt, occasional rounded pebbles, 0.22m thick	Single fill of [4024]
4026	Cut of WNW-ESE linear, 0.8m wide x 0.2m deep with moderate sloping sides to a concave rounded base	Ditch – undated
4027	Firm light grey sandy silt, occasional angular pebbles, 0.15m thick	Secondary fill of [4026]
4028	Firm yellowish brown silty sand, occasional rounded pebbles and iron panning, 0.05m thick	Secondary or tertiary infilling of [4026]
4029	Cut of E-W linear, 1.3m wide x 0.62m deep with steep concave sides to a flat base	Ditch – undated. Possible flint waste flake recovered from secondary fill (4032)
4030	Firm greenish grey silty sand, 0.02m thick	Primary fill of [4029]
4031	Firm dark grey sandy silt, occasional rounded pebbles, 0.04m thick	Secondary fill of [4029]
4032	Firm to hard yellowish brown silty sand, very occasional rounded pebbles, 0.03m thick	Secondary fill of [4029]. A possible flint waste flake was recovered
4033	Firm to hard yellowish brown silty sand, occasional to frequent rounded pebbles, 0.22m thick	Secondary fill of [4029]
4034	Firm to hard yellowish brown sandy silt, occasional rounded pebbles, 0.11m thick	Secondary fill of [4029]
4035	Firm greyish brown sandy silt, occasional rounded stones, 0.27m thick	Secondary fill of [4043]
4036	Cut of NW-SE linear, 0.6m wide x 0.15m deep with moderate to steep sloping sides to a rounded concave base	Ditch – undated
4037	Firm yellowish brown silty sand, occasional rounded pebbles, 0.11m thick	Secondary fill of [4036]
4038	Firm mid grey silty sand, occasional angular pebbles, 0.04m thick	Secondary fill of [4036]
4039	Cut of E-W linear, 0.45m wide x 0.06m deep, moderate sloping sides to an uneven base	Ditch – undated
4040	Hard mid to light orange brown silty sand, occasional small rounded stones, 0.06m thick	Single fill of [4039]
4041	Cut of NW-SE linear, 0.26m wide x 0.04m deep, moderate sloping sides to a rounded concave base	Ditch – undated
4042	Firm mid to dark orange brown silty sand, occasional sub angular to rounded stones, 0.04m thick	Single fill of [4041]

Context	Description	Interpretation
4043	Cut of E-W linear, 0.8m wide x 0.27m deep, moderate to steep sides to a rounded base	Recut of [4029]
Tr. 5	100m length x 1.8m wide x 0.35m deep	Evaluation trench
5001	Cut of NE-SW linear, 3m wide x at least 0.5m deep with steep sides. Not fully excavated	Modern field drain
5002	Firm dark greyish brown sandy silt, moderate small stones, 0.2m thick	Backfill of [5001]
5003	Soft very dark grey sandy silt, rare small stones, at least 0.3m thick. Contained large diameter ceramic drain	Backfill to [5001]
5004	Soft dark brownish grey sand and silt, occasional small stones, 0.2m thick	Single fill of [5005]
5005	Cut of NE-SW linear, 0.3m wide x 0.2m deep with concave sides to a rounded base	Ditch – undated
5006	Loose mid brownish grey silt and sand, moderate small stones, 0.25m thick	Topsoil
5007	Indurated mid brownish red iron pan	Iron panned natural deposit extending for approximately 20m in the central portion of the trench. Visible in the geophysical survey
5008	Soft dark brownish grey sand and silt, moderate small stones, 0.1m thick	Subsoil
5009	Soft to loose light yellow gravelly sand	Natural
5010	Soft to loose light grey sand, moderate gravel	Natural within iron panned area of the trench
5011	Soft to loose dark brown sand and gravel	Natural
Tr. 6	50m length x 1.8m wide x 0.5m deep	Evaluation trench
6001	Firm to loose dark brownish grey sandy silt, occasional rounded and angular pebbles, 0.3-0.45m thick	Topsoil
6002	Cut of N-S linear, 1.22m wide x 0.5m deep with moderate to steep sloping concave sides to a rounded concave base	Ditch – undated
6003	Firm to loose mixed yellowish brown to dark greyish brown slightly silty sand, occasional angular and rounded pebbles, frequent iron panning, 0.5m deep	Single fill of ditch [6002]
6004	Cut of N-S linear, 1.23m wide x 0.38m deep with moderate sloping sides to a slightly concave base	Ditch – undated
6005	Loose dark grey slightly silty sand, occasional rounded and angular pebbles, 0.38m thick	Single fill of [6004]
6006	Loose mixed yellowish brown to dark brown sand, frequent iron panning, occasional to frequent angular and rounded pebbles	Natural

Appendix 3

GLOSSARY

Context	An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretation of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, e.g. [004].
Cropmark	A mark that is produced by the effect of underlying archaeological or geological features influencing the growth of a particular crop.
Cut	A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, etc. Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded.
Fill	Once a feature has been dug it begins to silt up (either slowly or rapidly) or it can be back-filled manually. The soil(s) that become contained by the 'cut' are referred to as its fill(s).
Geophysical Survey	Essentially non-invasive methods of examining below the ground surface by measuring deviations in the physical properties and characteristics of the earth. Techniques include magnetometry and resistivity survey.
Iron Age	A period characterised by the introduction of Iron into the country for tools, between 800 BC and AD 50.
Layer	A layer is a term used to describe an accumulation of soil or other material that is not contained within a cut.
Medieval	The Middle Ages, dating from approximately AD 1066-1500.
Natural	Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity
Post-medieval	The period following the Middle Ages, dating from approximately AD 1500-1800.
Prehistoric	The period of human history prior to the introduction of writing. In Britain the prehistoric period lasts from the first evidence of human occupation about 500,000 BC, until the Roman invasion in the middle of the 1st century AD.
Romano-British	Pertaining to the period dating from AD 43-410 when the Romans occupied Britain.

Appendix 4

THE ARCHIVE

The archive consists of:

115	Context records
3	Photographic record sheets
2	Section record sheets
1	Plan record sheet
8	Daily record sheets
2	Levels sheets
28	Sheets of scale drawings
1	Stratigraphic matrix

All primary records are currently kept at:

Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincolnshire
NG34 9RW

The ultimate destination of the project archive is:

The Collection
Art and Archaeology in Lincolnshire
Danes Terrace
Lincoln
LN2 1LP

Accession Number: 2007.77

Archaeological Project Services Site Code: KSMF 07

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the development site but away from the areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is of a similar character to that revealed during the current investigation.