

Witham Archaeology

A Report to Seagate Homes

October 2023



MILLFIELD NURSERY, SPALDING COMMON, SPALDING, LINCOLNSHIRE

ARCHAEOLOGICAL TRIAL TRENCH EVALUATION

MILLFIELD NURSERY, SPALDING COMMON, SPALDING, LINCOLNSHIRE

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PROJECT QUALITY CONTROL DETAILS:

Project Personnel:

Role	Name
Project Manager(s):	Russell Trimble
Fieldwork Supervisor(s):	Chris Moulis
Fieldwork Technicians:	Chris Ayers, Rafal Jedzrejewski, Anna Jedzrejewska, Andy Pascoe, Daniel Sánchez-Gómez
Report Text:	Chris Moulis
Report Illustrations:	Chris Moulis
Ceramics (Roman):	I. M. Rowlandson & H. G. Fiske
Ceramics (Post-Roman):	Dr Anne Irving & Anna Jedrzejewska
Environmental Assessment:	James Rackham
Other Finds	Gary Taylor

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MILLFIELD NURSERY, SPALDING COMMON, SPALDING, LINCOLNSHIRE

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Archaeological Trial Trench Evaluation

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MILLFIELD NURSERY, SPALDING COMMON, SPALDING, LINCOLNSHIRE.

ARCHAEOLOGICAL TRIAL TRENCH EVALUATION

SUMMARY

This document presents results of a programme of archaeological trial trench evaluation carried out in advance of the redevelopment of the existing Millfield Nursery site on land east of the B1172 at Spalding Common, Spalding, Lincolnshire. The redevelopment comprises residential development of up to 135 dwellings, and the site was evaluated through the excavation of seventeen trenches, 30m long by 1.8m wide.

The site was considered to have potential to include significant archaeological remains. Undated cropmarks of possible enclosures and field boundaries have been identified in the immediate vicinity, some of which possibly extend into the site. Within the wider area, such cropmark evidence frequently corresponds with archaeological traces of Romano-British settlement. Following the Roman period until drainage in the late 17th century, the site was located within an area of freshwater fen known as Deeping Fen.

The trial trench evaluation revealed an additional settlement to add to the distribution of Romano-British settlement sites in the area around Spalding. The Site appears to have evolved in a manner similar to certain other sites in the vicinity, whereby saltmaking operations were succeeded by a phase of settlement sustained by more conventional agrarian activities.

Romano-British settlement occurred within a landscape of ditched boundaries and drains, the principal axis of which was probably laid out in the later 1st century AD. Occupation concentrated in the central-west part of the site, around Trench 6, and appears to have been most intensive around the 2nd to 3rd centuries AD, with very little indication of significant continuation into the 4th century.

1.0 INTRODUCTION

This document presents results of an archaeological trial trench evaluation carried out in advance of a housing redevelopment at Millfield Nursery, Spalding Common, Spalding, Lincolnshire. The proposed scheme of development provides for the construction of 135 new dwellings.

Planning permission for the development (SHDC Planning Ref. H-16-0668-16) was granted by South Holland District Council subject to the approval of a Written Scheme of Archaeological Investigation (WSI) (Condition 21) and the completion of any archaeological works detailed in the scheme.

In accordance with advice from the archaeological adviser to SKDC, initial investigations were agreed to be two-fold: first, a programme of historic building recording to mitigate demolition of the early 19th century remains of a windmill at the western edge of the site; second, a programme of trial trench evaluation designed to assess the potential for significant archaeological remains and, if necessary, to inform a strategy for mitigation of impact.

Witham Archaeology was commissioned by Seagate Homes to prepare WSIs for the necessary works designed to comply with the usual requirements of the local planning authority. Prior to the commencement of any fieldwork, the WSIs were to be submitted for approval by the archaeological adviser to South Holland District Council.

The trial trenching was carried out in accordance with the terms of an approved WSI dated 7th March 2021. The fieldwork was undertaken between 9th May 2022 and 20th June 2022, in parallel with final

operations to demolish the former nursery complex. Weather and ground conditions during the fieldwork were generally favourable.

The information in this document is presented with the proviso that further data may yet emerge. Witham Archaeology cannot, therefore, be held responsible for any loss, delay or damage, material or otherwise, arising out of this report. The document has been prepared in accordance with the Code of Conduct of the Chartered Institute for Archaeologists.

2.0 SITE LOCATION, TOPOGRAPHY & GEOLOGY (see Figs. 2.1)

The town of Spalding is the administrative centre of South Holland District within the county of Lincolnshire. It is located approximately 25km north north-east of Peterborough and 30km south-east of Sleaford.

The Spalding Common Site, centred at NGR TF 2344 2004, lies at the southern edge of Spalding, approximately 2.5km from the centre of the town. It is located between the B1172 minor road through Spalding Common to the west, and Cradge Bank to the east; Cradge Bank follows the western edge of the embankment of the River Welland.

The site is sub-rectangular in plan, covering an area of approximately 4.62ha. Most of the site area had most recently been in use as a nursery complex, and was largely built over with substantial glasshouses and associated storage and service buildings. A field at the southern end of the Site remained relatively undeveloped, except for a dwelling at its eastern edge which was also demolished as part of the current development.

The site is located on a geology of Oxford Clay Formation, a sedimentary bedrock formed approximately 157 to 166 million years ago in the Jurassic period. The bedrock is overlain by superficial deposits of tidal clay and silt formed up to three million years ago in the Quaternary period (BGS).

3.0 ARCHAEOLOGICAL & HISTORICAL BACKGROUND

A Heritage Impact Assessment of the site, carried out in 2016, indicates that the site is located in the vicinity of undated cropmarks, located to the west and south. These cropmarks were considered typical of the Late Iron Age and Roman periods, and to represent enclosures, trackways and field boundaries, possibly extending into the proposed area of development (Cope-Faulkner, 2016).

The earliest mention of Spalding may date to the 7th century, and the place-name derives from Old English translated as ‘the people of Spalde’ (Key to English Place-Names website). ‘Spalde’ is believed to reference a tribe mentioned in the ‘Tribal Hideage’, a document dating from the 7th to the 9th centuries listing thirty-five tribes south of the River Humber. Despite this there are no known Saxon remains in the vicinity of the site, probably reflecting the development of the freshwater fen that later became Deeping Fen (op cit.).

The 1086 Domesday Book mentions 91 households at Spalding, divided between three holdings held by Guy of Craon, Ivo Tallboys and by the abbey of Crowland. The Domesday Book also mentions six fisheries and two salthouses (Open Domesday website).

During the medieval period the site lay within or adjacent to freshwater fen and would therefore have been significant for its resources such as grazing, wildfowl and thatch. The place-name Spalding Common derives from communal management of access to the resources during the Medieval and Post-Medieval periods.

The area was drained in the late 17th century. A mid-18th century map based on a 1670 map shows the site clear of development and adjacent to a thoroughfare. The neighbouring fields are possibly shown as pasture fields, although sub-division of the land into the modern field pattern probably only occurred after enclosure in the early 19th century.

The earliest mapped structure on site is the Common Mill, which was originally built with five stories around 1816. The remains of the mill were demolished as part of the current project, following a historic building recording exercise. Demolition took place immediately before the trial trenching fieldwork.

Cartographic evidence shows the site largely clear of development until the mid-20th century when the Millfield Nursery came into being. By the 1980s most of the site was occupied by greenhouses.

4.0 PLANNING BACKGROUND

This document presents results of an archaeological trial trench evaluation carried out in advance of a housing redevelopment at Millfield Nursery, Spalding Common, Spalding, Lincolnshire. The proposed scheme of development provides for the construction of 135 new dwellings.

Planning permission for the development (SHDC Planning Ref. H-16-0668-16) was granted by South Holland District Council subject to the approval of a Written Scheme of Archaeological Investigation (WSI) (Condition 21) and the completion of any archaeological works detailed in the scheme.

In accordance with advice from the archaeological adviser to SKDC, initial investigations were agreed to be two-fold: first, a programme of historic building recording to mitigate demolition of the early 19th century remains of a windmill at the western edge of the site; second, a programme of trial trench evaluation designed to assess the potential for significant archaeological remains and, if necessary, to inform a strategy for mitigation of impact.

5.0 AIMS & OBJECTIVES

The principal objectives of the project, as set out in a Witham Archaeology specification of 7th March 2021, were to:

- *provide information on the presence/absence, nature, date and quality of survival of archaeological deposits and remains which might be contained within the site, at the depth of proposed construction disturbance, and to assess the importance of such remains in terms of their local, regional and national context.*
- *assess the possible scale of development impact on any remains and provide information which might influence development design so that impact on any remains can be avoided or minimised.*
- *provide information that will allow the local planning authority to reconcile development proposals with their policy for preserving archaeological remains and make an informed and reasoned decision on a planning application.*
- *provide site specific archaeological information which (if necessary) would allow for the design and integration of timing and funding of any further archaeological work (or other mitigating strategy) which might be required in advance of or during any subsequent development programme.*
- *produce a project archive for deposition with the appropriate museum and from which the potential for further study and academic research could be assessed.*
- *provide information for accession to the Lincolnshire Historic Environment Record (HER).*

6.0 METHODOLOGY

The 17 trenches, all 30m long and 1.8m wide, were located in accordance with the directions laid out in the Written Scheme of Investigation (WSI) and approved by the curatorial archaeologist. Minor modifications to the positions of Trenches 10, 11, and 12 were necessitated by the presence of live buried services and by immovable obstructions presented by the circumstances on site.

The most recent deposits were removed mechanically, using a tracked excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under archaeological supervision. Mechanical excavation was discontinued when archaeological deposits were exposed, or when

undisturbed natural deposits were revealed. Exposed surfaces, both vertical and horizontal, were then cleaned by hand to define the archaeological remains.

Potential archaeological features were further investigated by manual excavation in line with the sampling guidelines outlined in the WSI.

A record of the investigations was compiled through:

- Notes detailing the progress of archaeological fieldwork.
- Individual written descriptions of archaeological contexts made on pro-forma recording sheets and indexed appropriately.
- Measured section drawings showing specific archaeological contexts as well as general stratigraphic sequences, produced at scales 1:10 or 1:20 as appropriate.
- Measured plans of archaeological contexts (individual and/or multiple) at scale 1:20
- Sequences of colour digital photographs showing individual archaeological features and overall site circumstances.

The trenches, the features and the sample hand-excavated slots were located using survey grade GPS equipment, referenced to the Ordnance Survey National Grid.

7.0 RESULTS

The results of the investigations are described below, with reference to numbers assigned in the field to the various archaeological contexts. The numbers in square brackets refer to cut features, whereas those in parentheses describe deposits. Appendix A, the Context Summary, provides full descriptions of the contexts.

To better facilitate comparison of the written account with the plans and drawings, description of the results of the fieldwork is divided geographically into three areas:

7.1 The Northern Area, comprising Trenches 1, 2, 3, 4, 5, 6, 7 & 8 (Fig. 4 to Fig. 21)

7.2 The Southeast Area, comprising Trenches 9, 10, 14, 15 & 16 (Fig. 22 to Fig. 29)

7.3 The Southwest Area, comprising trenches 11, 12, 13 & 17 (Fig. 30 to Fig. 35)

7.1 The Northern Area. Trenches 1, 2, 3, 4, 5, 6, 7 & 8. (Fig. 4 to Fig. 21)

7.1.1 Trench 1

The trench was at the northwestern extremity of the site and aligned east to west. Its location had previously been within one of the large glasshouses of the former nursery complex. Ground surface level at the time of the fieldwork was +2.4 to +2.5m OD and the trench was generally around 0.5m deep.

The earliest deposit revealed, and further explored in a 1m deep machine-cut sondage at the western end of the trench, was laminated mid yellowish orange silty fine sand (01005), laid down under estuarine conditions.

Near the eastern end of the trench, the natural estuarine deposits were truncated by two irregular features. The westernmost, shallow north to south aligned curvilinear anomaly [01001] (Fig. 5, Section 67), was filled by mid grey and orange brown sandy silt, (01003) and dark grey to black 'peaty' silt (01002). Immediately to the east, similar east northeast to west southwest aligned feature [01008] (Fig. 5, Section 69) had a corresponding sequence of fills. Both were interpreted as naturally formed channels.

Above the features lay 0.25m thick modern topsoil (01004).

7.1.2 Trench 2

The trench lay towards the northwest corner of the site and was aligned north to south. Its location had previously been within one of the large glasshouses of the former nursery complex. Ground surface level at the time of the fieldwork was approximately +2.3m OD and the trench was generally around 0.4m deep.

The earliest deposit was an accumulation of light brown to brownish orange laminated estuarine silty sand revealed towards the north end of the trench as context (02003) (Fig. 6, Section 68), in the central part of the site as (02011), and further south as (02015) (Fig. 6, Section 73). At the northern end of the trench estuarine deposit (02003) was sealed by firmer finer grained light grey sandy silt (02002). Similarly, to the south deposit (02015) was sealed by firmer more silty grey deposits (02014) and (02013).

Across the central part of the trench, natural deposit (02011) was truncated by northeast to southwest aligned steep sided ditch [02004], revealed as a substantial feature at least 2.94m wide and 1.16m deep (Fig. 6, Section 72. Plate 6)). Primary fill, yellow-grey silt (02010) lay below thin dark peaty silt deposit (02009). Above this was yellow-grey silt (02008), from which pottery dated as 'Roman' was recovered.

Fill (02008) lay below dark greyish brown peaty silt (02007), above which was light grey silt (02006), with inclusions of small snail shells, and yellowish-brown silt (02005). Deposits (02007) to (02005) correlated with a depositional sequence note frequently across the site within the tertiary fills of large features. Towards the southern end of the trench, 0.14m thick dark greyish brown 'peaty' silt (02012) with occasional light whitish brown fine sandy patches, was interpreted as a vestige of a former land surface and may have been associated with peaty fill (02007) in the upper part of ditch [02004] (Fig. 6, Section 73).

Dark greyish brown modern topsoil, composed of sandy silt and up to 0.38m thick, was the most recent deposit revealed in the trench.

7.1.3 Trench 3

The trench was located in the northwestern part of the site, near to the western boundary, and was aligned north to south. Its location had previously been within one of the large glasshouses of the former nursery complex. Ground surface level at the time of the fieldwork was approximately +2.5m OD and the trench was generally around 0.4m deep.

Light yellowish brown silty sand (03006) was the earliest estuarine deposit revealed and was further explored within a 1m deep mechanically dug sondage in the southern part of the trench.

Truncating (03006), shallow north northwest to south southeast aligned ditch [03007], was 1.1m wide and 0.28m deep, its primary fill comprising greyish brown silty sand (03010) (Fig. 7, Section 66. Plate 7).

Above (03010), black silty sand (probably quite organic) (03009) included frequent charcoal flecks, and yielded Roman pottery of 2nd to 3rd century date, together with a bone needle of typical Roman form and two fragments of briquetage. Light greyish brown silty sand (03008) was the uppermost fill within the features. A fragment of 12th to 15th century Medieval pottery of 'Bourne-type' fabric recovered during mechanical excavation from the exposed surface of ditch [03007] was retained as context (001). It probably correlates with fill context (03008).

In the central part of the trench, just beyond where the southern extent of ditch [03007] met the eastern limit of excavation, estuarine deposit (03006) was truncated by east to west aligned ditch [03001], 0.8m wide by 0.35m deep (Fig. 7, Section 59). The sequence of fills was comparable with those of [03007] and comprised greyish brown silty sand (03005) black silty sand (03004), and greyish brown silty sand (03003). Deposit (03004) yielded Roman pottery of 2nd to 3rd century date, a stone whetstone (possibly contemporary) and fragments of briquetage. Analysis of a paleoenvironmental sample of (03004) indicated #####. Pottery of 2nd to 3rd century date was also recovered from deposit (03003).

Mid greyish brown silty sand layer (03002) made up modern topsoil, up to 0.25m thick.

7.1.4 Trench 4 (Fig. 8)

The trench was aligned east to west and located in the northern part of the site, just east of centre. Its location had previously been within one of the large glasshouses of the former nursery complex. Ground surface level at the time of the fieldwork was +2.45 to +2.50m OD and the trench was generally around 0.5m to 0.6m deep.

Soft light brownish/orange-yellow silty fine sand (04008), the earliest deposit revealed, was a laminated estuarine accumulation, investigated more deeply in a 1m deep mechanically dug sondage at the eastern end of the trench.

Just west of centre within the trench, estuarine deposit (04008) was truncated by approximately north northeast to south southwest aligned ditch [04005], a substantial steep-sided feature around 3.5m wide and 1.45m deep (Fig. 9, Section 58. Plate 7 & Plate 8). Pottery dated as 'Roman' was recovered from primary fill (04015), revealed as mid to dark (slightly bluish) grey sandy silt.

At the western side of ditch [04005], and partially exposed along the northern edge of the trench, east to west aligned ditch [04032], was observed to truncate early fill (04015) (Fig. 9, Section 58). Ditch [04032] was at least 1m wide and 0.33m deep; it appeared to feed into the western side of [04005], without continuation eastwards beyond it. Dark grey sandy silt (04036) was the primary fill of [04032], above which lay soft banded mid grey-brown and light yellow sandy silt (04014). Roman pottery of 2nd to 3rd century date was recovered from (04014).

Ditch [04004] represented continuation of [04032] towards the west (Fig. 9, Section 56), and 2nd to 3rd century Roman pottery was recovered from banded mid grey-brown and light yellow sandy silt (04009), which lay above primary fill (04010). Further continuation of the east to west ditch was revealed on the western side of later ditch [04002], where ditch [04003] was filled by dark brownish grey sandy silt (04029) and banded light yellowish brown and dark grey sandy silt (04019) (Fig. 9, Section 57). The feature was observed to continue up to the western end of the trench, where its full extent was exposed in an extension to the northern side of the trench.

The configuration of deposits within ditch [04005] was interpreted to indicate a probable recutting, represented by context [04026] (Fig. 9, Section 58). The re-cut was not as deep as the original feature, but appeared to be deeper than [04032], which probably served it from the west. Cut [04026] was filled by light grey silty fine sand (04035), yellowish brown silty sand (04025), mid to dark grey sandy silt (04034) and mid grey sandy silt (04013). Pottery identified as 'Roman' was recovered from fill (04013).

Approximately 3.3m west of ditch [04005], east to west aligned ditch [04003]/[04004] was truncated by approximately parallel north to south aligned ditch [04002] (Fig. 7, Section 55). Primary fills comprised mid brownish grey and light brown sandy silts (04021) and (04022), above which lay yellowish brown silty fine sand (04020) and mid greyish brown sandy silt (04011). The latter included occasional charcoal flecks and yielded Roman pottery of 2nd to 3rd century date. Above (04011) was mid to light (slightly bluish) grey sandy silt (04018).

Fill (04013), within ditch re-cut [04026], was sealed by very dark blackish grey 'peaty' organic silt (04012), above which were firm very dark brown silt (04033) and mid brown sandy silt (04024) (Fig. 9, Section 58). To the west, fill (04018) within ditch [04002], was sealed by blackish grey very organic ('peaty') silt (04017), very similar in composition to deposit (04012). Above (04017) were very dark brown silt (04028) (similar to (04033)), light whitish brown sandy silt (with dark grey patches) (04016) and dark brown sandy silt (04027). Deposits (04012) and (04017) may correlate with similar deposits noted elsewhere on the site.

In the area between ditches [04002] and [04005], irregular shallow sub circular anomaly [04007] was at least 1m by 1.2m in plan and 0.25m deep, with very gently sloping sides and an irregular broadly concave base. It was filled by mid to light brownish grey silty fine sand (04006), which included frequent small snail shell fragments, and from which a sherd of Medieval 12th to 15th century Bourne-type fabric pottery was recovered. The feature was interpreted to have been most likely naturally formed rather than to be an archaeological feature. It was sealed by intermittent thin mid orange brown silty sand layer (04023), immediately below modern topsoil (04001). Rectangular cut [04031] was a modern intrusion,

derived from demolition operations to remove the greenhouses of the nursery complex immediately before the trial trenching took place.

7.1.5 Trench 5 (Fig. 10)

The north to south aligned trench was located mid-way along the eastern side of the northern section of the site. Its location had previously been within one of the large glasshouses of the former nursery complex. Ground surface level at the time of the fieldwork was approximately +2.65 to +2.70m OD and the trench was generally around 0.4m to 0.6m deep.

Light brown laminated silty fine sand (05011) was the earliest deposit revealed, interpreted as an estuarine deposit. It was apparent in the base of the trench towards its southern end, and only partially revealed towards the north. Most of the central area of the trench appeared to lie within a very large cut feature, with a north northwest to south southeast aligned ditch running into it from the north.

The southern limit of the feature was investigated as cut [05002], described as at least 13m by 1.8m in plan and at least 1.1m deep, with moderately steep sides and a gently concave base (Fig. 11, Section 46, Plate 9). The feature was interpreted as a possible relict channel or pond and was filled by light brownish grey silty fine sand (05010) and mid, slightly bluish, grey sandy silt (05009). Deposit (05010) yielded a fragment of ##### bone.

At its northern edge, the large feature was investigated as cut [05003] at its junction with ditch [05004], which joined into it from the north (Fig. 11, Section 48, Section 49 & Section 50, Plate 10). Ditch [05004] was 1.6m wide and up to 0.8m deep with steep sides and a concave base. Deposits filling both the ditch and the large pond or channel were continuous and comprised light greyish brown silty fine sand (05017) and mid to dark grey sandy silt (05016).

In the central part of the trench, a hand-auger bore-hole was excavated in the edge of a machine excavated sondage to examine the depth of the large feature. The base of the feature was recorded as [05023] at +0.125m OD.

The subsequent depositional sequence was largely mirrored at each end of the feature and within the ditch. To the south, fill (05009) was sealed by very dark brownish grey highly organic 'peaty' silt (05008), above which were mid grey silt with rusty streaking (05007), dark greyish brown silt with occasional light yellow laminations (05022), light brownish yellow silty fine sand with fine dark brown laminations (05006) and mid brown sandy silt with light yellowish brown patches (05005) (Fig. 11, Section 46).

To the north, ditch and pond fill (05016) was sealed by very dark brownish grey 'peaty' organic silt (05015), which probably correlated with (05008) to the south. Above (05015) were dark greyish brown sandy silt (05014), stiff mid grey silt (05013), and dark brownish grey silty fine sand with light yellow laminations (05012). A fragment of bone was recovered from (05014).

Dark brown sandy silt (05001) formed the modern topsoil, into which were cut modern drain [05020] and [05021], the base of the foundation cut of a modern roadway within the demolished nursery complex.

7.1.6 Trench 6 (Fig. 12)

The trench was aligned east to west and located in the central area of the northern part of the site, just west of centre (Plate 11). Its location had previously been within one of the large glasshouses of the former nursery complex. Ground surface level at the time of the fieldwork was +2.50 to +2.60m OD and the trench was generally around 0.35m to 0.50m deep. The trench revealed the highest concentration of archaeological remains on the Site, both in terms of archaeological features and of artefacts recovered. Further investigation of a designated area around the western end of the trench was subsequently required as an additional phase of archaeological mitigation. It was undertaken as an archaeological 'strip map and record' exercise intended to clarify the nature of remains revealed within the trench, and the later phase of work will be published as a separate report (Witham Archaeology – forthcoming).

Firm and sticky orange-brown silty sand layer (06050) was the earliest deposit recorded, revealed at the base of Section 64 at the western end of the trench (Fig. 15). Deposit (06035) just to the southeast was probably the same deposit (Fig. 15, Section 63), and both were interpreted as estuarine deposits. Layer (06050) was sealed by coarser yellow silty sand (06049), also interpreted as an estuarine deposit;

elsewhere within the trench silty sand deposits (06030) and (06044) were also interpreted as estuarine, and probably represented continuation of (06049).

Approximately 10.5m from the eastern end of the trench, cut [06017] was partially revealed while investigating the western side of later cut [06010] (Fig. 13, Section 40. Plate 12). It was interpreted as the southeast side of a 2.5m wide north northeast to south southwest aligned ditch, the opposite side of which was revealed in plan as cut [06043] (Fig. 12. Fig 14, Section 51). Ditch [06017] was filled by dark grey silty sand (06018) and yellowish orange silty sand (06019), whereas the sequence of deposits partially revealed to fill [06043] included thin dark grey deposits (06040) and (06042) with occasional inclusions of charcoal and small fragments of burnt bone.

Approximately parallel with [06043], and located just over 3m to the northwest, north northeast to south southwest aligned ditch [06020] was around 1.5m wide and 0.38m deep (Fig. 13, Section 42). Roman pottery of 1st to 2nd century date was recovered from light grey primary fill (06022), above which lay yellowish grey fill (06021).

The eastern side of partially revealed cut [06017] had been truncated by the western side of substantial south southwest to north northeast aligned ditch [06010] (Fig. 13, Section 40. Plate 12). Bluish grey primary fill (06016) yielded 1st to 2nd century Roman pottery, overlain by grey silt (06015) from which pottery dated as 'Roman' was recovered. The next fill (06014) was sterile, but the succeeding fills all produced finds. Pottery dated as 3rd century pottery was recovered from ((06013), and 2nd to 3rd century material was recovered from (06061) and (06060).

The corresponding eastern side of [06010] was investigated as [06002], suggesting that the ditch was in total around 4m wide and 1.2m deep (Fig. 13, Section 34). Primary fill (06009) yielded 'Roman' pottery, with 2nd to 3rd century ceramics recovered from bluish grey overlying deposit (06008). Fill (06007) contained 3rd century pottery, and 2nd to 3rd century pottery came from succeeding deposit (06006). Dark grey to black silty sand (06005) included frequent charcoal fragments and yielded 3rd century pottery, together with fragments of briquetage and a worked bone point or peg. Roman 2nd to 3rd century pottery was recovered from overlying 'sooty' silty sand (06062).

West of [06010], earlier ditches [06020] and [06017] were truncated by steep-sided west northwest to east southeast ditch [06023], 1.55m wide and 0.6m deep (Fig. 14, Section 45). The ditch was interpreted as probably contemporary with [06010], and Roman pottery of likely 3rd to 4th century date was recovered from primary fill (06026).

Approximately 7m from the western end of the trench, north northeast to south southwest aligned ditch [06031] was 1.45m wide and 0.55m deep (Fig. 14, Section 47). Primary fill (06034) was sterile, but succeeding fills (06032) and (06033) both produced 2nd to 3rd century Roman pottery.

Immediately west of [06031], against the southern edge of the trench, lay possible post-hole or small pit [06058], filled by yellowish brown sandy silt (06059) (Fig. 15, Section 63).

Towards the western end of the trench, linear cut [06046] was partially revealed near its northern side (Fig. 15, Section 64 & Section 65. Plate 14). The feature was 0.93m wide and 0.38m deep and appeared to mark the southeastern corner of a small ditched enclosure. It was filled by orange-brown silty sand (06048), from which 'Roman' pottery was recovered, and by yellow-brown sandy silt (06047).

Enclosure ditch [06046] was truncated by smaller north northeast to south southwest aligned ditch or gully [06051] (Fig. 15, Section 61, Section 62 & Section 65). The feature was observed to turn sharply towards east southeast at its southern end and possibly terminate. Pottery dated as 'Roman' was recovered its fill, grey and orange brown silty sand (06057); context (06052) records the same deposit. Overlying fill, orange-brown deposit (06053), yielded 2nd to 3rd century Roman pottery. Immediately west of [06051], sub-rectangular cut [06054] probably represented a small pit or post-hole (Fig. 15, Section 62).

The principal ditches, [06002]/[06010] and [06023] appeared to display evidence of the same sequence of deposition post-abandonment. Very dark deposits (06004) and (06012) apparent in [06002] and [06010] respectively (Fig. 13, Section 34 & section 40) were probably related to dark grey or black organic sandy silt (06025) in ditch [06023] (Fig. 14, Section 45). Similarly, overlying pale silty sand

deposits (06003) and (06011) and (06024), all rich in small snail shells, related to the same depositional and environmental episode, and reflect a similar sequence noted frequently in feature fills across the site.

Mixed dark brown and light yellow sandy silt layer (06036) probably represented disturbance through cultivation of deposits immediately underlying the topsoil (Fig. 14, Section 51). Irregular cuts [06027] and [06038] recorded relatively recent disturbance through animal burrowing (Fig. 14, Section 45 & Section 51); 2nd to 3rd century pottery recovered from (06029), therefore, represented residual material derived from the fills of ditch [06023].

Modern topsoil (06001) was the most recent deposit recorded within the trench.

7.1.7 Trench 7 (Fig. 16)

The trench was located towards the southern end of the northern area of the site and was aligned north to south near its western boundary. Its location had previously been within one of the large glasshouses of the former nursery complex. Ground surface level at the time of the fieldwork was +2.4 to +2.5m OD and the trench was generally around 0.4m deep.

In the central area of the trench the earliest deposit revealed was dark brown silt (07030), interpreted as an estuarine deposit, above which lay coarser estuarine silty sands (07029), (07028) and (07027) (Fig. 18, Section 43). Near the top of the revealed sequence, much darker and stiffer silt layers (07026) and (07025) had been deposited, again presumably under estuarine conditions. All these deposits showed a slight dip towards the east.

At the northern end of the trench, firm dark brown silt layer (07006) (Fig. 17, Section 38) probably correlated with estuarine deposit (07030) to the south (see above). Above it lay greyish brown sandy silt layer (07005), from which a ##### was recovered, thin whitish brown silty fine sand (07004) and thin grey layer (07012). The sequence was capped by 0.1m thick stiff dark grey silt layer (07003); Roman pottery of 2nd to 3rd century date recovered from this location as a surface find after mechanical excavation and retained as context (006) probably derived from (07003). The deposits recorded in Section 38 were most likely naturally deposited under estuarine conditions, although the presence of artefacts in the layers above (07006) indicates a degree of contemporaneity with settlement or utilisation of the site. The deposits also show a very slight dip towards the east. Nearby, on the south side of ditch [07020], layer (07024) probably represented continuation of layer (07003) (Fig. 17, Section 39).

Layer (07024) was truncated by the southern side of substantial east to west aligned ditch [07008], revealed as 2.78m wide and 0.86m deep with a broad flattish base (Fig. 17, Section 39. Plate 15). Primary fill, plastic and sticky mid grey sandy silt (07010) yielded Roman pottery of 2nd to 3rd century date. Immediately to the north, parallel ditch [07007] was 1.9m wide and 0.63m deep with a very gently concave base (Fig. 17, Section 39); the location where the ditches met was interrupted by modern intrusion [07023]. Mid grey silt (07016) formed the primary fill of [07007].

At the south end of the trench, light yellowish brown sandy silt (07040) was noted as the underlying estuarine deposit in the vicinity of substantial ditch [07038]. The ditch was aligned north northeast to south southwest and was at least 2.1m wide and 1.18m deep (Fig. 18, Section 44). Mid grey primary fill deposits (07036) and (07037) were sterile, but above these mid to light bluish grey silty fine sand (07035) produced 2nd to 3rd century Roman pottery and ##### bone.

As noted within other trenches, post-abandonment siltation within the larger features appears to have occurred in a consistent pattern. In ditch [07007] deposits (07015) and (07009) were recorded as very dark in colour and 'peaty', whereas in ditch [07008], deposits (07019), (07020) and (07021) could be similarly characterised (Fig. 17, Section 39). Deposit (07021), in particular, was composed largely of fibrous organic material.

Coarser silty sands accumulated above these deposits rich in organic material. The latest of the coarser deposits ((07013) in [07007] and (07017) in [07008]) were rich in small snail shell fragments.

Within the fills of ditch [07038] at the southern end of the site, a similar depositional trend was revealed (Fig. 18, Section 44). Dark brownish grey 'peaty' silt (07034) perhaps represented the more organic deposits seen to the north, and overlying deposits (07032) and (07031) reflected subsequent coarser-grained deposits. Discolouration and disturbance were noted within (07031), probably derived from

confinement below (and works associated with construction of) the former nursery glasshouse. Post-Medieval pottery recovered during its excavation was, therefore, considered intrusive, and retained as context (07039).

Towards the northern end of the trench, above the deposits filling ditches [07007] and [07008], 0.14m thick dark grey layer (07002) may have been deposited as alluvium, although an abraded sherd of Roman pottery and possible fragment of Roman brick were recovered from it (Fig. 17, Section 39). It lay below dark greyish brown subsoil (07011), although definition between the two deposits became less clear away from the northern end of the trench.

Modern drain [07023] was located between ditches [07007] and [07008] (Fig. 17, Section 39) and was sealed by topsoil (07001), the most recent deposit recorded within the trench.

7.1.8 Trench 8 (Fig. 19)

The trench was located towards the south end of the northern part of the site and was aligned east to west towards its eastern side. Its location had previously been within one of the large glasshouses of the former nursery complex. Ground surface level at the time of the fieldwork was +2.40 to +2.55m OD and the trench was generally around 0.35m to 0.40m deep.

Soft light brownish yellow or orange silty fine sand (08002), revealed as a laminated estuarine deposit at least 1.2m thick, was the earliest context encountered. At the east end of the trench, it appeared to be sealed by 0.06cm thick firm light greyish brown and mid to light grey silty sand layer (08027), also probably estuarine in origin (Fig. 20, Section 33).

Layer (08027) was truncated by the eastern side of approximately north to south aligned large ditch [08003], at least 1.9m wide and 1.1m deep with steep sides and a narrow flat base (Fig. 20, Section 32 & Section 33. Plate 16). Primary fill (08004) yielded a single sherd of Roman 2nd to 3rd century Nene Valley grey ware.

Approximately 6m to the west, estuarine deposit (08002) was truncated by anomaly (08016), interpreted as a shallow approximately northwest to southeast aligned ditch, at least 0.5m wide by 0.5m long and 0.11m deep (Fig. 21, Section 36). The feature displayed steep sides and a flattish base. The composition of thin very dark grey primary fill (08018) indicated nearby occupation, with charcoal flecks, occasional flecks of mid red fired clay, and bone fragments. Above it was more sterile fill (08017).

The postulated southeastern extent of [08016] was truncated by the northwest side of northeast to southwest aligned ditch [08008], revealed as 2.2m wide and 0.55m deep, with steep sides and a flattish or very gently concave base (Fig. 21, Section 35. Plate 17). No finds were found in primary fills (08025) and (08026), nor in subsequent fill (02024)

The sequence of fills within ditch [08003] (and possibly the fills of ditch [08008]) seemed to be interrupted and truncated by elongated sub-circular cut [08006], revealed as at least 3m by 2.8m in plan and 0.55m deep (Fig. 20, Section 32 & Section 33. Plate 16). The feature had gently sloping sides and a gently concave base, and was interpreted as a shallow pit or pond, with a primary fill of mid grey sandy silt (08005), above which was light grey silty fine sand (08012).

In the western half of the trench, around 6.8m from its western end, south southeast to north northwest aligned ditch [08019] truncated estuarine deposit (08002) (Fig. 21, Section 37). The ditch was 2.1m wide and 0.54m deep with steep uneven sides and a concave base. No dateable finds were recovered from fill (08028) and (08029).

As noted elsewhere around the site, the post-abandonment deposits within the features presented a consistent pattern. Within feature [08006], very dark brownish grey 'peaty' silty sand (08011) was 0.08m thick, above which lay light greyish brown silty fine sand (08007), which included small snail shells (Fig. 20, Section 32 & Section 33). Similarly, just to the west, firm very dark brownish grey 'peaty' organic silt (08023) was 0.06m thick within ditch [08008], with light greyish brown silty sand (08009) above. Further to the west, a similar sequence was apparent within ditch [08019], with peaty deposit (08021) below light whitish yellow silty sand (08020) with inclusions of small snail shells (Fig. 21, Section 37).

Features and deposits were sealed by 0.26m thick mid to dark greyish brown sandy silt layer (08010), interpreted as a possible former topsoil, with modern topsoil (08001) above. These deposits probably represented the effects of modern modification of the site prior to construction of the former nursery facility.

7.2 The Southeast Area. Trenches 9, 10, 14, 15 & 16 (Fig. 22 to Fig. 29)

7.2.1 Trench 9

The Trench was located near the eastern side of the site and was orientated east to west. Its location had previously been largely within structures of the former nursery complex. Ground surface level at the time of the investigation was approximately +2.5m OD, and the trench was generally around 0.7m deep.

The underlying estuarine deposit, silty sand (09006), was truncated approximately 4m from the eastern end of the trench by sub-oval pit [09003], partially revealed against the southern limit of excavation (Fig. 23, Section 4). It was filled by sandy silt deposits (09005) and (09004), from the latter of which a fragment of ##### bone was recovered. Within pit [09003], varying environmental conditions post abandonment of the feature were apparent as very dark organic silt (09015), and as organic inclusions within overlying grey deposit (09002).

A further 17.4m to the west, the estuarine deposits were truncated by sub-circular pit [09007], revealed as 1.38m wide and 0.62m deep (Fig. 23, Section 6. Plate 18). Primary fill (09012) produced fragments of ##### bone, whereas fragments of briquetage were recovered from subsequent fills (09011) and (09009).

Near the western end of the trench, 2.9m west of [09007], small sub-circular pit [09008] was filled by orange-grey silty sand (09014) and bluish grey silt (09013) (Fig. 23, Section 7). ### was recovered from (09013).

The features were sealed by orange-brown subsoil (09001), above which modern greyish brown topsoil (09000) was the most recent deposit recorded (Fig. 23, Section 5).

7.2.2 Trench 10 (Fig. 24)

former nursery complex. Ground surface level at the time of the investigation was approximately +2.4m OD to +2.5m OD, and the trench was generally around 0.7m deep.

Of the estuarine deposits underlying the trench, the earliest was firm and plastic dark brown silt (10006), revealed as at least 0.3m thick (Fig. 25, Section 28). Above it, light bluish grey clayey silt (10005) was a layer 0.05m thick, sealed by another thin layer of dark brown silt represented by (10004). The most recent of the early estuarine deposits was coarser brownish yellow silty fine sand (10003), around 0.16m thick.

The underlying deposits were truncated 4.6m from the southern end of the trench by 1m wide steep-sided east to west aligned ditch or channel [10008] (Fig. 25, Section 28). Fills (10023), (10022), (10042) and (10021) were sterile, and the fine laminations apparent within (10042) suggested estuarine environmental conditions.

Just to the north, estuarine deposit (10003) was truncated by approximately northwest to southeast aligned ditch [10009], revealed as at least 0.95m wide and 0.78m deep, with steep convex sides and a narrow flat base (Fig. 25, Section 28). No dateable artefacts were recovered from fills (10019) and (10020).

The northern edge of [10008] and the southern edge of [10009] were both truncated by approximately east to west aligned ditch [10007], revealed as 1.55m wide and 0.76m deep (Fig. 25, Section 28). No dateable artefacts were recovered from fills (10018), (10017) and (10016). If [10007] represents a re-cutting of one of its neighbours, it is not completely clear which is concerned. Although the alignment of the feature correlates better with [10008], the sequence of fills could be interpreted to suggest that [10009] was less completely filled when [10007] was dug.

Approximately halfway along the trench, estuarine deposit (10003) was truncated by east northeast to west southwest aligned ditch [10010], revealed as at least 1.6m wide and 0.64m deep, with steep, uneven convex sides and a flattish very gently concave base (Fig. 26, Section 29 & Section 41). Primary fill, mid to dark grey sandy silt (10029) included the near-complete skeleton of a horse, albeit only partially revealed within the excavated section (Plate 19). Analysis of a paleoenvironmental sample of the deposit revealed #####. No finds were recovered from the subsequent fills (10028), (10027) and (10026), and fine laminations within (10027) were suggestive of estuarine conditions.

Near the northern end of the trench, southwest to northeast aligned ditch [10012] was 1.25m wide and 0.65m deep (Fig. 25, Section 30 & Section 31). It was filled by a sequence of silt and fine silty sand deposits from which no dateable artefacts were recovered.

Above the fills of [10012], further deposition post-abandonment appears to have occurred under varying environmental conditions, with a change represented by very dark grey organic silt (10036), and the 'peaty' inclusions within overlying deposit (10035). The fills of the ditch were truncated by elongated irregular cut feature [10034], revealed as at least 2.75m by 0.5m in plan and 0.24m deep, with a longest axis apparently northwest to southeast. It had gently sloping sides and a flattish base, and its function was not clear; it may have represented a small pond or natural pool. It was filled by light whitish brown silty sand (10033), characterised by the small snail shells within it.

To the south, a similar variation in conditions was suggested by very dark brownish grey peaty or organic silt (10015) which overlay the fills of ditch [10007], above which lay light yellowish brown silty fine sand (10014) and mid brownish grey sandy silt (10013) (Fig. 25, Section 28). The latter included small snail shells.

Towards the northern end of the trench, the fills of shallow feature [10034] were sealed by dark greyish brown layer (10032), from which post-medieval pottery was recovered (Fig. 25, Section 30). The layer probably represented an early subsoil or former topsoil. Inclusions of fired clay within (10032) were considered noteworthy, and amongst the fragments recovered from the deposit, several briquetage fragments were identified. The concentration of material at this location could indicate proximity to ancient salt-making activity. Layer (10032) was truncated by land drain [10031], which was sealed by more recent mid greyish brown subsoil or topsoil layer (10002).

In the central area of the trench, layer (10002) was truncated by modern electricity cable trench [10025], above which lay modern topsoil (10002). The combined thickness of (10001) and (10002) may be indicative of a degree of modification and levelling of the site during construction of the former nursery complex.

7.2.3 Trench 14

The trench was aligned northeast to southwest and located in the central part of the southeastern area of the site, near the former southern edge of the nursery complex. Its location had previously been partially within structures associated with the former nursery complex. Ground surface level at the time of the investigation was between +2.1m OD and +2.5m OD, and the trench was generally around 0.45m to 0.55m deep.

The earliest estuarine deposit underlying the trench was firm mid brown silt layer (14003), at least 0.4m thick (Fig. 27, Section 25). Above it, coarser yellowish grey sandy silt layer (14002) also represented an estuarine deposit.

In the central part of the trench, estuarine layer (14002) was truncated by approximately north to south aligned narrow ditch [14008], revealed as 0.5m wide and 0.3m deep with steep sides and a narrow concave base (Fig. 27, Section 26 & Section 27. Plate 20). Dark grey silty sand (14012) represented the primary fill, above which lay light grey silty sand (14011), from which several fragments of briquetage were recovered. Subsequent fill, dark grey silty sand (14010) included small mid red fired clay fragments together with charcoal flecks; the deposit yielded a fragment of 'Roman' pottery. The feature was sealed by greyish brown sandy silt layer (14009) with inclusions of small mid red fired clay fragments and charcoal flecks.

Further south within the trench, 9m from its southwest end, northwest to southeast aligned ditch [14004] was revealed as 2.23m wide and 0.7m deep with steep sides and a narrow gently concave base (Fig. 27,

Section 25). A fragment of animal bone was recovered from orange-grey sandy silt fill primary fill (14007). Above (14007) lay dark grey sandy silt (14006), from which ##### bone fragments and briquetage fragments were recovered, and above (14006) lay mottled light grey and orange sandy silt (14005), which also yielded bone fragments.

Modern topsoil (14001) was the most recent deposit recorded within the trench, although a few modern drains, service trenches and cultivation scars were noted in the trench base.

7.2.4 Trench 15

The north to south aligned trench was located near the southeast corner of the site. It was within a parcel of land previously occupied by a modern dwelling which had been demolished just before the trial trenching project. Ground surface level at the time of the investigation varied from approximately +2.1m OD at the south end of the trench to +2.5m OD at the north end, and the trench was up to around 0.7m deep.

Firm reddish brown silt layer (15001), with yellow and grey patches, was revealed as the estuarine deposit underlying area of the trench, although towards its northern end it was overlain by yellowish brown sandy silt, with fine whitish grey laminations.

Near the southern end of the trench, estuarine silt (15001) was truncated by ditch [15003], revealed as 1.14m wide by 0.58m deep, with steep sides and a narrow flat base. No finds were recovered from early fills (15013) and (15005), but a fragment of briquetage and a fragment of ##### bone were recovered from subsequent brownish grey sandy silt fill (15004).

Near the northern end of the trench, estuarine silt (15002) was truncated by north northeast to south southwest aligned ditch [15012], revealed as 2.15m wide by 0.35m deep with gently sloping concave sides and a flattish gently concave base. No dateable artefacts were recovered from basal fills (15016) and (15015). Above (15015), blackish brown deposit organic sandy silt (15014) was probably comparable with similar post-abandonment deposits noted elsewhere around the site.

In the northern part of the trench, estuarine deposit (15002) was also truncated by east to west aligned ditch [15008]. The feature correlated with the modern boundary, and post-medieval pottery was recovered from fill (15009). The ditch fills, and the northern end of the trench more generally, were sealed by modern dumped deposits to create an area of 'made ground', intersected by land drains and modern service cuts [15006], [15017], [15019], [15021] and [15029].

Further south, by contrast, over the southern half of the trench, deposits were sealed by dark brown to greyish brown sandy silt topsoil (15000).

7.2.5 Trench 16 (Fig. 28)

The east to west aligned trench was located centrally towards the south end of the site, 25m from the southern boundary (Plate 21). It lay within an undeveloped field south of the main former nursery complex. Ground surface level at the time of the investigation was approximately +2.0m OD, and the trench was generally around 0.4m deep, although deepened to 0.85m deep in a mechanically cut exploratory sondage.

The earliest estuarine deposit revealed to underly the area of the trench was stiff mid to dark brown silt layer (16027), at least 0.58m thick. Above it lay 0.05m thick layer of light bluish grey silty clay (16026), and then 0.4m thick firm dark brown silt layer (16002).

At the eastern end of the trench, estuarine deposit (16002) was truncated by shallow northwest to southeast aligned ditch [16004]. It was filled by mid grey sandy silt (16003), which yielded no dateable artefacts.

Just to the west, the underlying deposit was truncated by approximately parallel northwest to southeast aligned ditch [16006]. Four briquetage fragments were recovered from mid grey sandy silt fill (16005). The ditch appeared to have been re-cut as shallower and broader ditch [16014], revealed as 1.6m wide and 0.34m deep. Ditch [16014] was filled by sandy silt deposits (16011) and (16010), neither of which yielded dateable artefacts. Subsequent very dark brownish grey silt (16009) may have been comparable

to other more organic deposits noted in the tertiary fill of ditch [16018] to the west, and within features elsewhere across the site. Such deposits represent variation in environmental conditions at the site.

In the central area of the trench, a large ditch or channel, aligned west northwest to east southeast and up to around 2.5m wide, was observed to cross it at an oblique angle. A section excavated across it revealed the primary cut as [16023], at least 1m wide and 0.22m deep, with a flattish base (Fig. 29, Section 23). No artefacts were recovered from bluish mid grey silt fill (16022). The feature seemed to have been re-cut as [16018], at least 1.55m wide and 0.4m deep with very steep sides and a flattish uneven base. The primary fill, light whitish yellow-brown silty sand (16021), included fine laminations, probably indicative of an estuarine environment, above which lay mid grey silt (16020).

Further west, the same feature was investigated and recorded in the edge of a mechanically cut sondage (Fig. 29, Section 20). At the base, the truncated vestige of cut [16025], at least 0.3m wide and 0.24m deep, probably represented the primary cut of the feature, filled by bluish mid grey silt (16024). Subsequent re-cutting was apparent as [16008], at least 1.4m wide and 0.42m deep with steep (near vertical) sides and a flattish uneven base. The sequence of fills was similar to that noted within [16018], as primary fill (16017) was composed of light yellowish brown silty fine sand with fine laminations, overlain by mid grey silt (16016); no artefacts were recovered from any of these deposits. Continuation of the feature was revealed in Trench 17 as ditch [17007]

In both recorded sections through the ditch, a deposit of very dark brownish grey organic silt indicated variation in environmental conditions during siltation; the same deposit was represented by contexts (16015) and (16019) in Section 20 and Section 23 respectively (Fig. 29). It was sealed by subsequent soft mid brownish grey sandy silt (16007), characterised by inclusions of small snail shells.

Features and deposits were sealed by 0.35m thick mid to dark brown topsoil (16001), composed of sandy silt with occasional inclusions of coal and brick fragments.

7.3 The Southwest Area. Trenches 11, 12, 13 & 17 (Fig. 30 to Fig. 35)

7.3.1 Trench 11 (Fig. 31)

The east to west aligned trench was northeastern-most of the southwest group of trenches (Fig. 30). Its location had previously been within one of the large glasshouses of the former nursery complex. Ground surface level at the time of the investigation was approximately +2.2m OD to +2.3m OD, and the trench was generally around 0.5m deep.

Firm dark brown silt (11039) was the earliest underlying estuarine deposit revealed within the trench (Fig. 32, Section 9), above which lay coarser-grained light yellowish brown silty fine sand (11002), at least 0.1m to 0.15m thick, also estuarine in origin.

Towards the western end of the trench, the earliest feature to truncate the estuarine deposits was an approximately east to west aligned small ditch, at least 8.5m long. The flattish eastern terminus was investigated as ditch [11016], revealed as 0.32m wide and 0.2m deep, with very steep sides breaking gradually to flattish, slightly uneven, base (Fig. 32, Section 8). Primary fill (11036) was light whitish yellow-brown silty fine sand with occasional small charcoal inclusions, whereas thin overlying fill (11035) was composed of very dark brownish grey or black 'peaty' organic silt. Above (11035) lay dark brownish grey silty sand (11015), with occasional charcoal inclusions.

Back 7.5m towards the western end of the trench, the ditch was investigated as context [11006], where it was revealed as 0.32m wide and 0.12m deep with a similar profile to [11016] and was filled by whitish brown silty sand (11005). Continuation of the feature beyond the trench to the west, beyond its truncation by feature [11004], was observed as ditch [11045] (Fig. 32, Section 9 & Section 11. Plate 22).

Narrow ditch or channel [11004] truncated [11006]/[11045] at the western end of the trench. It was revealed as an approximately north to south cut, 0.4m wide by at least 0.9m long and 0.32m deep with very steep sides and a gently concave base (Fig. 32, Section 9, Section 10 & Section 11. Plate 22). No dateable artefacts were recovered from the sequence of fills, which comprised contexts (11003), (11040), (11036), (11037) and (11043). The fills were capped by soft very dark brownish grey/black 'peaty' silt (11042), above which crumbly/friable mid orange silt (11041) was also considered to be highly organic.

The deposits were interpreted to indicate a change in environmental conditions in the period post-abandonment of the ditches, possibly related to similar peaty and organic deposits noted elsewhere within both the trench and the site.

In the central area of the trench, curvilinear ditch or gully [11008] appeared to inscribe a gentle arc. It was 0.48m wide by at least 3.6m long and 0.28m deep, with steep sides and a flattish base (Fig. 32, Section 12. Plate 23). No artefacts were recovered from mid grey sandy silt fill (11048), which was sealed by thin very dark brownish grey to black 'peaty' silt (11047), brownish grey sandy silt (11046) and dark grey silt (11007).

Just to the east, east southeast to west northwest aligned ditch [11014] was at least 0.6m wide by at least 1.3m long and 0.22m deep, with steep sides and a gently concave base (Section 32, Section 13 & Section 14). The ditch appeared to terminate at the line of ditch [11010], to which it was aligned approximately perpendicular. Pottery dated as 'Roman' together with briquetage fragments were recovered from very dark brownish grey primary fill (11049). Analysis of a paleoenvironmental sample of the deposit #####. Overlying light olive or yellowish brown silty sand (11013) also yielded 'Roman' pottery.

The northwestern end of the ditch was truncated by approximately north northeast to south southwest aligned ditch [11010], revealed as 1.1m wide by at least 2.1m long and 0.78m deep with very steep sides and a concave base (Fig. 32, Section 13). Primary fill (11021) was sterile, but a fragment of ##### bone was recovered from overlying mid grey fill (11020). Later fill (11017) yielded 'Roman' pottery, as did overlying fill (11009), together with briquetage fragments.

That [11014] did not continue beyond [11010] indicated that they belonged to the same arrangement of drainage and/or boundaries; [11010] probably represented re-cutting and maintenance of one element of that pattern.

Approximately 5.5m east of ditch [11010], context [11032] marked the remaining steep eastern side of a north northeast to south southwest aligned ditch (Fig. 32, Section 15. Plate 24). It survived as at least 0.5m wide and 0.55m deep, filled by deposits (11031) and (11033), from which no dateable artefacts were recovered. The feature appeared to have been re-cut as ditch [11012], 1.94m wide and 0.8m deep with steep sides and a flattish, gently concave, base (Fig. 32, Section 15. Plate 24). Primary fill (11029), a mix of mid to dark grey silt and very dark brownish grey organic silt, produced ##### bone fragments, and later fill (11028), a mid grey deposit with patches and laminations of light whitish yellow yielded ##### bone and three heavily abraded sherds of pottery dated as 'Roman'. The laminations within (11028) could indicate the effects of estuarine conditions.

Above (11028), subsequent fills (11027), (11026), (11025) and (11024) did not produce additional dateable material. Fill (11024) was sealed by very dark brownish grey silt (11023), a deposit with organic staining and inclusions considered to correlate with other peaty or organic deposits noted elsewhere in the trench, and around the site. The deposit indicated variation in environmental conditions post-abandonment of the ditched landscape. Similarly, overlying mid greyish brown silty fine sand (11022) with inclusions of small snail shells also correlated with deposits of similar composition noted at multiple locations across the site.

Features and deposits were sealed by mid to dark brown topsoil (11001), the most recent layer recorded within the trench.

7.3.2 Trench 12

The trench was aligned approximately north to south at the western edge of the site. It was located in a grassed area at the base of the slight embankment upon which the modern B1172 minor road through Spalding Common is situated (Plate 25). The location and extent of the trench was modified slightly due to the presence and proximity of live underground services and substantial trees. Ground surface level at the time of the investigation was approximately +2.4m OD, and the trench was generally around 0.5m deep.

Light to mid brownish yellow silty fine sand (12015), the underlying estuarine deposit in the area, was truncated near the northern end of the trench by remains of approximately southwest to northeast aligned ditch [12002], revealed as at least 0.75m wide and 0.28m deep with gently sloping sides and a very gently concave base (Fig. 33, Section 52). The ditch was truncated to the north by intrusion of modern service

trenching [12017]. It was filled by deposits (12022) and (12014), from which no dateable artefacts were recovered.

In the southern part of the trench, estuarine deposit (12015) was truncated by a southwest to northeast aligned ditched boundary, the earliest component of which appeared to be ditch [12005], revealed as at least 0.6m wide and 0.15m deep (Fig. 33, Section 53 & Section 54. Plate 26). Deposit (12013), fill of [12005], was truncated by ditch re-cut [12004], 1.8m wide by at least 1.5m long and 0.42m deep with steep sides and an uneven gently concave base. Primary fill (12012) was sterile, but a briquetage fragment together with a fragment of ##### bone was recovered from fill (12007), and more animal bone from subsequent fill (12006).

Further maintenance of the boundary was possibly indicated by re-cut [12003], dug at the southern edge of [12004], apparently when the latter had become fully silted (Fig. 33, Section 53 & Section 54. Plate 26). Ditch [12003] was 0.7m wide and 0.35m deep with steep sides and a concave base. Primary fill was (12010), above which mid grey fill (12009) included fine light grey laminations, possibly indicative of estuarine conditions. Overlying layer (12008) was composed of light bluish grey silty fine sand and included occasional charcoal flecks and occasional small mid red fired clay fragments.

The northwest side of ditch [12004] was truncated by land drain cut [12019], which was sealed by topsoil (12001) (Fig. 33, Section 53. Plate 26). In addition to the modern services observed to truncate [12002] at the north end of the trench (see above), modern drain [12017] was revealed to carve longitudinally through its entire southern half. Modern turf (12023) was the most recent context recorded within the trench.

7.3.3 Trench 13

The trench was located centrally within the southwestern group of trenches, just south of Trench 11. Its location had previously been within one of the large glasshouses of the former nursery complex. Ground surface level at the time of the investigation was approximately +2.1m OD to +2.25m OD, and the trench was generally around 0.4m deep.

Firm mid brown sandy silt (13015), the underlying estuarine deposit, was truncated 13.7m from the northwest end of the trench by north northeast to south southwest aligned ditch [13003] (Fig. 34, Section 16 & Section 22). It was revealed as 0.95m wide and 0.45m deep with concave sides continuous with a concave base. It was filled by a sequence of silty sand deposits comprising (13008), (13007), (13006), (13005) and (13004), none of which yielded dateable artefacts.

A further 6.3m along the trench to the southeast, natural layer (13015) was truncated by a second ditch, approximately parallel with [13003]. North northeast to south southwest aligned ditch [13009] was 1.65m wide and 0.67m deep with concave sides and a concave base (Fig. 34, Section 17 & Section 21). The silty fills of the feature, deposits (13013) and (13012), were also devoid of dateable finds. The ditches may have been associated, and possibly defined a trackway across the area.

Above (13012) in the top of ditch [13009], dark brownish grey organic silt (13011) was comparable to other deposits revealed across the site interpreted to suggest a change in environmental conditions. Overlying brownish grey sandy silt (13010), characterised by the inclusions of small shells, also had parallels across the site and was similarly interpreted.

Across the central area of the site mixed orange grey to whitish grey sandy silt layer (13002) probably represented a subsoil, above which lay modern topsoil (13001). At the southern end of the trench, modern brick wall (13014) was a remnant of the glasshouse structure demolished just prior to the trial trenching; other modern intrusions associated with the nursery complex were also noted in the trench base.

7.3.4 Trench 17

The north to south aligned trench was located towards the southwestern corner of the area, within an undeveloped field south of the main former nursery complex. Ground surface level at the time of the investigation was approximately +2.1m OD, and the trench was generally around 0.35m deep, although deposits were explored to a depth of approximately 0.8m in localised mechanically-excavated sondages.

Stiff dark brown estuarine silt (17005), at least 0.36m thick, was the earliest deposit revealed in the trench, above which thinner layers of light bluish grey clayey silt (17004), dark brown silt (17003) and light brownish yellow silty fine sand (17002) were also estuarine in origin (Fig. 35, Section 24).

Approximately 7.9m from the northern end of the trench the natural sequence was truncated by west northwest to east southeast aligned ditch [17007], revealed as 2.46m wide by 0.48m deep with a distinctive profile of vertical sides and a broad flattish base (Fig. 35, Section 71. Plate 27). The ditch continued the alignment (and form) of ditch [16008] in Trench 16.

Ditch [17007] was filled by a sequence of sandy silt deposits which comprised (17012), (17011), (17010), (17009) and (17013), none of which yielded dateable artefacts. Fill (17009) showed fine laminations suggestive of estuarine conditions.

Above fill (17013), very dark greyish brown 'peaty' organic silt (17008) was comparable with deposits of similar composition across the site, and probably indicated varying environmental conditions post-abandonment of the feature (Fig. 35, Section 71). Light brownish grey silty sand (17006) immediately above it was characterised by frequent small snail shells, similarly interpreted as representative of changing environmental conditions.

A modern drain trench was observed at the southern end of the trench, and all deposits and features were sealed by modern topsoil (17001) (Fig. 35, Section 24 & Section 71).

7.4 Finds

Finds recovered during the project comprised pottery, examples of worked bone and worked stone objects, animal bone fragments, fragments of ceramic salt-making debris (briquetage), a few metal objects and miscellaneous fragments of slag and clinker. The Roman pottery assemblage is predominantly represented by 2nd to 3rd century fabrics, with a range of wares typical for this part of Lincolnshire.

8.0 DISCUSSION & CONCLUSION

The investigation revealed the presence of deposits and features of archaeological significance across the entire site, principally associated with a period of Romano-British settlement and exploitation of the surrounding landscape. The results of the fieldwork are discussed under the following headings:

8.1. Pre-Roman

8.2. Phase 1: Romano-British

8.3. Phase 2: Post-Roman

8.4. Phase 3: Post-Medieval & Modern

8.5. Conclusions

8.6. Finds

8.1 Pre-Roman

In general terms, the Site is located upon tidal flat deposits (BGS) of later prehistoric date. Interpretation of details of the local topography formed by these deposits is somewhat compromised by the modern canalised river channel immediately to the east, and also by modification of most of the Site area during

construction of the former nursery complex in the 20th century. Demolition and levelling of the complex immediately before the works referred to in this report have further masked the original topography.

From reference to LIDAR height data, it seems that the Site occupies a slightly elevated location upon the alluvium, with indications of sinuous continuations of the elevated band traceable to the north and the south, and a lesser sinuous ridge observed to enter the Site area from the west (Fig. 36). The low ridges most likely represent accumulations of alluvium that mark extinct channels. The environmental and archaeological phenomenon is common locally, and the elevated former channels are known as 'Roddons'.

The undeveloped field at the southern end of the Site had a ground surface level of approximately +2.1m OD at the time of the works, whereas within the former nursery area to the north (following demolition of the former nursery structures), a surface level of around +2.5m OD was more typical. There were indications from the depths of overburden within trenches that the original site surface may have been variable in height. In Trenches 9 and 10 it was necessary to remove more overburden, for example, than within Trench 6, indicating that the latter (which provided most of the Roman finds) may have formerly had a slightly higher surface elevation. In a location relatively vulnerable to flooding a marginal increase in elevation may well have been a significant advantage.

Estuarine deposits within the trenches show a trend whereby the underlying layers (within the scope of the current investigation) vary from south to north. Over the southern part of the site, the earliest estuarine deposit within the trenches is a firm dark brown silt layer, above which lay relatively thin accumulations of more coarse grained yellowish silty sand. By contrast, over the area northeast of Trench 6, including trenches 1, 2, 3, 4, 5 and the eastern end of Trench 8, a much deeper accumulation of light yellow-brown laminated silty sand is apparent. The trend is clearly the product of deposition around the early pattern of channels and had occurred through circumstances not fully explained by the results gathered within the scope of this project.

Although the pottery assemblage includes no fabrics dateable to the pre-Roman Iron Age, assessment of the briquetage (the fired clay remnants of equipment used in saltmaking) suggests that the modest collection matches known material typical of the 1st century BC (Appendix E). A contemporary saltern is, therefore, likely to be located in the immediate vicinity of the site and may have provided the initial foothold to prompt subsequent exploitation of the area.

Pre-Roman activity at the Site would not be entirely surprising and would augment the record of Iron Age saltmaking gathered from previous investigation at Tollbar Drove in Cowbit Wash around 1.9km to the southeast (Lane & Morris ed, 2001). Iron Age pottery, together with saltmaking debris, has also been recovered from a location at Clay Lake, 2.5km northeast of the site (Network Archaeology, 2011).

8.2 Phase 1: Romano-British

Whatever the character of any earlier activity within and around the site, the remains indicate that settlement of the area was undertaken in earnest during the Romano-British period, and that development included works to improve drainage and to define parcels of land. Only in trial trenches 1 and 9 are ditched boundaries not present; all the other trenches include ditches which, either through artefacts or by association, can be ascribed to this period.

8.2.1 The Romano-British Landscape (Fig. 37)

The pattern inscribed by the ditches displays marked irregularities. It does, however, appear to include as a principal element a north northeast to south southwest aligned boundary which, as far as could be ascertained, bisects the entire site area. It is marked by a series of ditches through trenches 2, 4, 6, 7, 11, and 13, the trend of which could be interpreted as a continuation of a more extensive ditched boundary suggested by cropmarks within fields between 190m and 240m south southwest of the site (Cope-Faulkner, 2016).

The principal boundary, which presumably also had a function in drainage, appears in overview as a double-ditched feature, particularly in trenches 4, 6, 13, and 11, and could easily be interpreted to define a trackway (Fig. 37). More detailed examination of the stratigraphic sequence within each trench,

together with the presence within the postulated carriageway of features which show association with one or other of the ditches (particularly Trench 4) suggest that the feature may not have simply functioned as a trackway with a ditch on either side. The ditches probably represent periodic re-cutting and maintenance of the boundary over a considerable period of time, and within Trench 6 dating evidence is available to suggest that the boundary may have been significant from establishment in the 1st to 2nd century until the 4th century.

Either side of the principal boundary, subsidiary boundary ditches subdivided and drained the surrounding land. By the nature of the evaluation exercise, only a small and scattered sample of the ancient landscape pattern was exposed within the trial trenches and interpretation of it is somewhat hypothetical.

Amongst the sample, the orientation and alignment of the ditches is variable, although trends may be suggested. Excluding ditches interpreted as comprising part of the north northeast to south southwest aligned principal boundary, the most frequent group of 10 ditches is approximately northeast to southwest aligned (including ditches on a north northeast to south southwest alignment directly comparable with the principal boundary). The next most frequent group of 9 ditches comprises those on an approximately perpendicular northwest to southeast alignment (including those aligned north northwest to south southeast). Only five ditches appear to show an east to west alignment, and only two appear to be aligned north to south; two west northwest to east southeast ditches are also anomalous, particularly the unusual flat-bottomed example present in trenches 16 and 17. In the most general terms, therefore, the landscape appears divided largely by reference to the principal boundary cut through it.

It is not fully understood from results of the current work the degree to which the revealed landscape pattern represents the pattern of land division at any given time during the Romano-British period; it is suggested here that there must have been evolution in arrangements through the period. The nature and composition of the deposits locally leads to a tendency to siltation and, in response, a need for maintenance. Regarding the principal boundary, re-cutting of ditches is identified in trenches 4, 6 and 11, and similar necessary maintenance in other ditches is revealed, for example, in trenches 10 and 16. Additionally, through the duration of occupation and utilisation of the site, periodic alterations would undoubtedly have occurred to the pattern of land division in response to changes in landholding and land use. Changes may have been particularly significant if activity was interrupted by episodic flooding.

8.2.2 Habitation & Economy

Regarding contemporary habitation at the site, the evidence principally comprises the collection of artefacts recovered during the fieldwork, with few features which might be interpreted definitively to represent domestic activity or structures. Artefacts were recovered from most trenches, apart from Trench 1 and Trench 13, albeit generally in quite small numbers. Trench 6, by contrast, has produced a reasonable assemblage of Romano-British pottery, together with other artefacts perhaps indicative of habitation, such as a bone peg, a fragment of possible quernstone and traces of iron smithing slag.

Towards the western end of the trench, two small pits may have functioned as post-holes, and feature [06051] was initially thought to potentially represent a slot for structural timbers. During subsequent investigation of the area, a broader expanse around Trench 6 was opened and examined to clarify the character of the remains revealed within the trench. The additional work could not, unfortunately, confirm with certainty a structural interpretation or define the footprint of a building. It is likely that Romano-British buildings on the site would have included examples of relatively insubstantial construction, such as the 1st century mud-walled building at examined in Weston Fen (Hallam, 1970, 49). Previous cultivation of the Site would probably have degraded and destroyed evidence of any such structures.

Elsewhere across the site, charcoal-rich fills within anomalous narrow curvilinear ditches revealed in Trench 11 and Trench 14 may also indicate habitation or related domestic or craft activity in those vicinities. By contrast, pits revealed within Trench 9 contain relatively sterile fills, with little artefactual evidence to suggest that they were in any way associated with nearby occupation.

8.2.3 Dating

Assessment of the pottery assemblage dictates conclusions around the relative dating of the remains revealed within the trenches, and of the likely duration of habitation at the site. The presence of late 1st to 2nd century pottery in early fills of ditches within Trench 6 can be taken to indicate the likely date of

establishment of the initial pattern of Romano-British land-division, whereas the overall preponderance of 2nd to 3rd century pottery within the assemblage probably indicates the most intensive phase of habitation. Specialist opinion is that 'few, if any, new ceramic vessels reached the Millfield Nursery site by the 4th century AD', indicating that decline and eventual abandonment (possibly with relocation of settlement nearby) followed 2nd to 3rd century habitation (Appendix #).

By way of comparison, investigations at Backgate in Cowbit, situated at a similar elevation approximately 3.7km to the southeast, recovered pottery assemblages with comparable 2nd to 3rd century date ranges, although with the inclusion of some finer fabrics possibly suggestive of higher status occupation thereabouts (Rayner, 2003. Mellor & Trimble 2011). A similar distance to the north, investigation of extensive remains in advance of development west of Spalding at Wygate Park established that Iron Age and early Roman saltmaking was succeeded by 2nd to 3rd century occupation. Part of the site was subsequently abandoned, although, in contrast to the present Site, Area 2 at Wygate Park produced firm evidence for continuing occupation into the 4th century (Wood, 2006). Roman occupation also continued into the 4th century 6.5km northeast of the Site near Weston (Wood, 2008). The suitability of a particular site for habitation at any specific time was influenced by the general environmental trends and the susceptibility of local topography to the impacts of those trends.

8.3 Phase 2: Post-Roman

Although there is considerable variation in the way deposits within individual features have accumulated, trends apparent at multiple locations across the site may indicate more general influences on the pattern of settlement and land use.

8.3.1 Development of organic 'peaty' deposit

Within many of the deeper features, a transition frequently occurs whereby a very dark brownish grey organic (or 'peaty') silt deposit dips into the upper part of a feature, sealing earlier, sandier, fill deposits. It is suggested here that the ditches, for the most part, are already in an abandoned state by the time this layer begins to form, although still present in the landscape as prominent earthwork features. The fills below the dark layer are generally alluvial in character and may, in part, derive from flooding episodes in deteriorating environmental conditions.

The dark layer is provisionally interpreted to indicate the development of freshwater fen conditions over the site area (or the lowest parts thereof), presumably occurring gradually as the result of rising water levels and persistent waterlogging. The date of this transition has not been directly established during this investigation, but a comparable instance of a 'peat' deposit was examined in trial trenching in advance of development at Holland Park, around 1.5km north of the Site (Anon., JSAC, 2000. Appendix B: Environmental Archaeology). A carbon 14 date for the deposit at Holland Park suggested that it had formed during the 6th to 7th century, in the early to middle Saxon period.

8.3.2 Post-Roman Silting

Within the Millfield Nursery trenches, the dark organic silt accumulation noted above is frequently sealed by deposits of an alluvial composition, suggestive of episodes of further flooding.

Although the results indicate that post-Roman silting did occur, it does not appear to have buried and masked the Roman landscape to a significant degree. Only a relatively shallow depth of excavation is necessary to reveal the archaeological remains in trenches 16 and 17 at the lowest end of the site. Any more general post-Roman silting is probably included within the thickness of topsoil and has been mixed and dispersed through cultivation, particularly in the 20th century.

Other sites in the area which provide better examples of the effects of Post-Roman silting include the area around Pennygate Drain (Herbert, 1996), 2.6km to the north northwest, a site on Holbeach Road, 5km to the northeast (Miller, 1998), and the site at Wygate Park, 2.5km to the north (Wood, 2006). At the former, cropmarks visible southwest of the site have been demonstrated to be masked by later silt to the east, whereas at Wygate Park Roman remains are sealed by up to 0.4m of later alluvium. At Holbeach Road, the interface between the proposed Roman land surface and overlying estuarine deposits lies at around +2.6m to +2.8m OD. Further east, the masking effects of Post-Roman silt have also been noted during excavations in advance of construction of the Weston bypass (Wood, 2008).

As part of excavations to examine a Roman salting site at Wygate Park (SWP04) a sample of the alluvial silt revealed to seal Roman features was subjected to an OSL (Optically stimulated luminescence) test which indicated a 7th to 10th century date for the deposit (ref. in Wood, 2006, 2.11). The date may give an indication of the likely parameters of dating for comparable processes at the Millfield Site.

8.2.3 Shell-rich Deposit

On the Millfield Site, deposits (possibly alluvial) above the dark organic silt are generally capped by a light-grey-brown silty sand deposit rich in small snail shell fragments. A sample from shell-rich deposit (6003) was recovered from Trench 6.

In Trench 4 and Trench 10, deposits of similar shell-rich composition appear to have accumulated within shallow irregular cuts interpreted as small ponds or pools. Dating of this episode is indicated by Bourne-type pottery of Medieval date recovered from the fill of the Trench 4 feature, and, additionally, by pottery of the same fabric recovered as a surface find from the comparable upper fill within ditch [3007] in the northwest part of the site. The pale shell-rich deposit would seem to have accumulated, therefore, during the Medieval period within surviving earthwork hollows of elements of the Romano-British landscape, as well as within occasional irregular post-Roman features. The functions of the latter are not known, but one might speculate that they may have been formed as water-sources for animals put out to graze on the common land.

Although the grazing, together with the other resources the common and fen provided, would have been important resources to contemporary communities, the land would always have been vulnerable and subject to periodic inundation. In the Medieval period, following construction of the sea banks, the threat would mainly have been from freshwater flooding during the winter.

8.4 Phase 3: Post-Medieval & Modern

The site area remained as common land into the Post-Medieval period, and is depicted as such on Dugdale's map of Deeping Fen of 1662, and also on Featherstone's map of the same from 1763. Immediately east of the Site, the current artificial course of the River Welland was established in the seventeenth century as one stage in the prolonged campaign to improve fenland drainage (Lane & Morris ed. 2001, 13). Canalisation to improve the flow of the river went together with creation of Cowbit Wash to temporarily hold floodwaters during periods of overflow.

The enclosure award of 1819 provided for division of the common into separate parcels of land and allowed more intensive agricultural exploitation of the area. The trend to 'improvement' is reflected in construction of the windmill at the western edge of the site, the derelict remains of which were demolished (after recording) as part of the current project (Fig 38). Ditch [15008] at the southeast end of the site is the only feature of the post-enclosure landscape to have been encountered within the trial trenches.

The 20th century nursery complex was an extensive facility, and its construction will have necessitated significant modification of the original land surface to create a level area for the glasshouses, together with excavations for subterranean plant and tanks. The results of this modification are apparent if the recorded surface levels in the undeveloped field at the south end of the site (around +2.1m OD) are compared with those of the developed nursery area (around +2.4m to +2.6m OD). Within the trenches, thicker overburden deposits revealed in trenches 9 and 10, indicate that soil may have been transferred there from formerly higher areas to the north.

8.5 Conclusions

The trial trench evaluation at Millfield Nursery has revealed an additional location to add to the distribution of Romano-British settlement sites in the area around Spalding. The Site appears to have evolved in a manner similar to certain other sites in the vicinity, whereby salting operations were succeeded by a phase of settlement sustained by more conventional agrarian activities. At this Site, the salting is only indirectly recorded through fired clay waste material (briquetage) recovered as

residual finds in later features. The form of the briquetage, however, indicates that the activity may have commenced in the 1st century BC, in the pre-Roman Iron Age.

Romano-British settlement occurred within a landscape of ditched boundaries and drains, the principal axis of which was probably laid out in the later 1st century AD. Occupation concentrated in the central-west part of the site, around Trench 6, and appears to have been most intensive around the 2nd to 3rd centuries AD, with very little indication of significant continuation into the 4th century. Although the settlement appears to have re-located, it is possible that the divided landscape continued to be exploited for some time.

Eventual abandonment of the Romano-British landscape, however, is perhaps indicated by fills of alluvial character within some features, presumably accumulated in part through episodes of estuarine flooding. Partially filled features at various locations across the site show evidence for formation of a darker organic deposit, probably representing onset of wetland conditions over the Site area, succeeded by further alluvial accumulations. Tentative comparisons may be suggested with scientific dating of deposits examined within 2.5km north of the Site. Radiocarbon dating suggests that peat formation at Holland Park, possibly associated with the darker organic deposits observed at Millfield, may be of 6th to 7th century date, whereas overlying estuarine silts at Wygate Park, just to the north, have generated a 7th to 10th century OSL date. The precise sequence of environmental changes at Millfield will have been directed by its immediate topography, but the general trends accord with those of peer sites in the vicinity.

Through the medieval period the land was valuable as common pasture but remained relatively marginal and vulnerable to occasional freshwater inundation. Improvements to local drainage, beginning with major campaigns in the 17th century, led to enclosure in the early 19th century and to increasingly intensive exploitation for agriculture and horticulture. In the later 20th century this culminated in construction of the nursery complex demolished immediately before the investigations described in this report.

8.6 Finds

Finds recovered during the project comprised pottery, examples of worked bone and worked stone objects, animal bone fragments, fragments of ceramic salt-making debris (briquetage), a few metal objects and miscellaneous fragments of slag and clinker. The Roman pottery assemblage is predominantly represented by 2nd to 3rd century fabrics, with a range of wares typical for this part of Lincolnshire.

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11.0 PROJECT/ ARCHIVE DETAILS

11.1 Project Information

SITE CODE: SCSP21

PLANNING APPLICATION No.: H16-0668-16

FIELD OFFICER: C. Moulis

NGR: TF 2344 2004

CIVIL PARISH: N/A

SMR No.:

DATE OF INTERVENTION: 9th May to 20th June 2021

TYPE OF INTERVENTION: Trial Trench Evaluation

UNDERTAKEN FOR: Seagate Homes

11.2 Archive Details

PRESENT LOCATION: Witham Archaeology Ltd, 2 High Street, Ruskington, Lincolnshire, NG34 9DT

FINAL LOCATION: The Collection, Danes Terrace, Lincoln

MUSEUM ACCESSION No.: LCNCC2021.39

ACCESSION DATE: -TBC

The Site Archive Comprises:

Context Register	25 Sheets
Context Records	460 Sheets
Trench Records	17 Sheets
Plan Register	1 Sheet
Section Register	2 Sheets
Drawings at Scale (var.)	22 Sheets -Drawing film
	40 Sheets Annotated paper drawings
Photographic Register	4 Sheets
Digital Photographs	134 image files
GPS digital survey data	6 data files
Digital Drawing for Archive	1 data file
Daily Record Sheets	29 Sheets

It is intended that transfer of the archive in accordance with current published requirements will be undertaken following completion of this project.

COLOUR PLATES



Plate 1: Aerial view from Site towards Cowbit Wash, looking south southeast



Plate 2: Aerial view of the south end of site, looking southwest



Plate 3: North end of the site, looking north



Plate 4: North end of the site, looking southwest



Plate 5: Southern field, looking east northeast



Plate 6: Trench 2. Ditch [02004], looking north



Plate 7: Trench 3, looking south



Plate 8: Trench 4. Ditch [04005], looking north



Plate 9: Trench 4. Ditches [04005] & [04002], looking northeast



Plate 10: Trench 5. Large pit [05002], looking north northwest



Plate 11: Trench 5. Ditch [05003], looking east northeast



Plate 12: Trench 6, looking west



Plate 13: Trench 6. Ditches [06017] & [06010], looking northeast



Plate 14: Trench 6. Ditch [06046], looking west



Plate 15: Trench 7. Ditch [07008], looking east



Plate 16: Trench 8. Ditch [08003], looking north



Plate 17: Trench 8. Ditch [08008], looking southwest



Plate 18: Trench 9. Pit [09007], looking south



Plate 19: Trench 10. Horse burial (10011), looking north



Plate 20: Trench 14. Ditch [14008], looking north



Plate 21: Trench 16, looking west



Plate 22: Trench 11. Ditches [11006] & [11004], looking north



Plate 23: Trench 11. Ditch [11008], looking northwest



Plate 24: Trench 11. Ditch [11032]/[11012], looking north northeast



Plate 25: Trench 12, looking north



Plate 26: Trench 12. Ditches [12003], [12004] & [12005], looking west

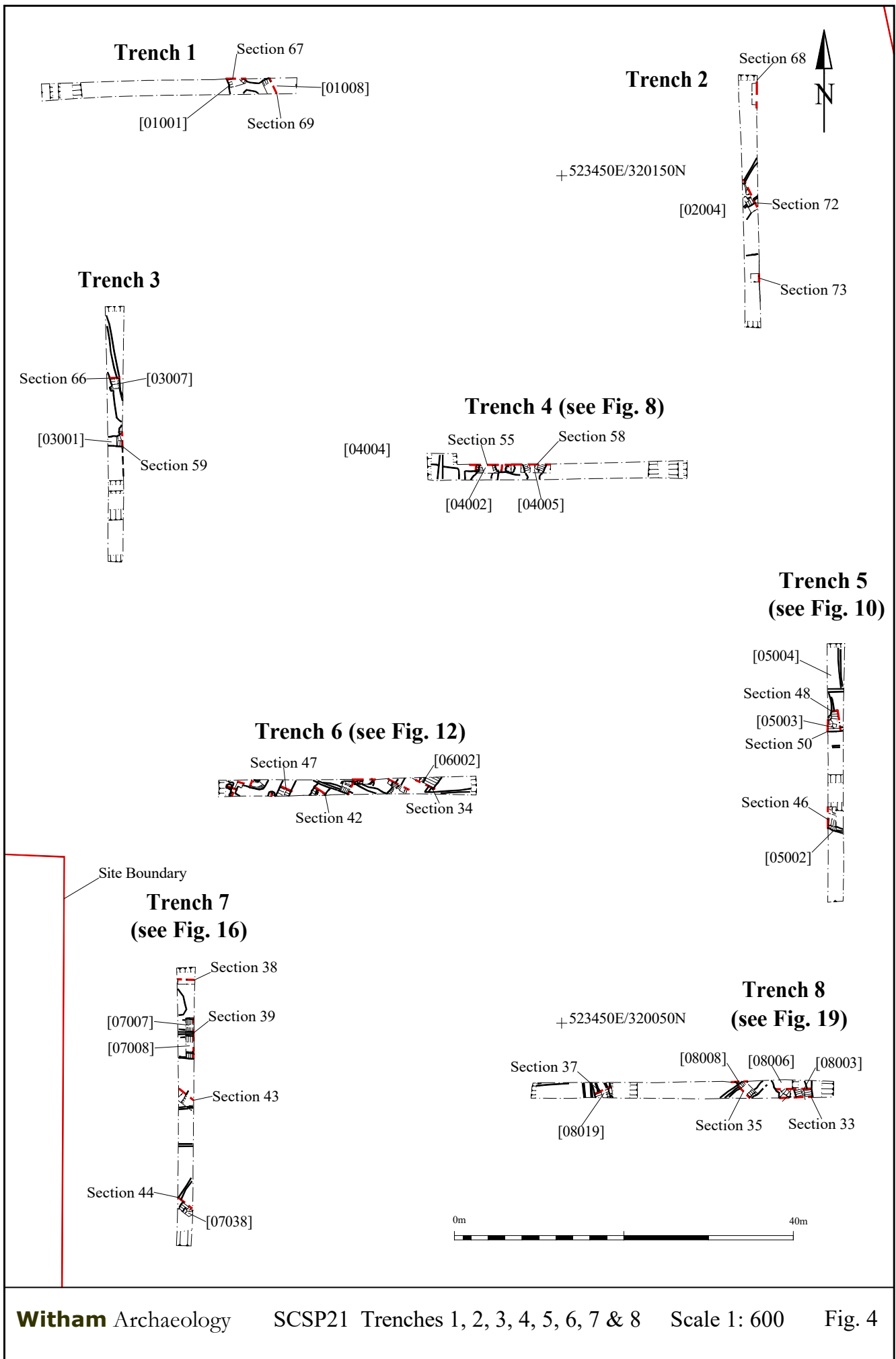


Plate 27: Trench 17. Ditch [17007], looking west

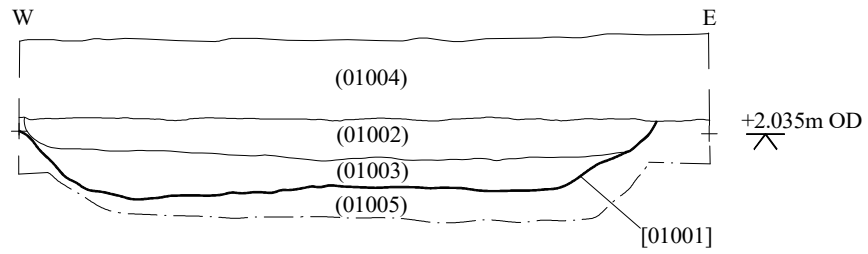




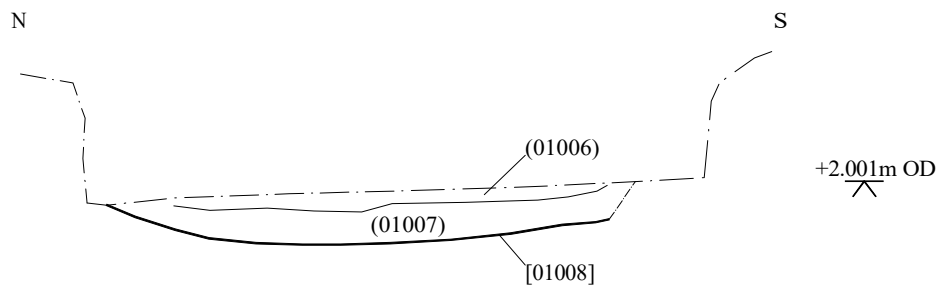




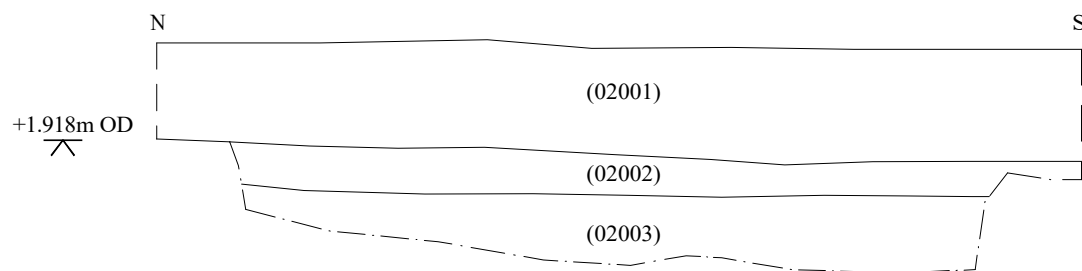
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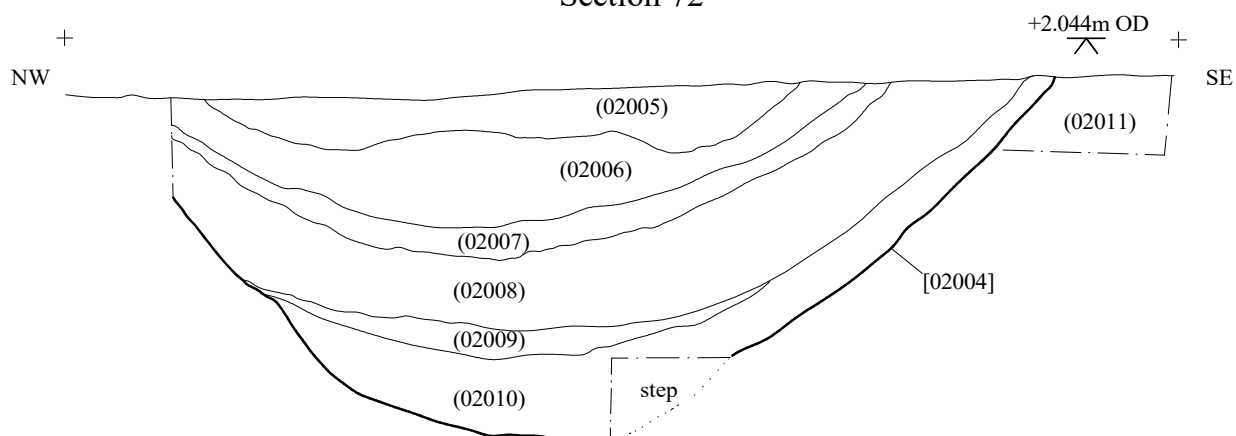
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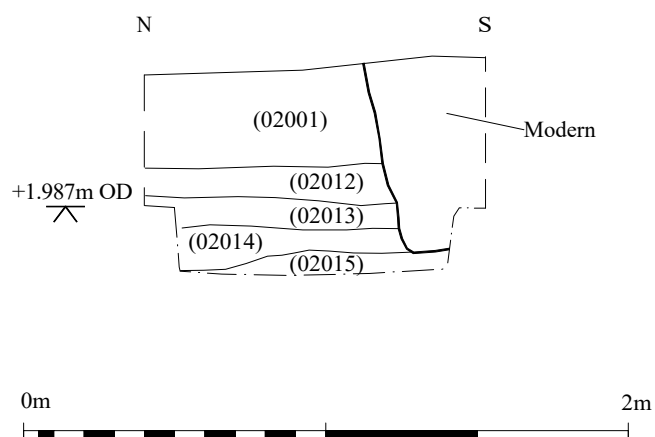
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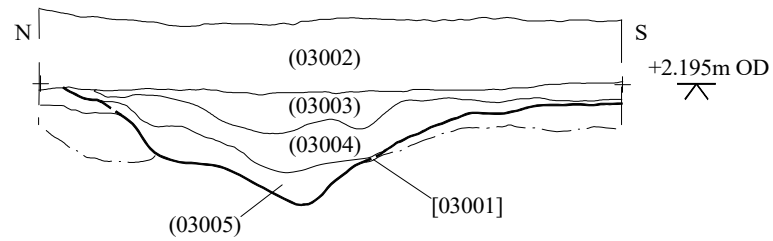
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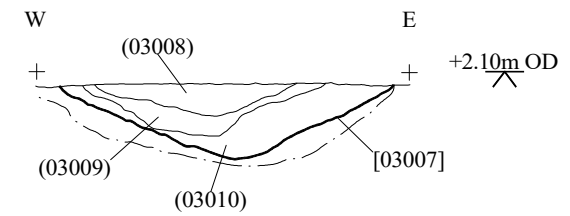
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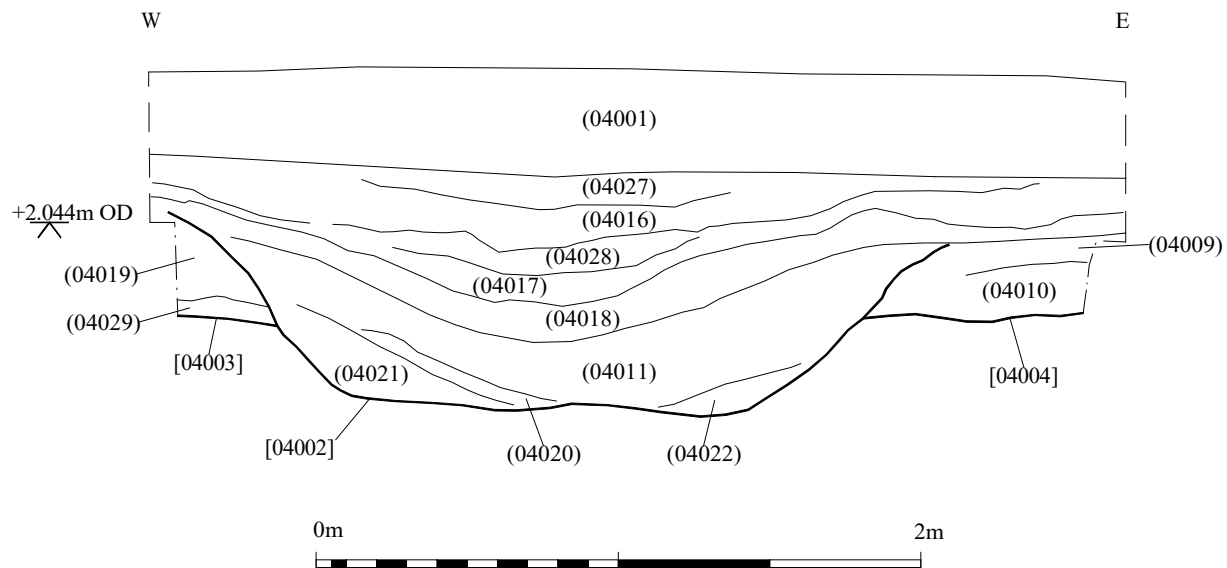
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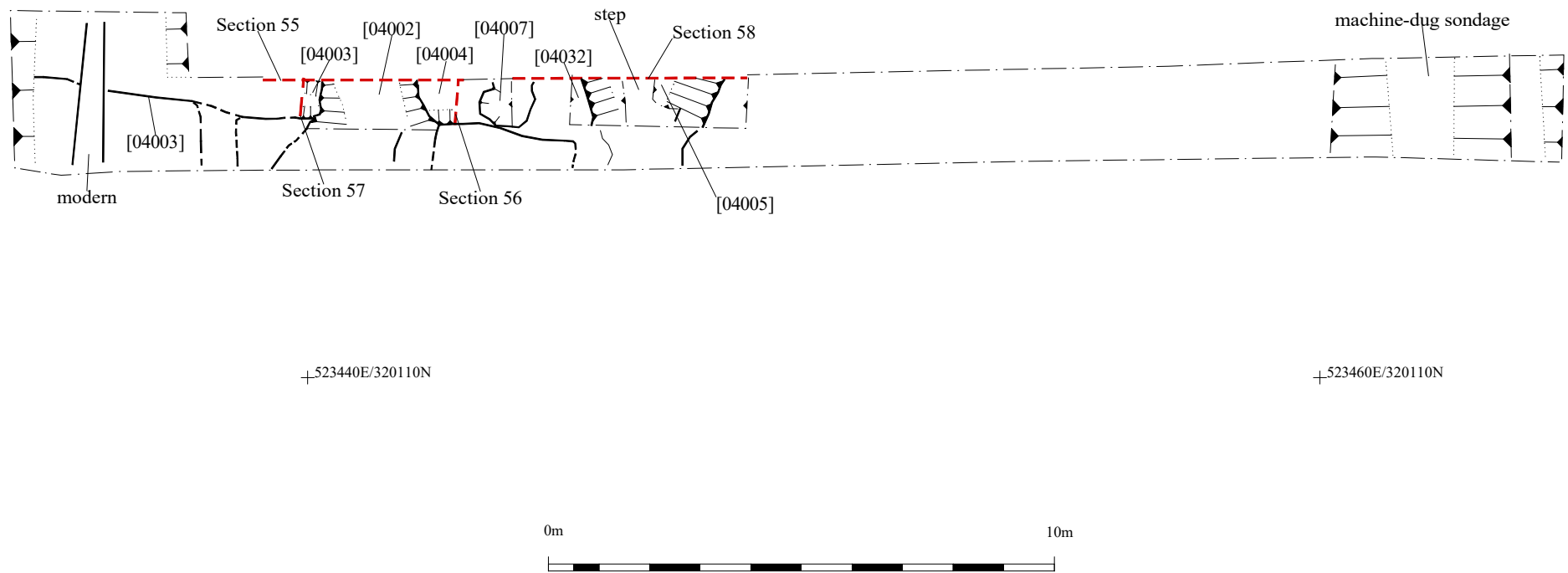


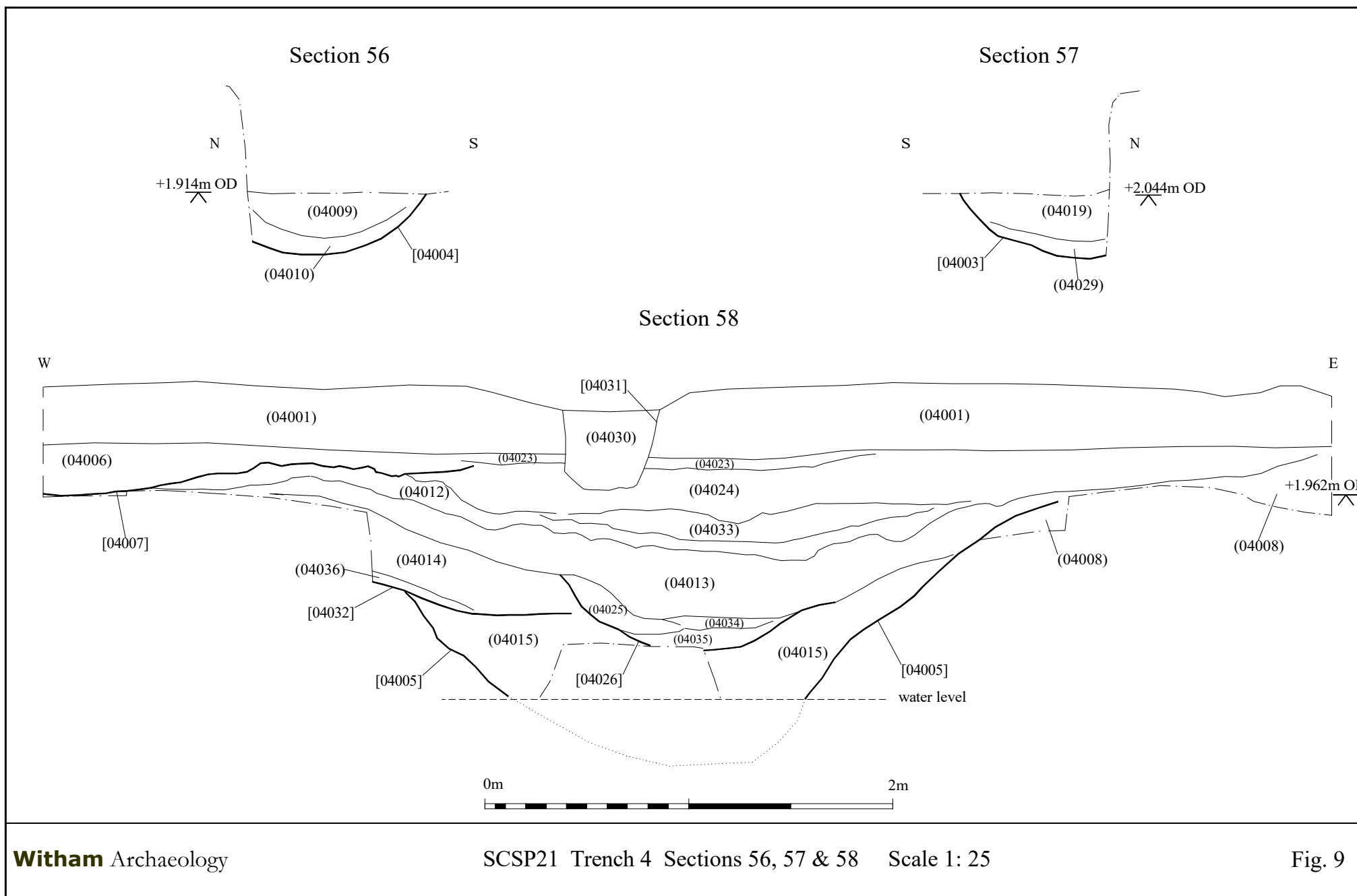
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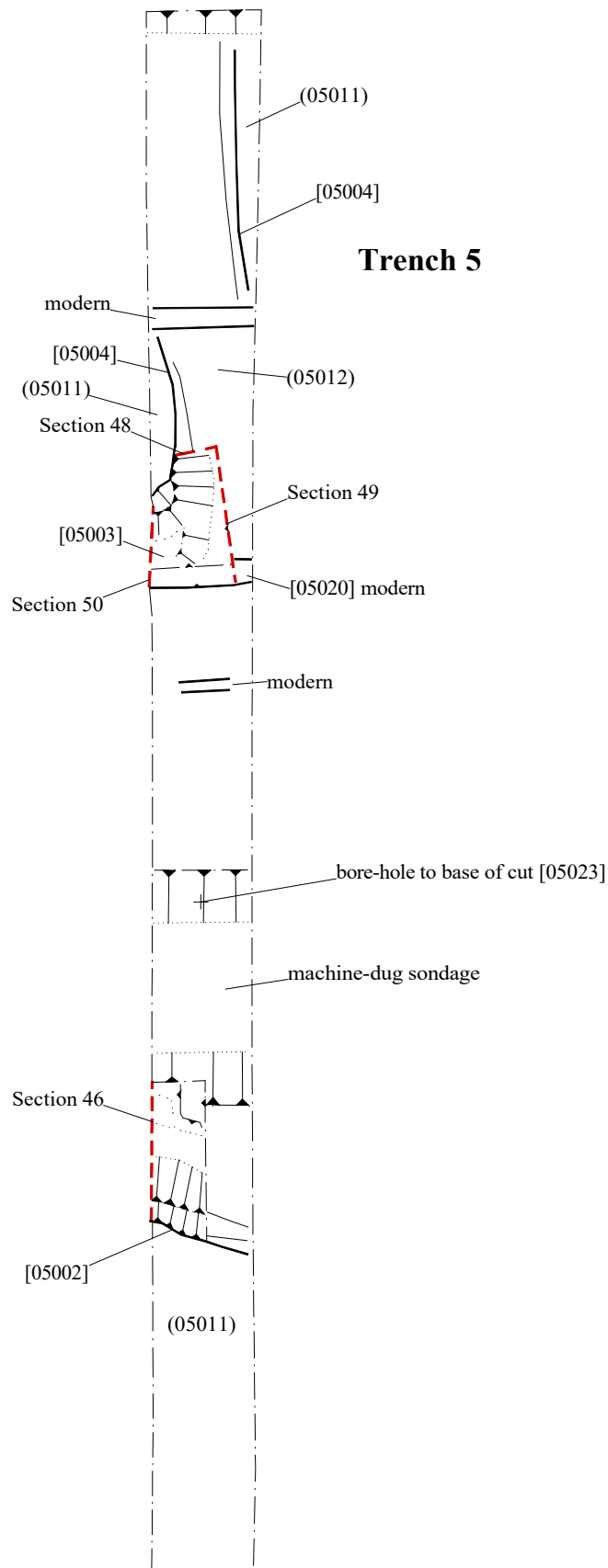




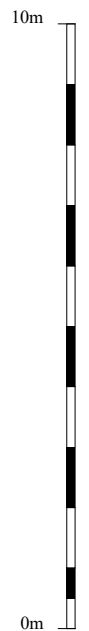
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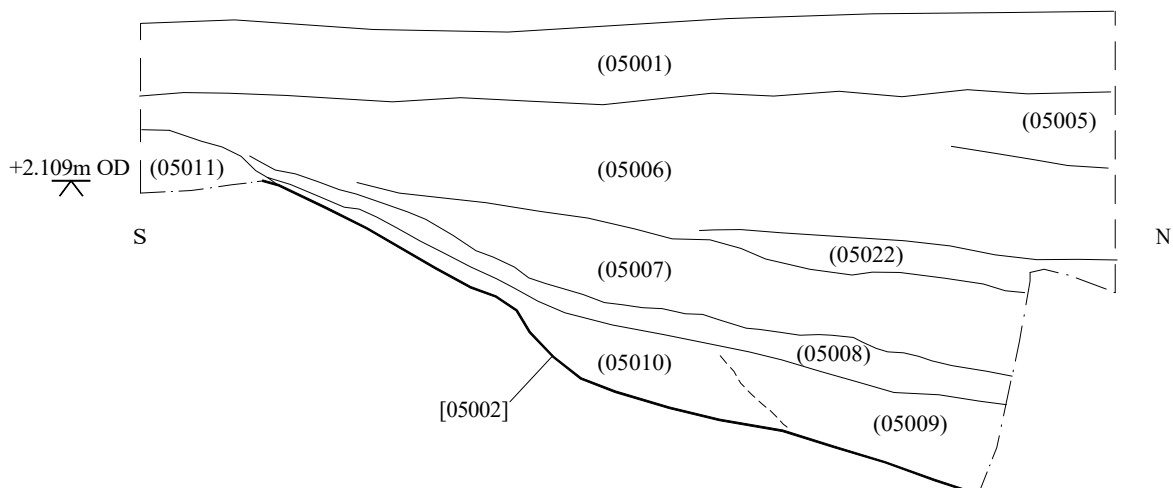


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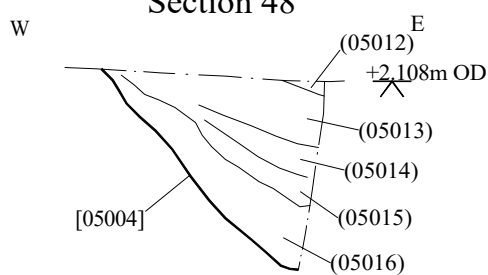


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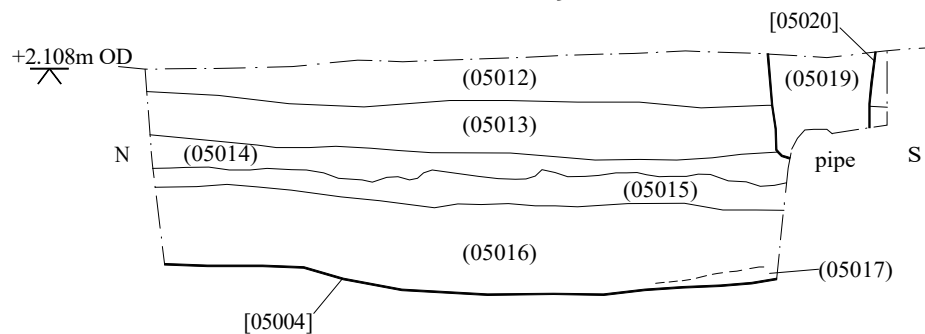
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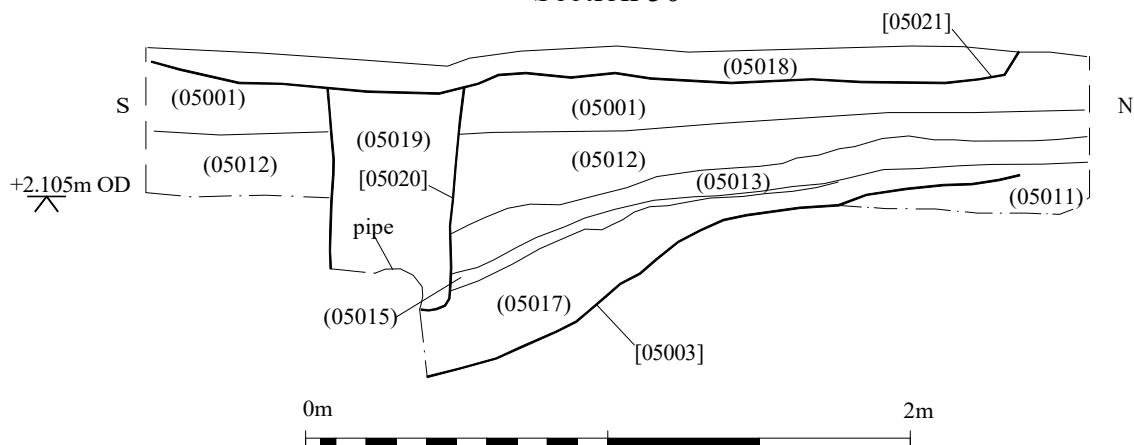
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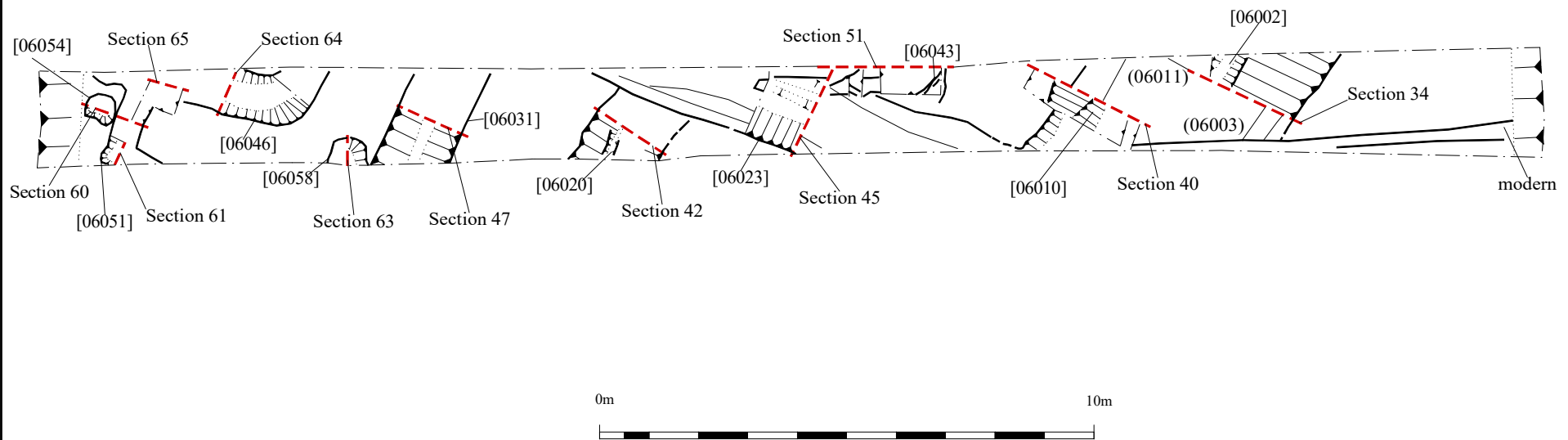




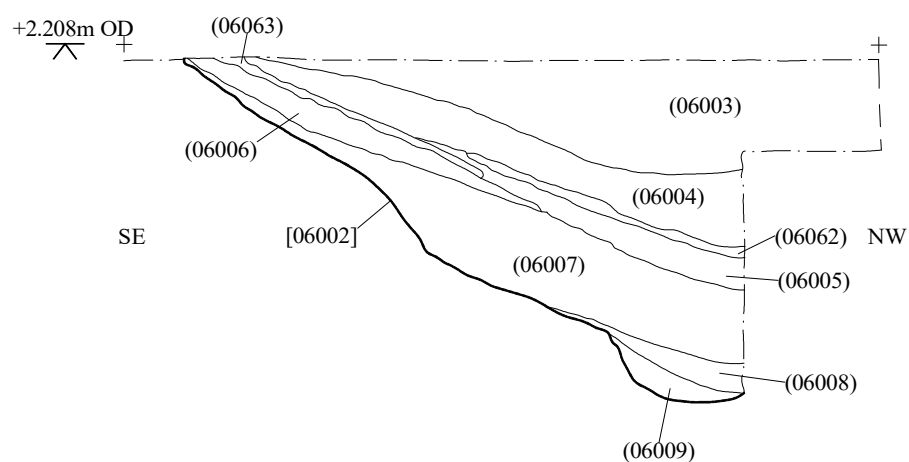
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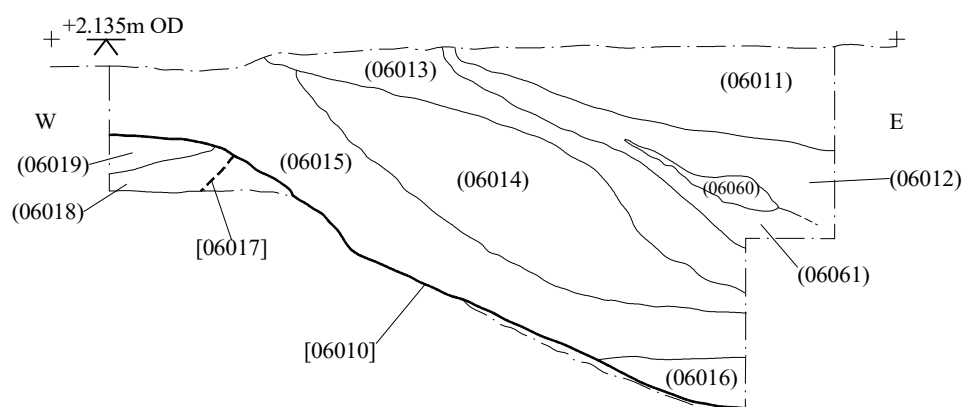
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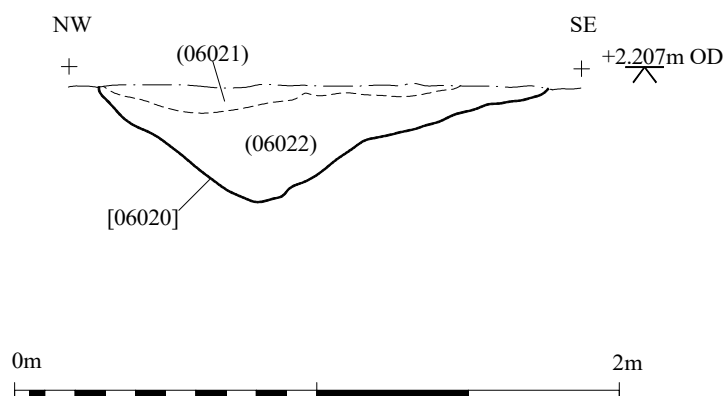
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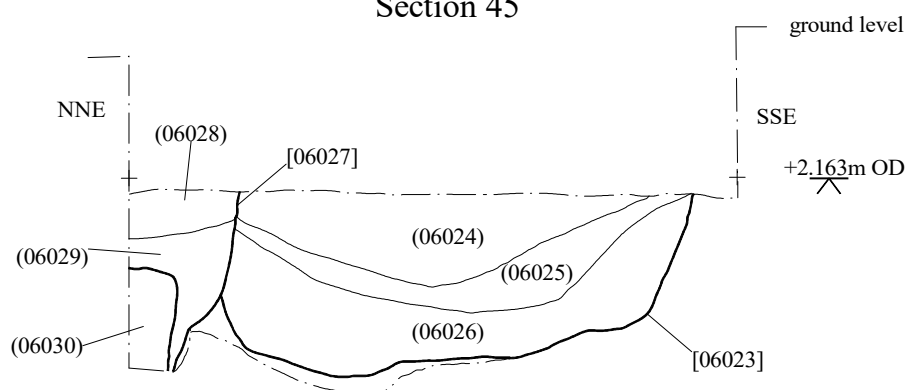
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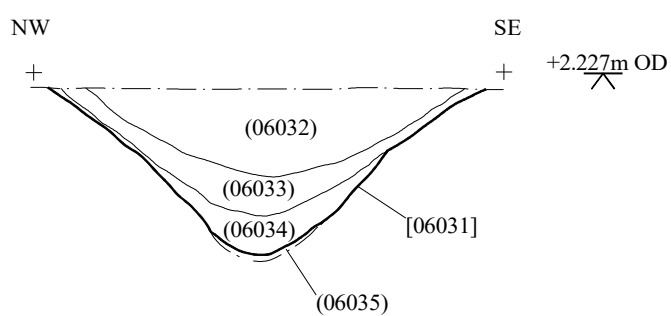
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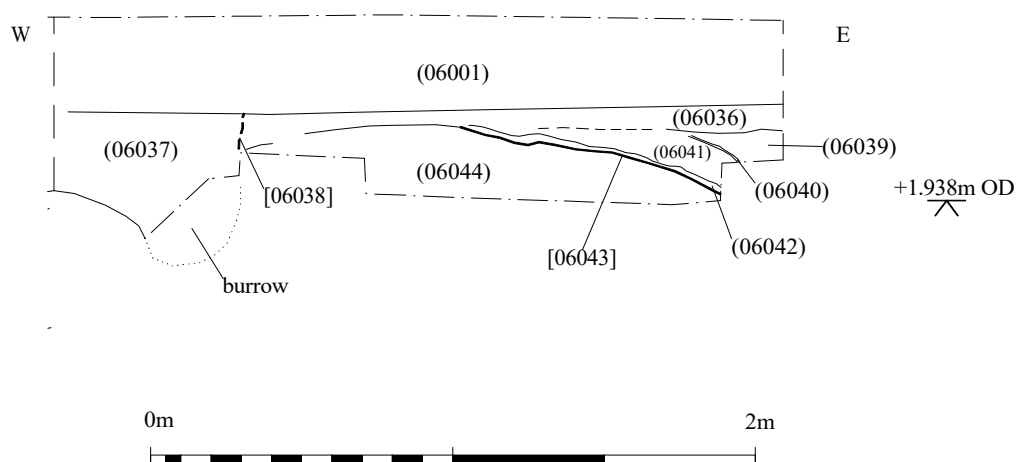
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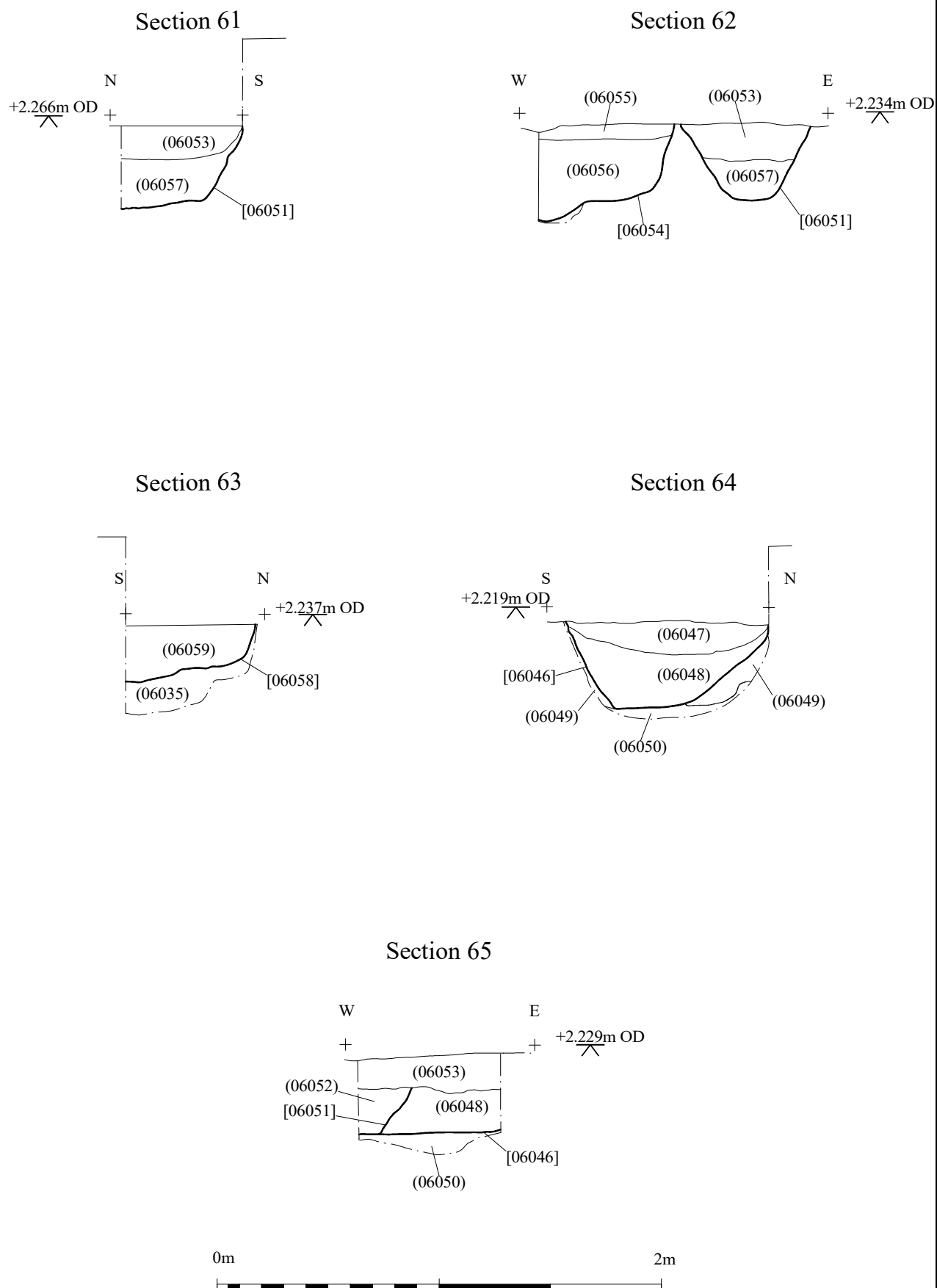


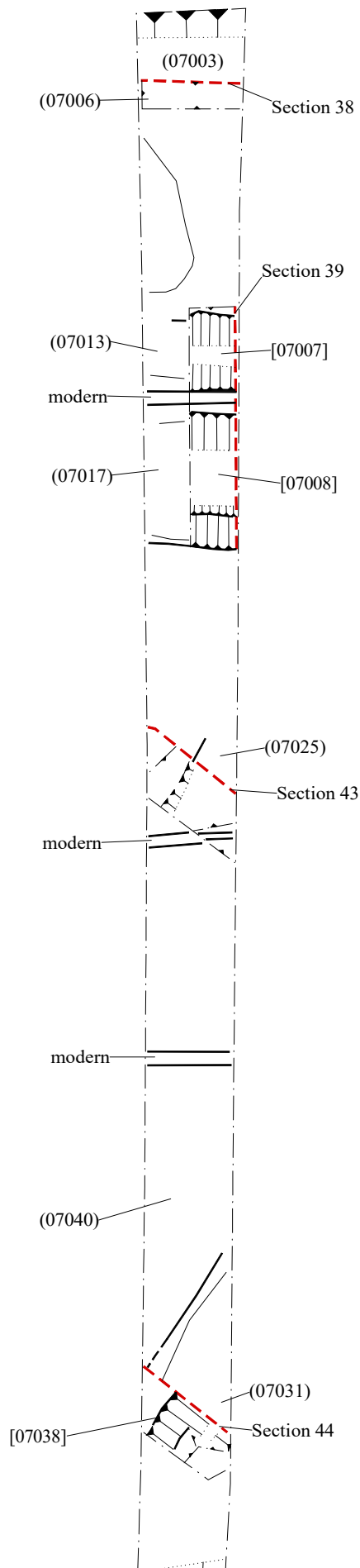
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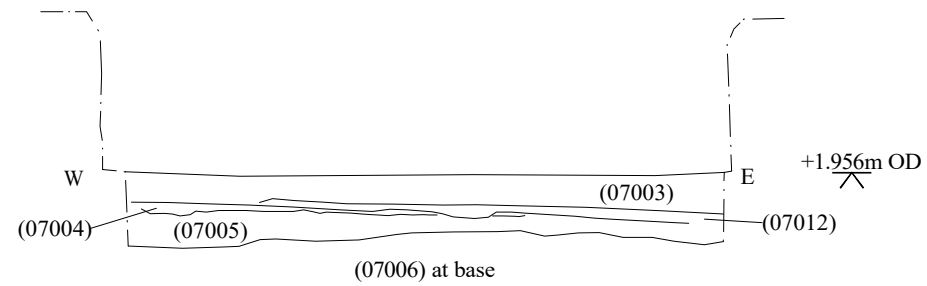




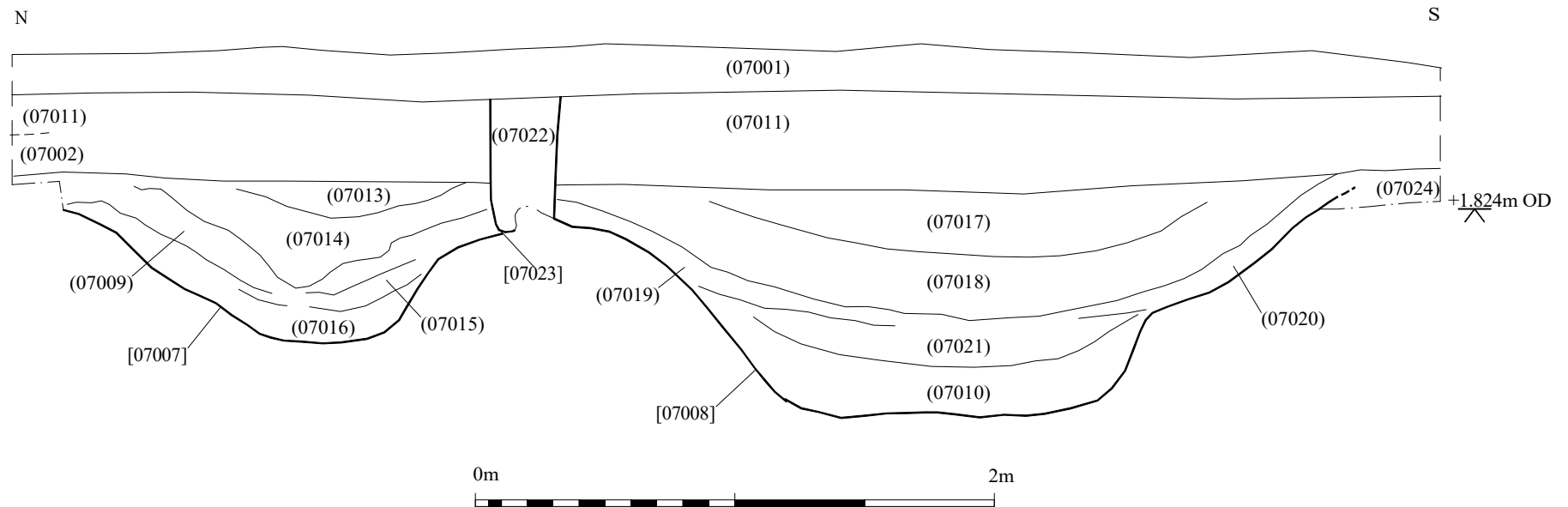
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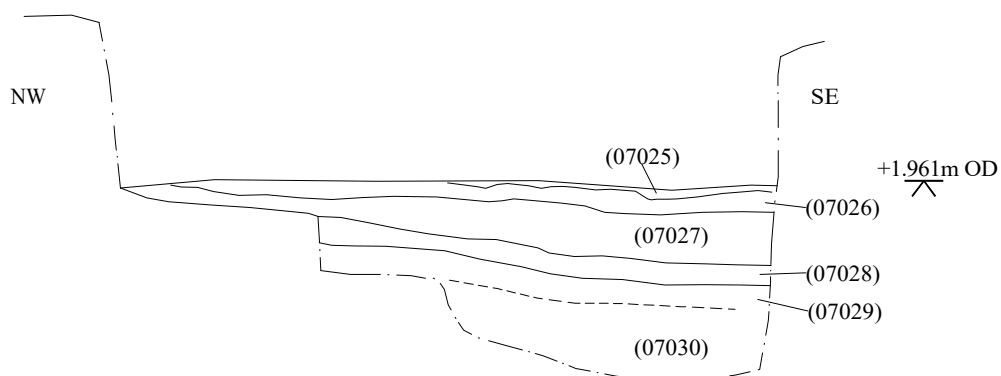
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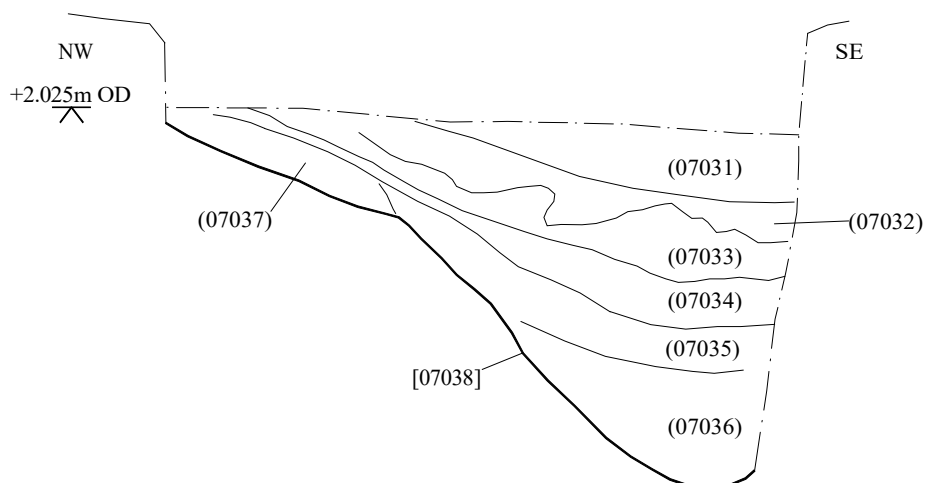
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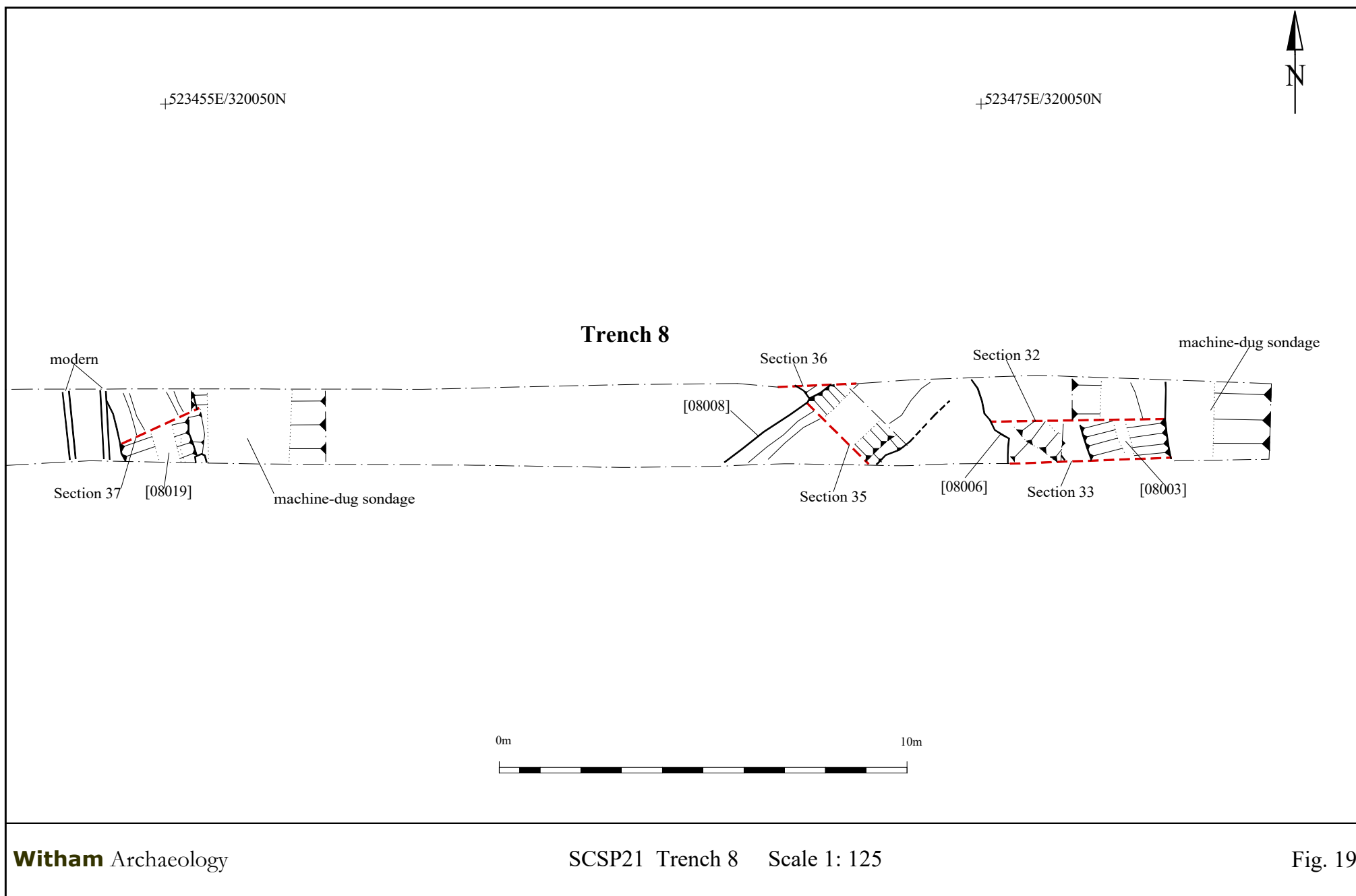


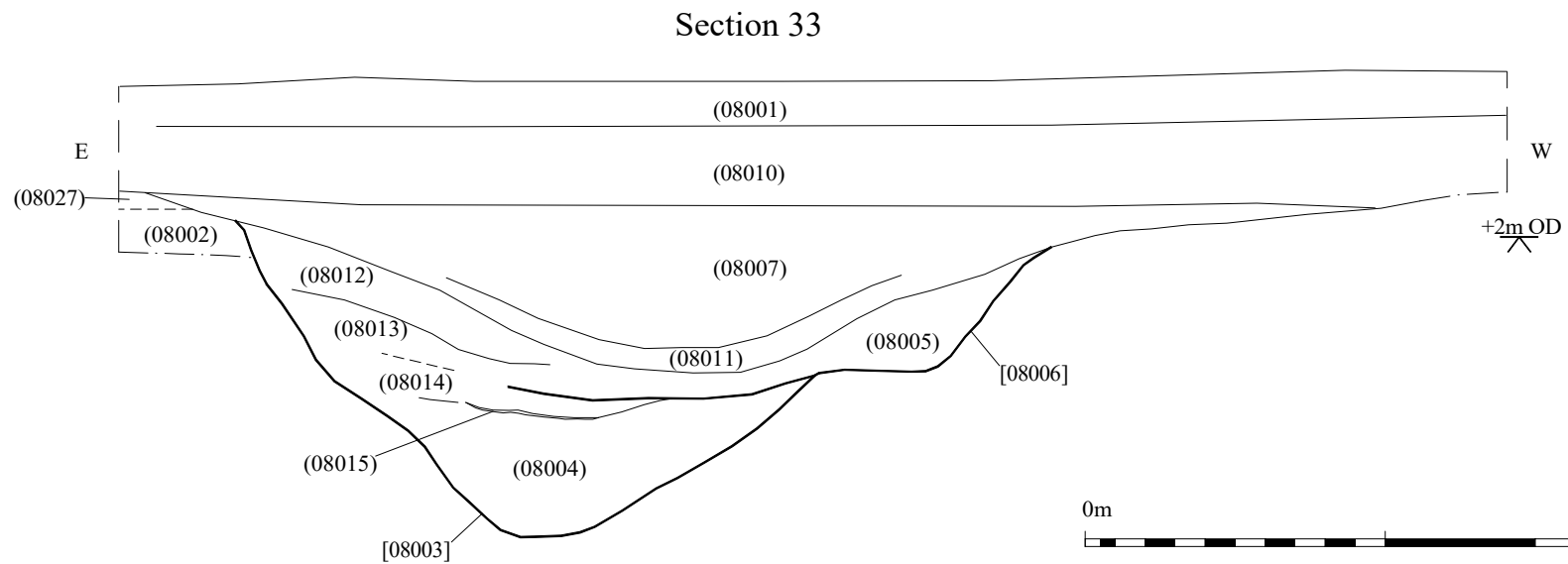
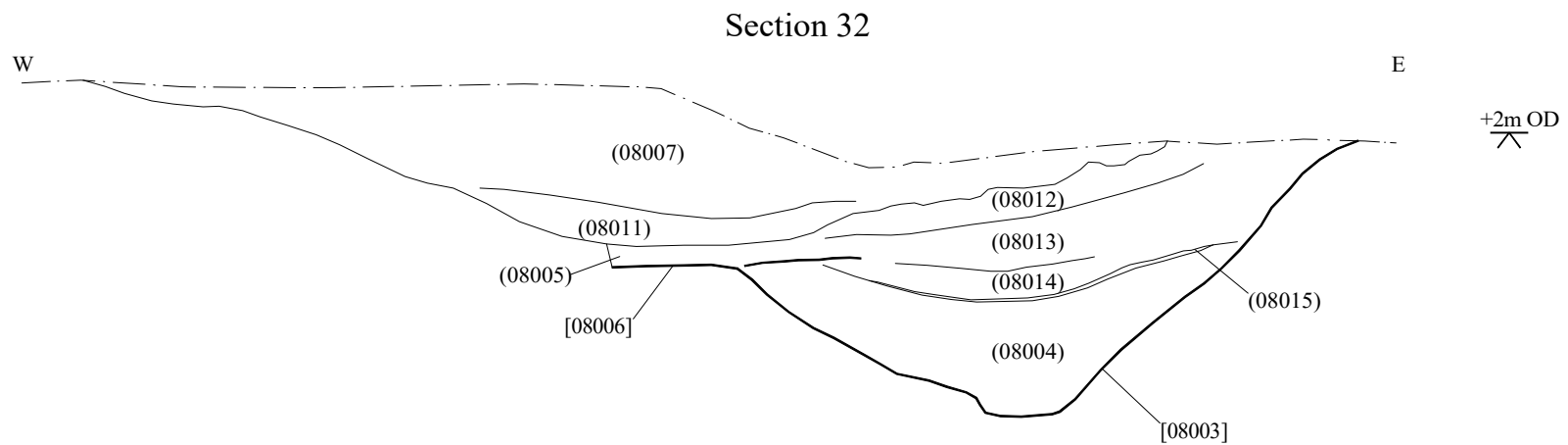
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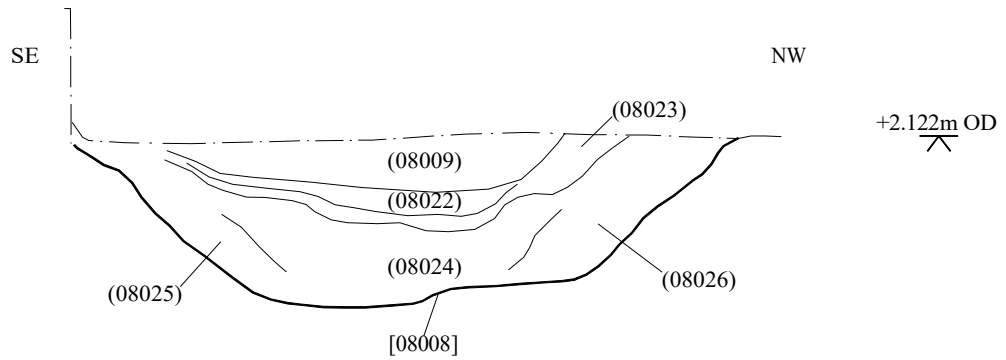
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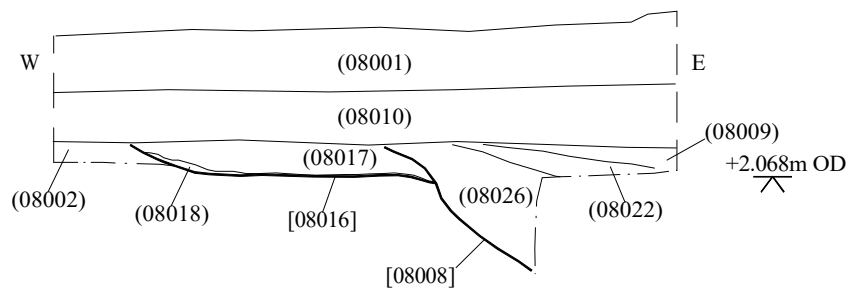




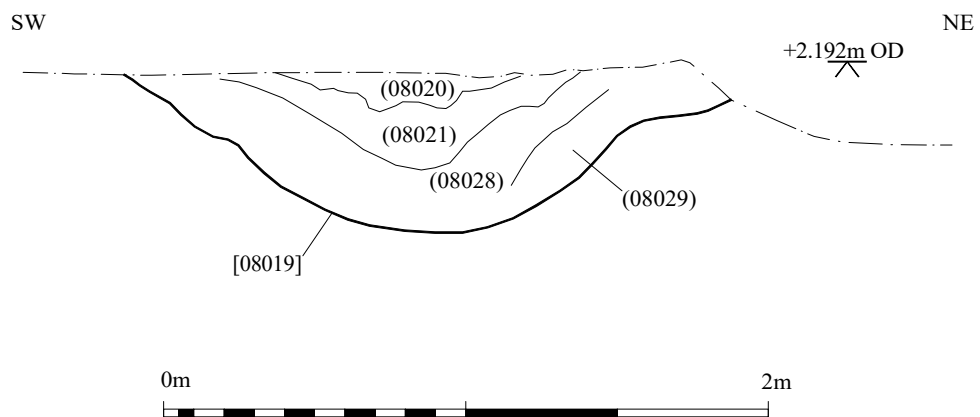
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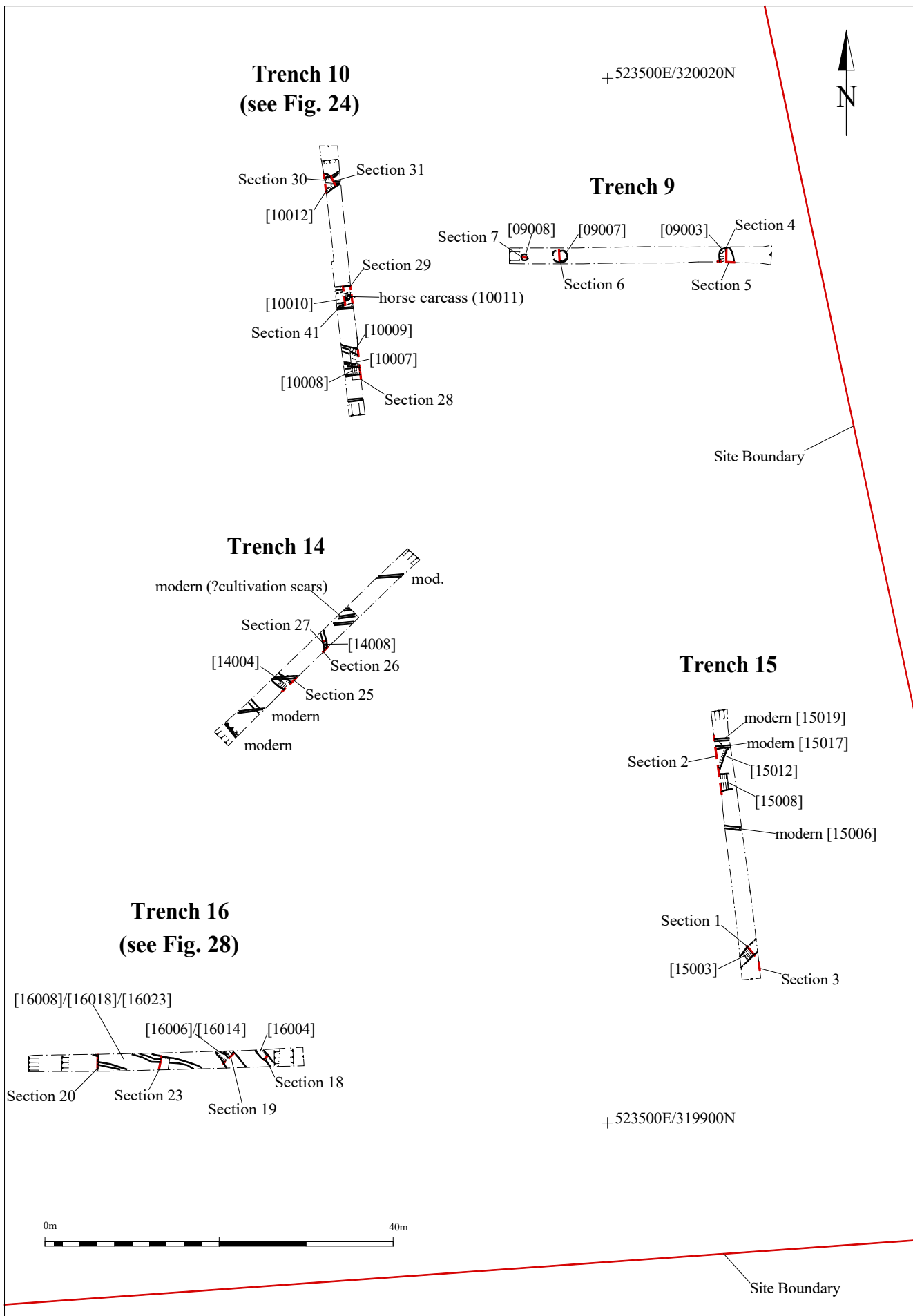


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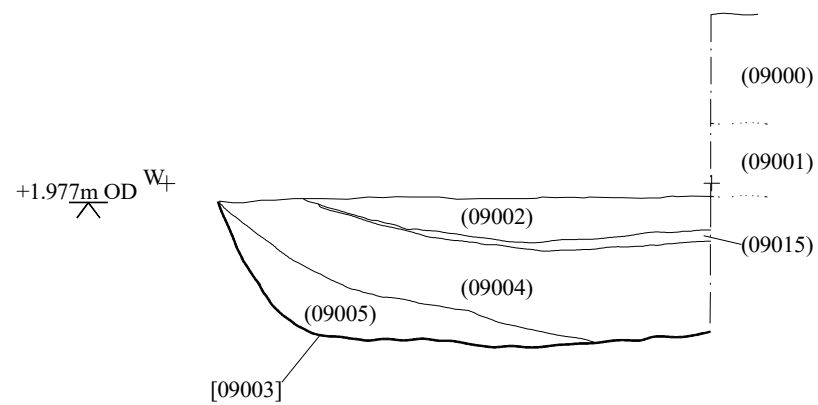


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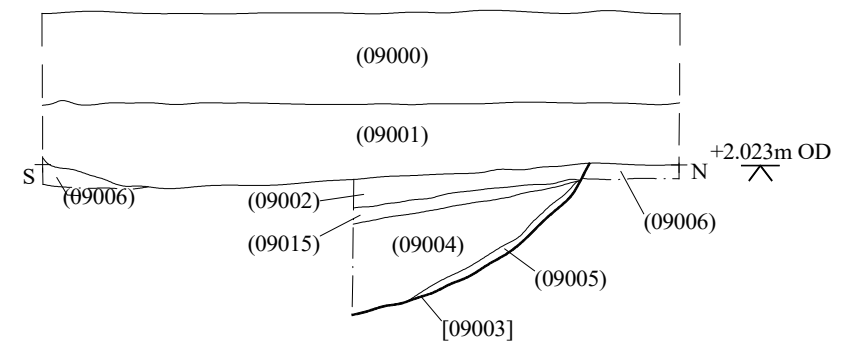




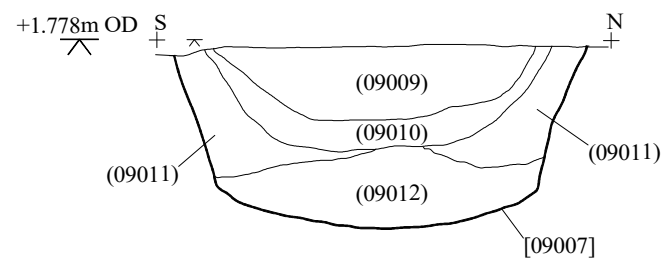
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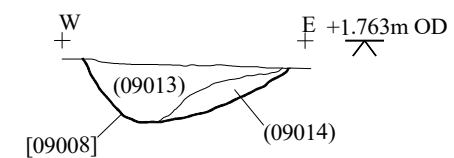
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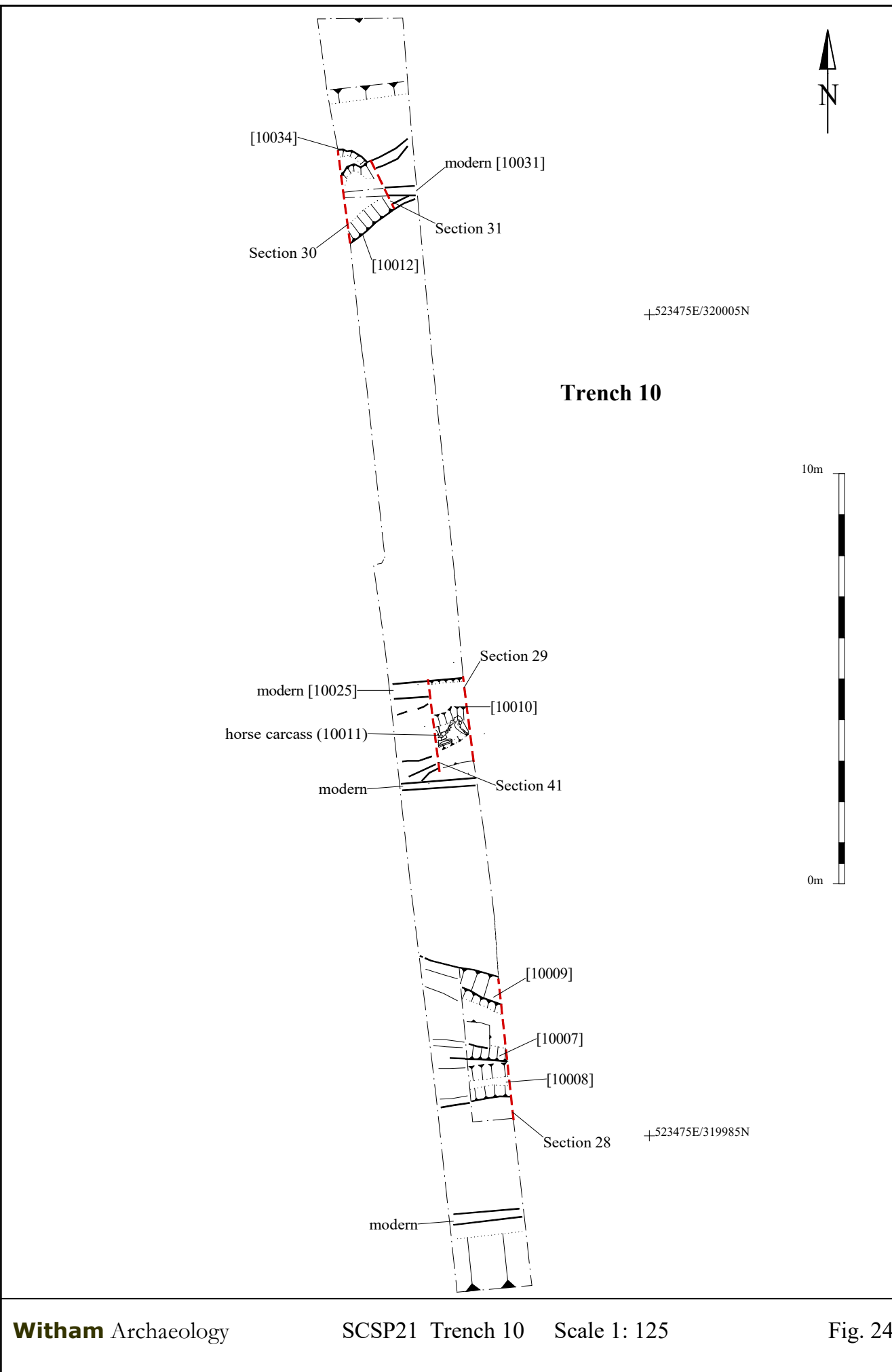


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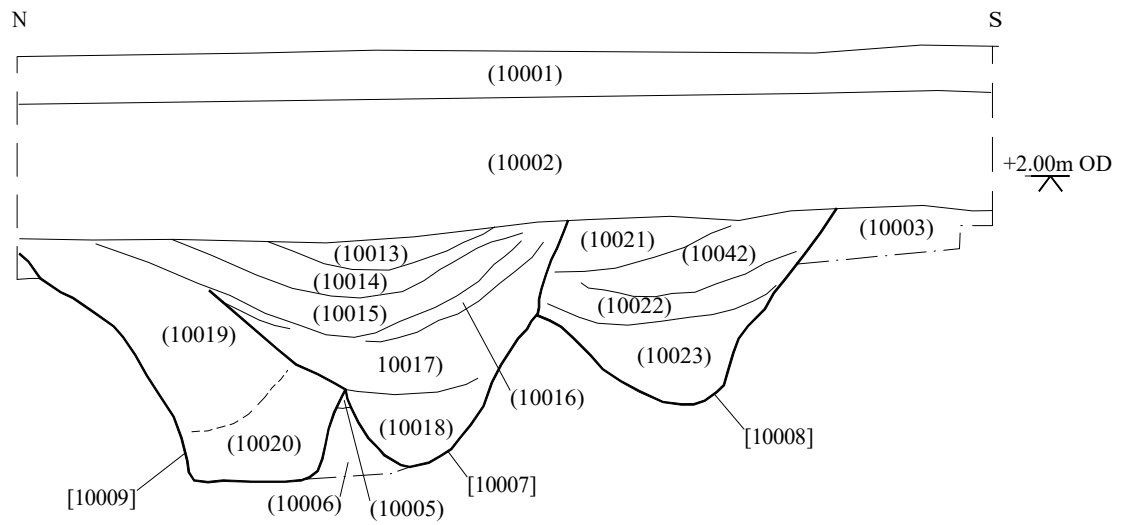


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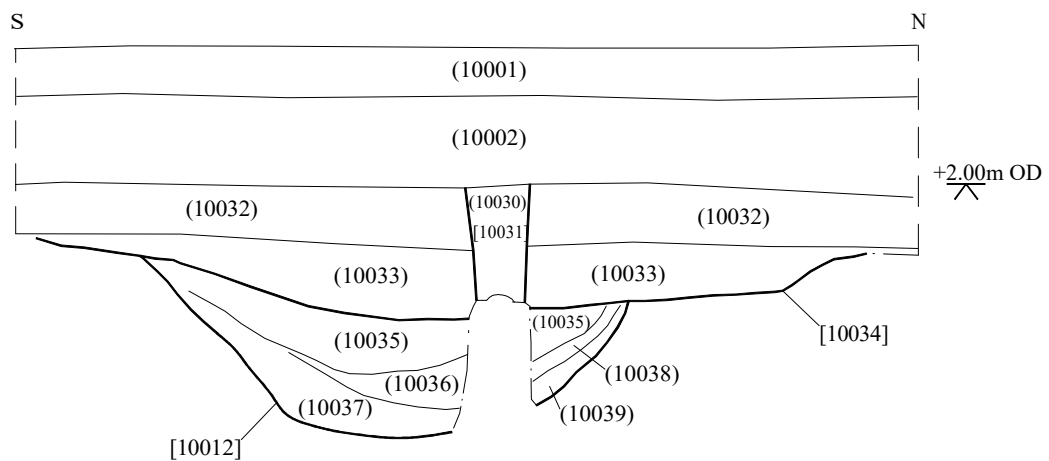




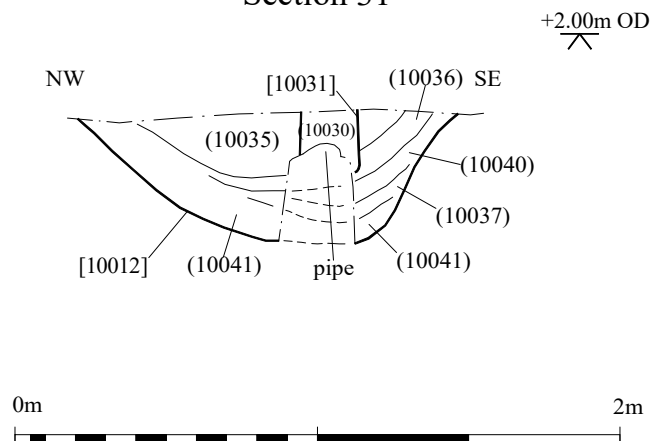
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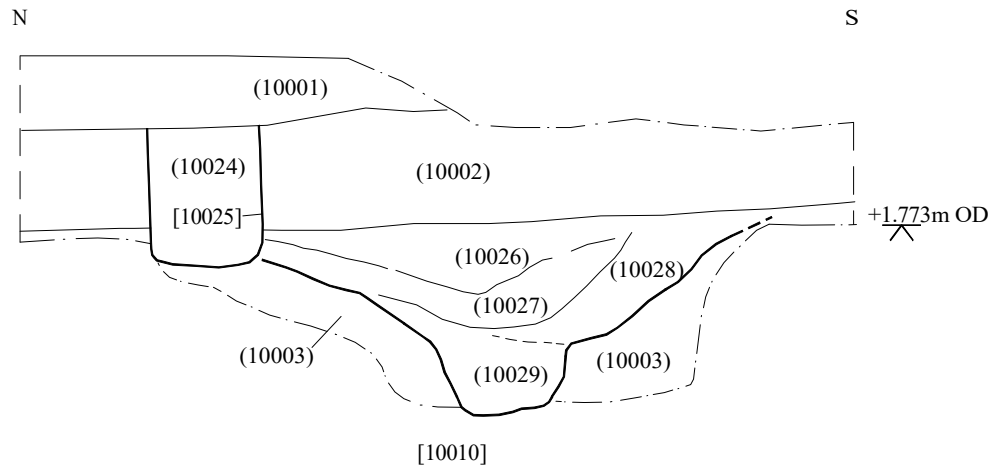
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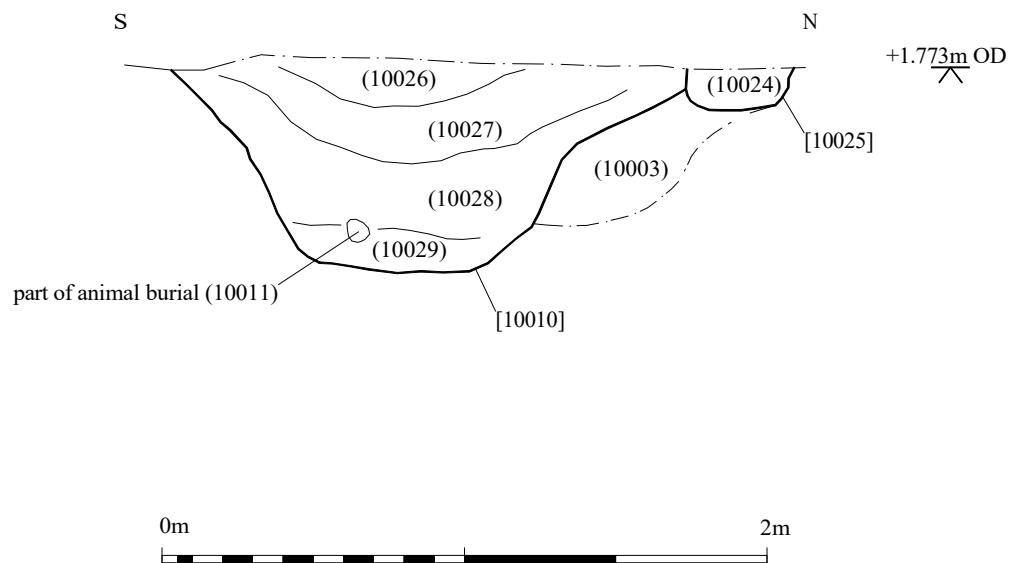
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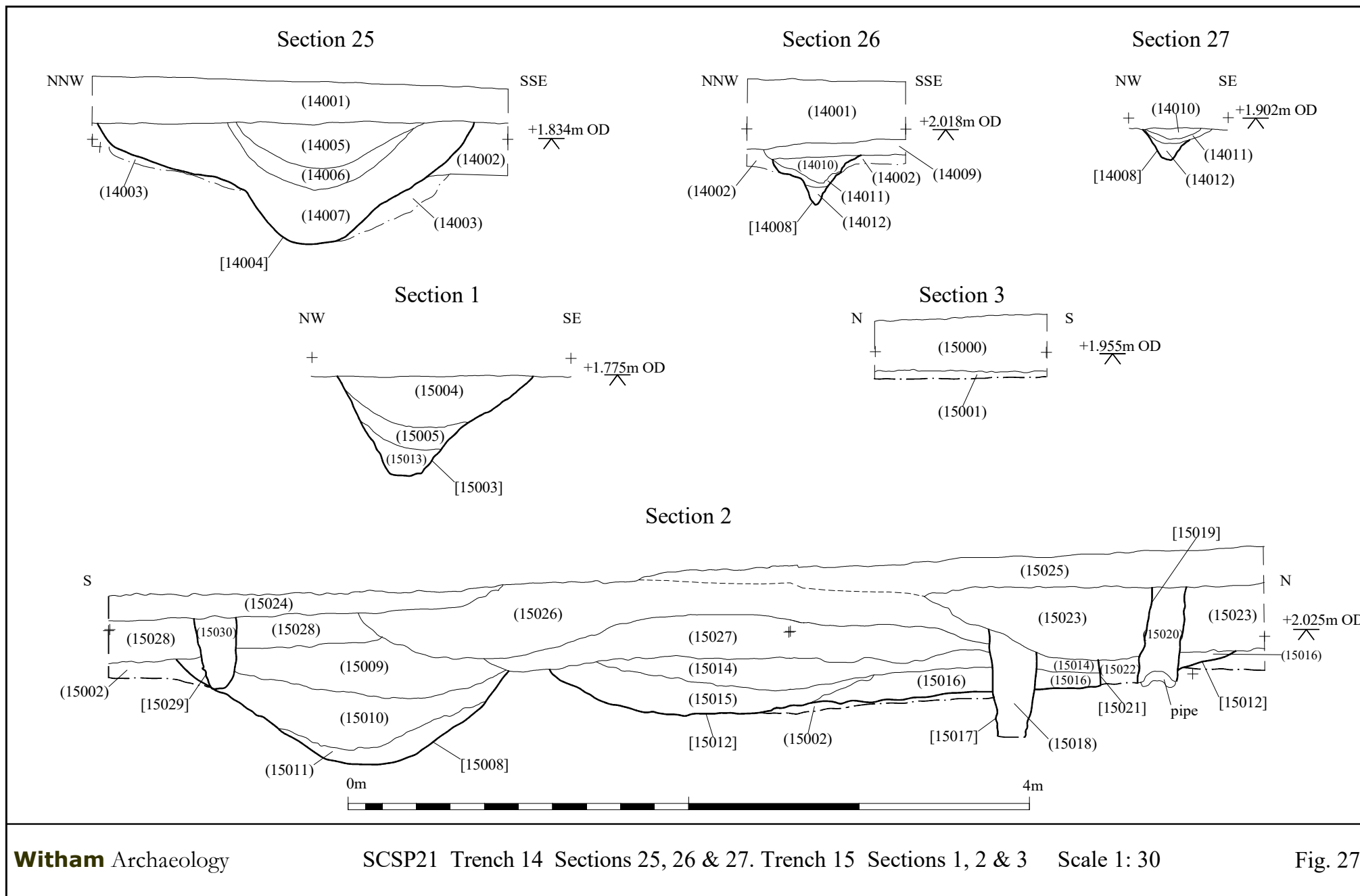


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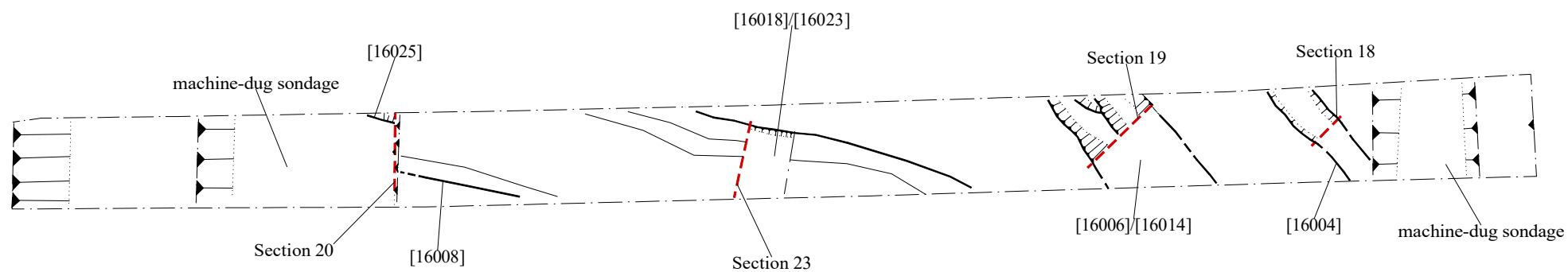


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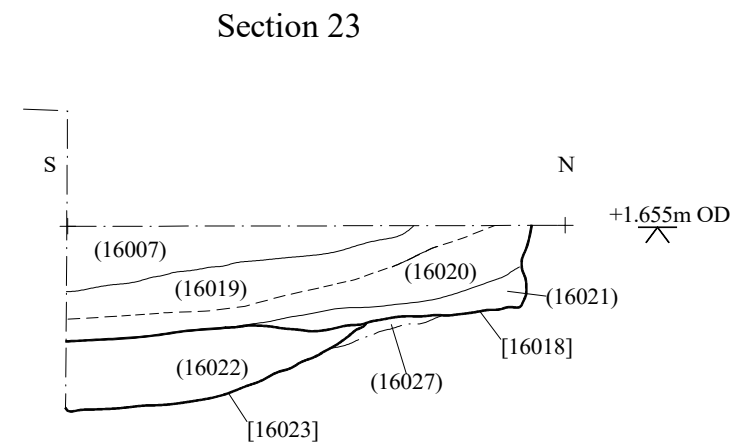
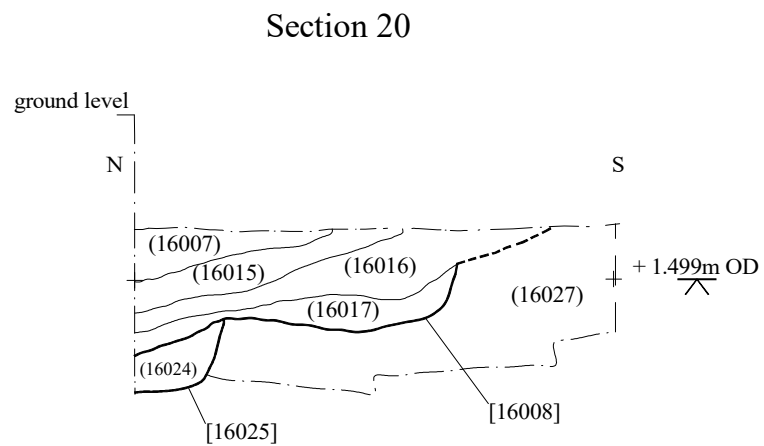
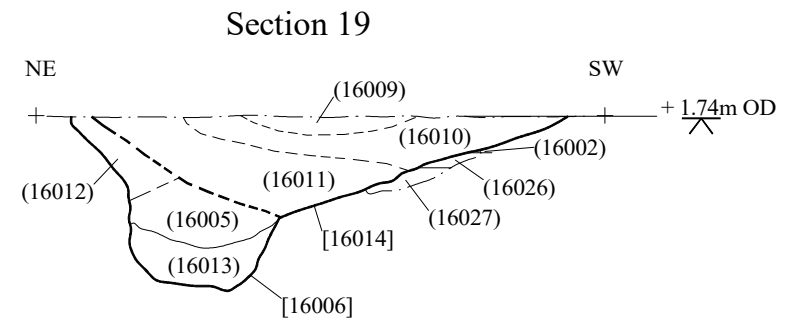
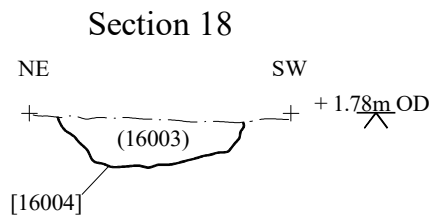
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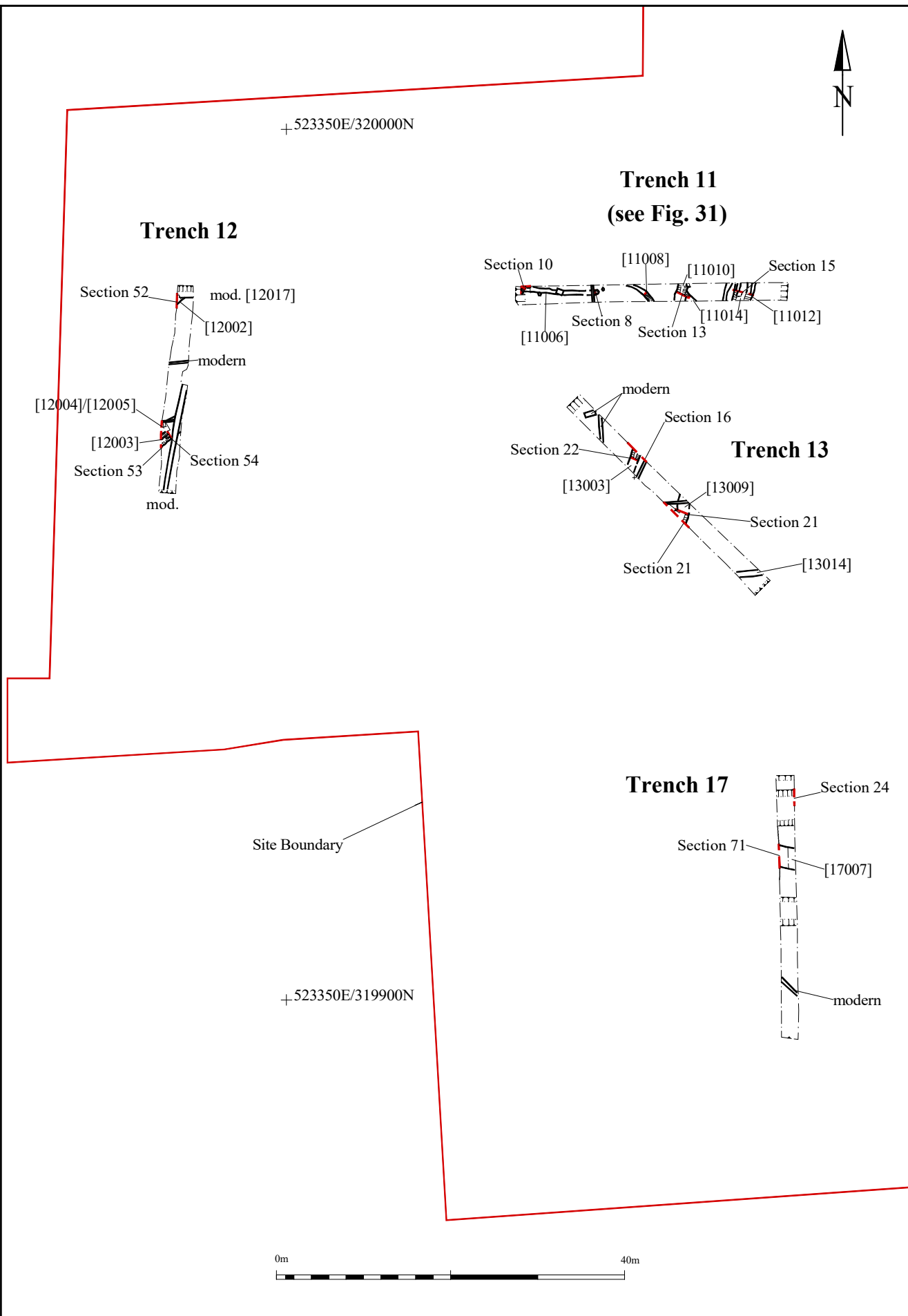


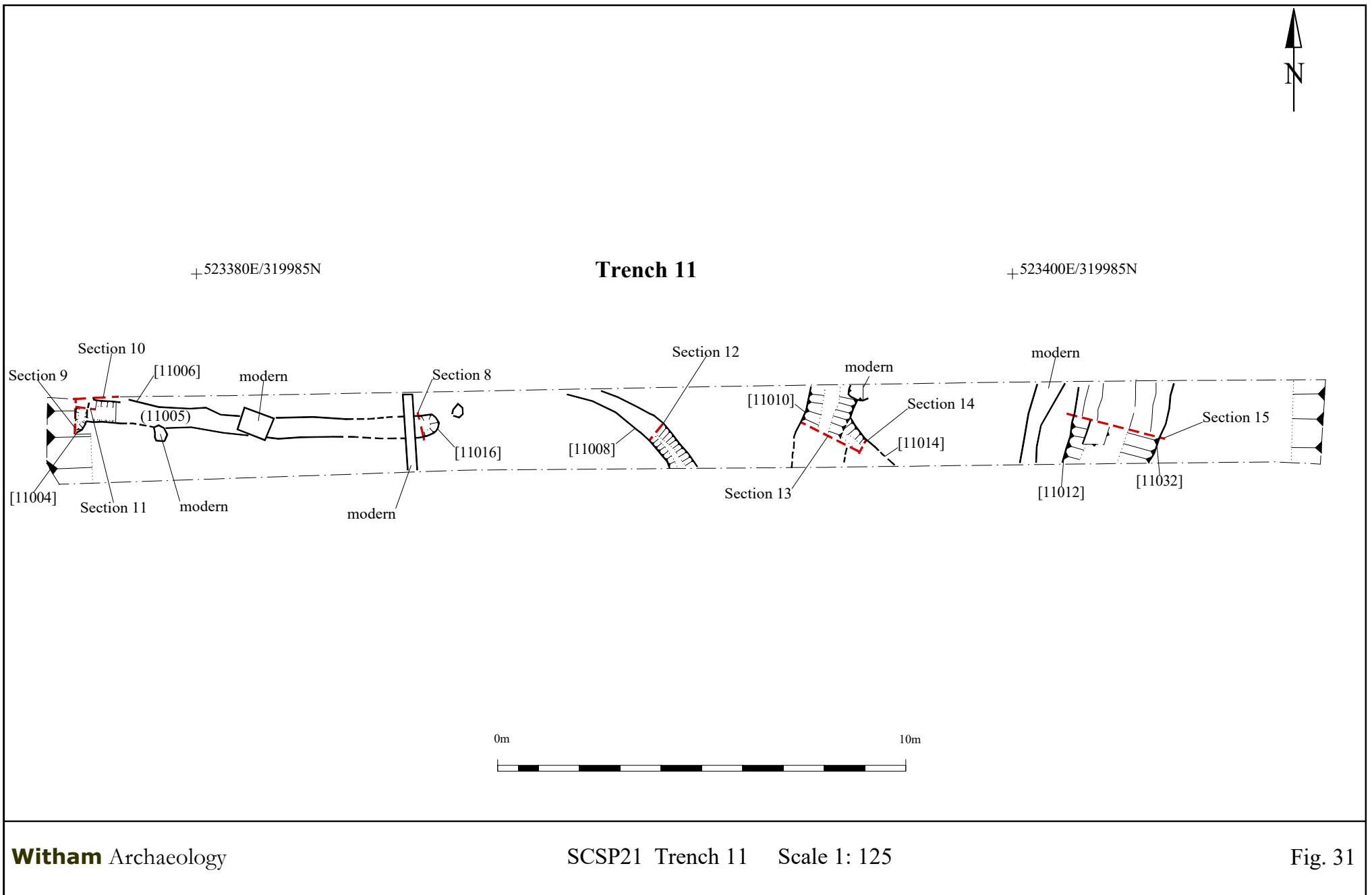
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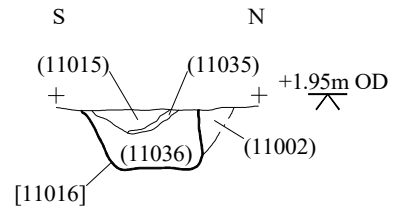




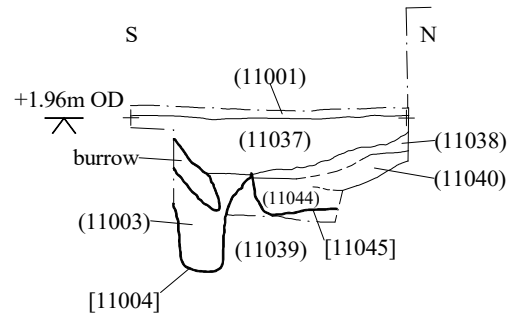




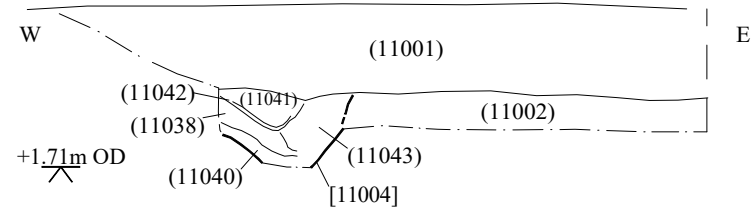
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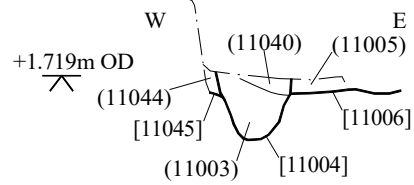
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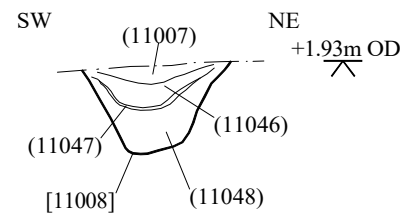
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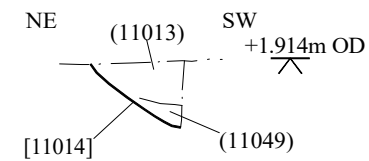
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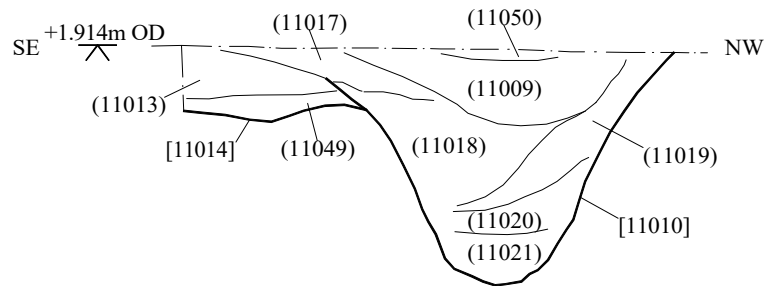
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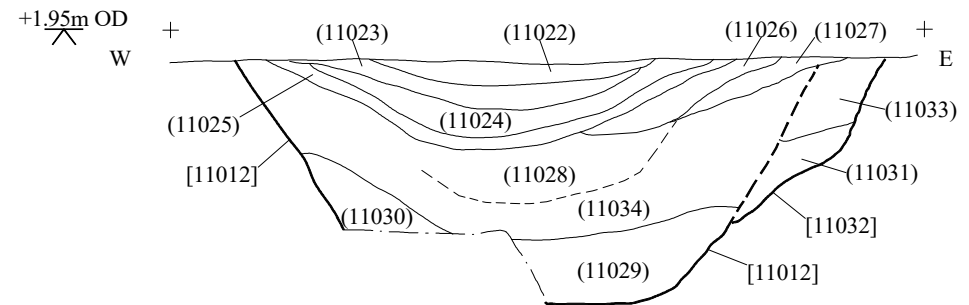
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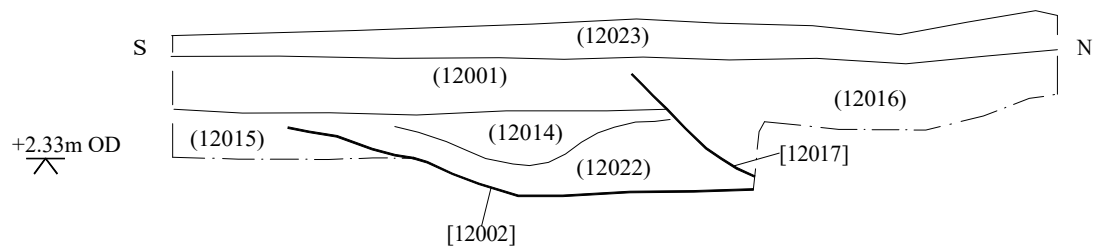
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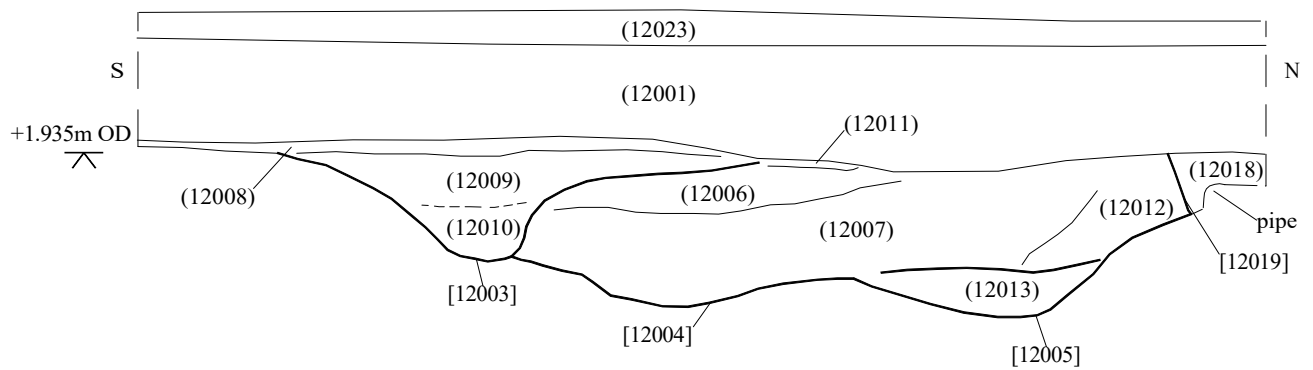
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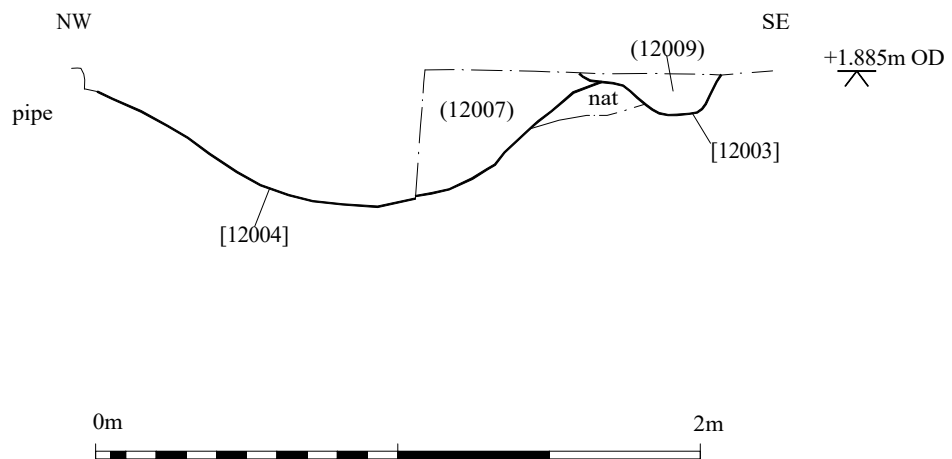
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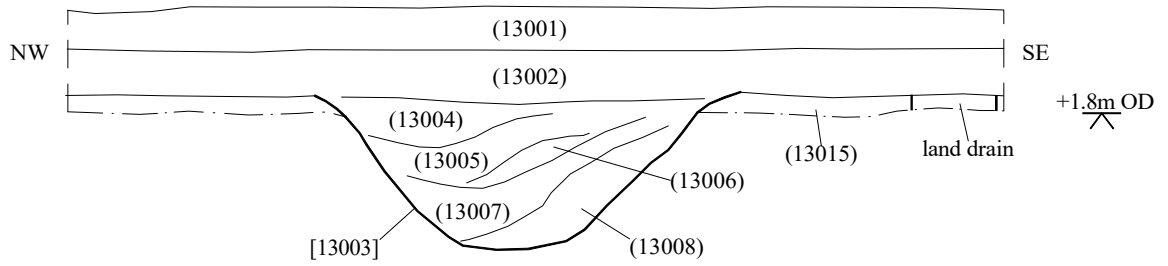
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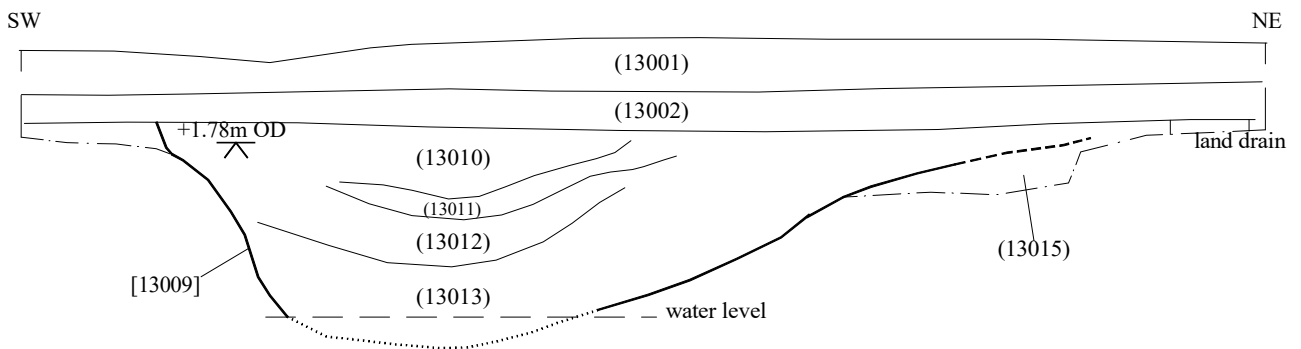
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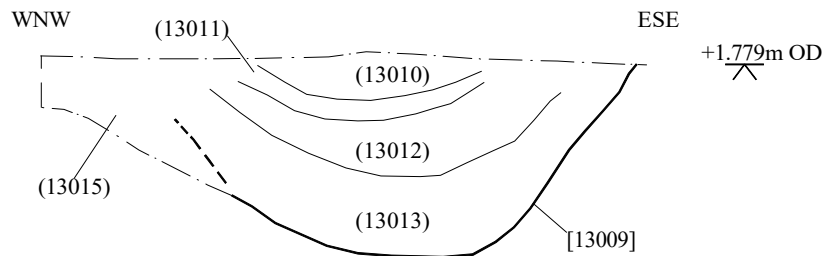
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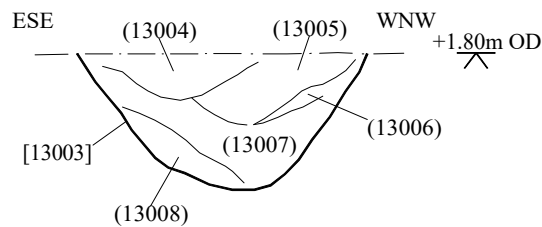
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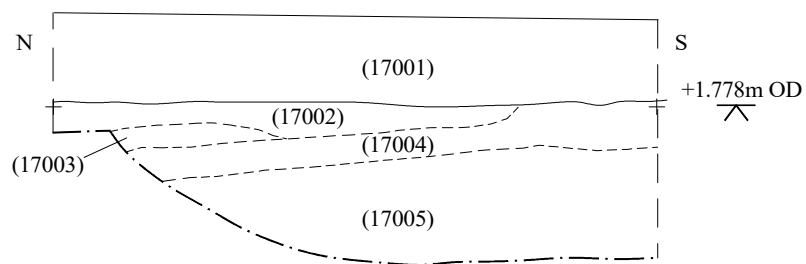
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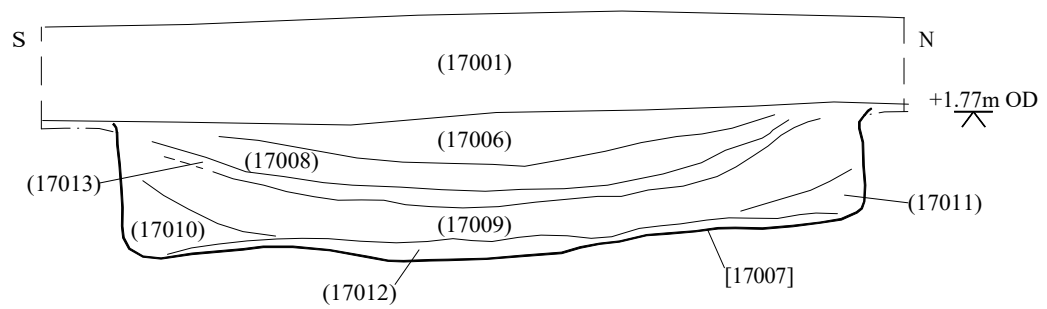
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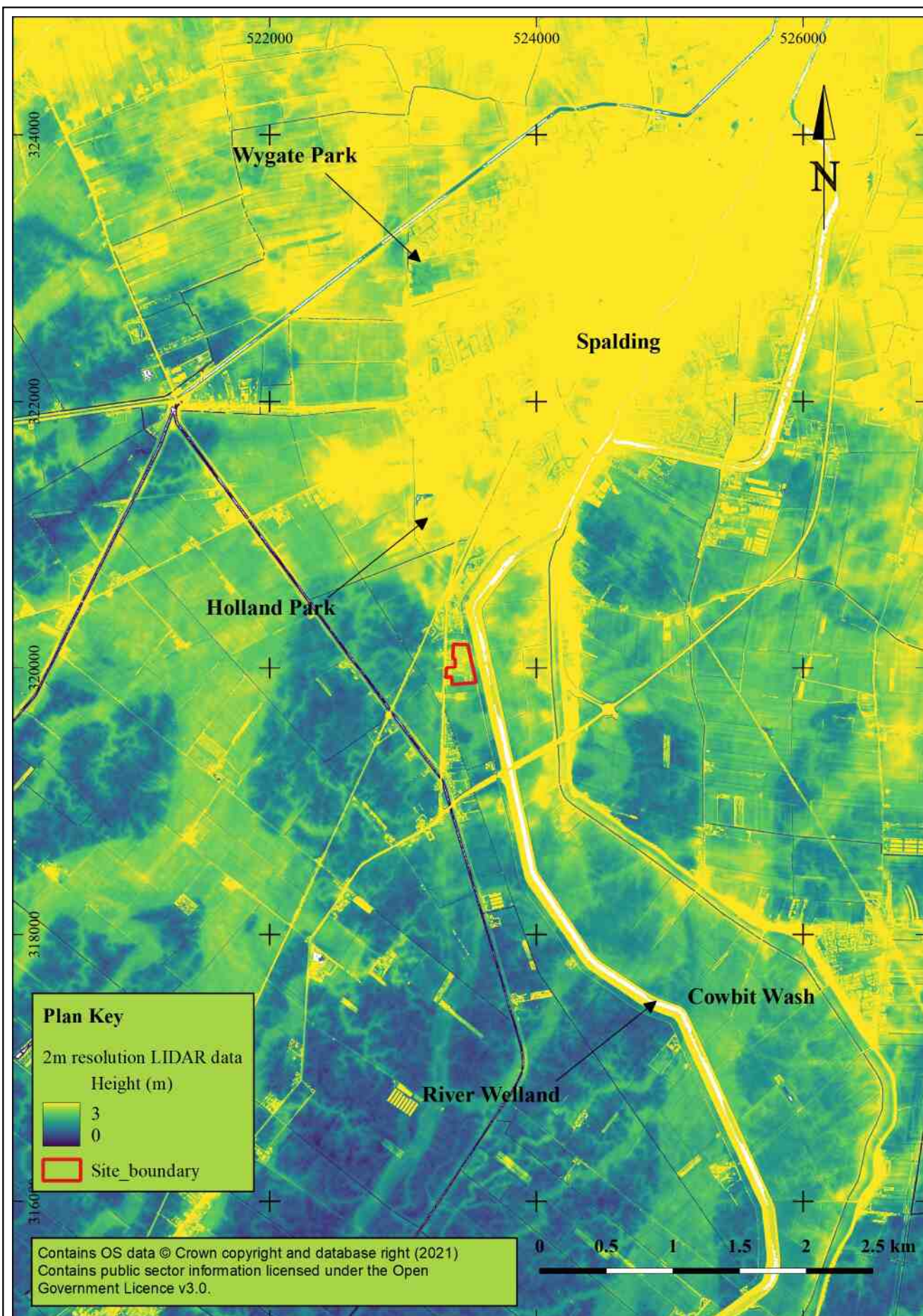


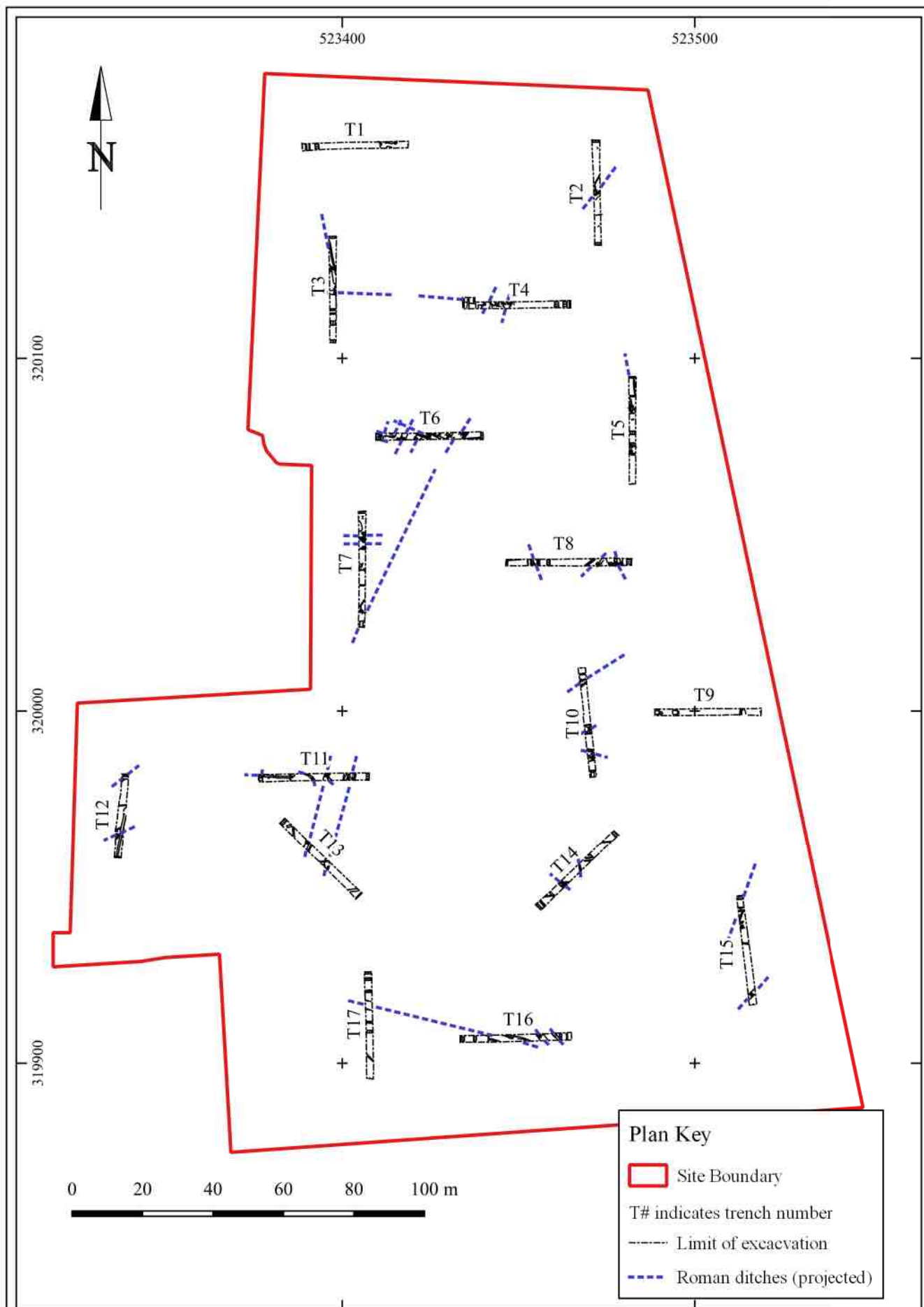
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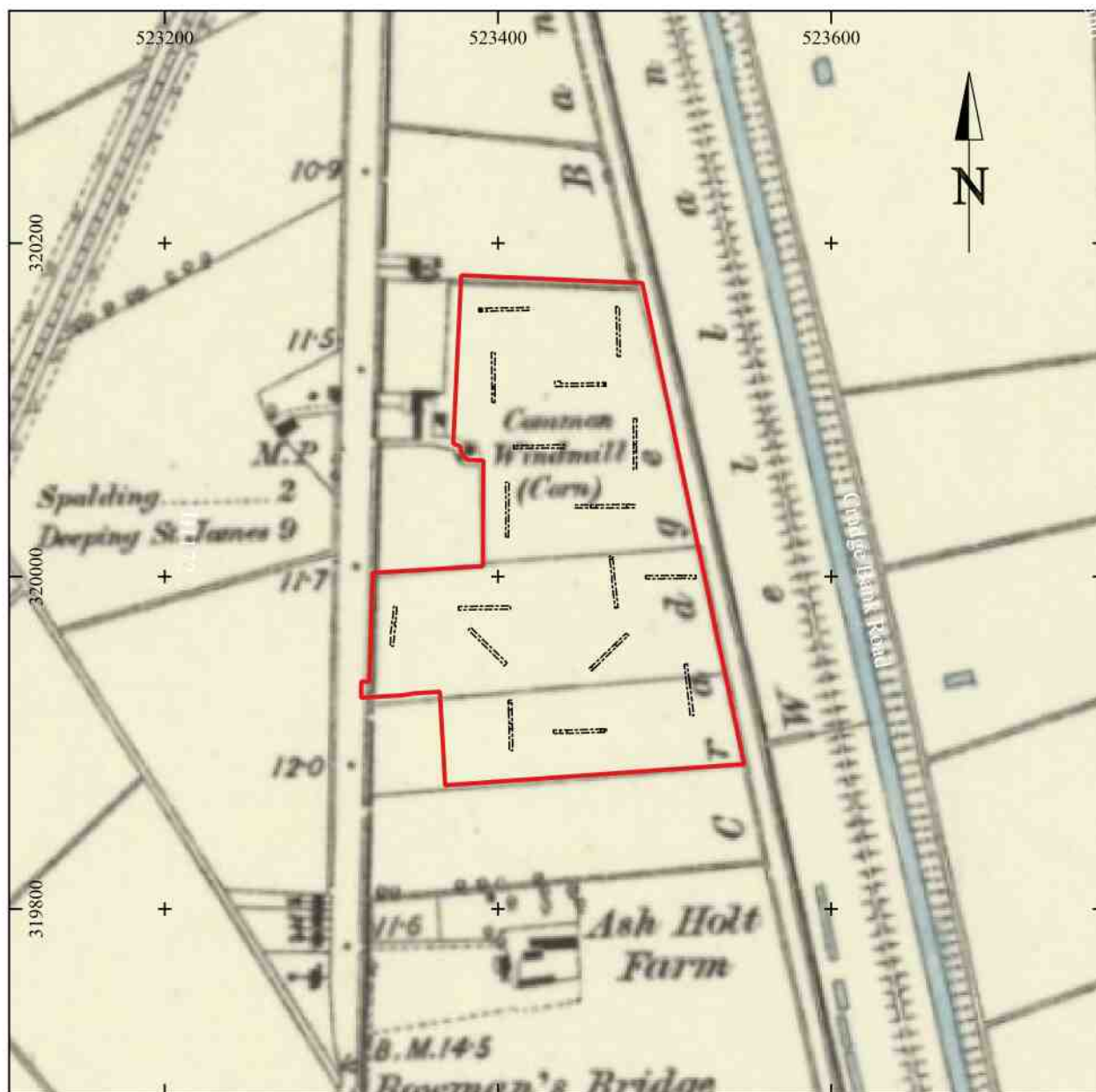


Section 71









Plan Key

- Site Boundary
- Limit of excavation

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APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
001	3	Finds recovered during mechanical excavation. See (03008)	Finds recovery
002	6	Finds recovered during mechanical excavation. See (06004)	Finds recovery
003	6	Finds recovered during mechanical excavation. See (06012)	Finds recovery
004	6	Finds recovered during mechanical excavation. See (06025)	Finds recovery
005	6	Finds recovered during mechanical excavation. See (06032)	Finds recovery
006	7	Finds recovered during mechanical excavation. See (07003)	Finds recovery
01001	1	Curvilinear cut, 2.1m wide and 0.18m deep. Gently sloping sides breaking gradually to a gently concave base. Aligned approximately north to south	Probable natural undulation or shallow channel
01002	1	Firm dark grey to black deposit with lighter grey patches. Very organic ('peaty') silt. 0.13m thick	Fill of cut [01001]. Possible former land surface
01003	1	Moderately firm mid grey deposit with orange brown rusty mottles. Sandy silt. 0.13m thick	Alluvial deposit
01004	1	Moderately firm dark greyish brown sandy silt. 0.25m thick	Topsoil
01005	1	Soft mid yellowish orange silty fine sand, with grey speckles. A laminated deposit	Natural estuarine deposit
01006	1	Firm dark grey to black deposit with light grey patches. Very organic ('peaty') silt. 0.06m thick	Fill of cut [01008]. Possible former land surface
01007	1	Moderately firm mid grey deposit with orange-brown rusty mottles. Sandy silt. 0.08m thick	Fill of cut [01008]
01008	1	Curvilinear cut, 1.8m wide and 0.16m deep. Gently sloping sides breaking gradually to a gently concave base. Aligned approximately east northeast to west southwest	Probable natural undulation or shallow channel
02001	2	Firm dark greyish brown sandy silt. Up to 0.38m thick	Topsoil
02002	2	Firm mid to light grey sandy silt, 0.14m thick	Layer. Probably alluvium
02003	2	Soft light brownish orange laminated silty fine sand. A general deposit	Natural estuarine deposit
02004	2	Linear cut, at least 2.94m wide and 1.16m deep. Northwest side steep concave and stepped, southeast side steep, both breaking gradually to a concave base. Aligned approximately northeast to southwest	Ditch
02005	2	Firm mid yellowish brown deposit with mid brown mottles. Silt. 0.22m thick	Fill of ditch [02004]
02006	2	Firm mid to light grey silt with occasional small snail shells. 0.32m thick	Fill of ditch [02004]
02007	2	Firm dark greyish brown peat/peaty silt. 0.12m thick	Fill of ditch [02004]
02008	2	Soft mid yellowish grey silt with occasional small shells and charcoal flecks	Fill of ditch [02004]
02009	2	Soft dark brownish grey peat/peaty silt, 0.08m thick	Fill of ditch [02004]
02010	2	Soft light yellowish grey silt with occasional rusty streaks. 0.32m thick	Fill of ditch [02004]

APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
02011	2	Firm mid yellowish brown silt with mid greyish brown mottles and occasional rusty flecking	Natural estuarine deposit
02012	2	Firm very dark greyish brown deposit with occasional light whitish brown patches. Organic ('peaty') silt. 0.14m thick	Layer. Possible former land surface
02013	2	Firm mid grey sandy silt, 0.1m thick	Layer. Alluvium
02014	2	Firm mid to light greyish brown sandy silt. 0.08m to 0.15m thick	Layer. Alluvium
02015	2	Soft light brown silty fine sand, at least 0.08m thick	Layer. Alluvium
03001	3	Linear cut, 0.8m wide by 0.35m deep. Gently sloping concave sides breaking gradually to a concave base. Aligned east to west	Ditch
03002	3	Firm mid greyish brown silty sand with occasional charcoal flecks. Up to 0.25m thick	Topsoil
03003	3	Firm greyish brown deposit, mottled with yellow and black. Frequent charcoal and fired clay flecks. Up to 0.15m thick	Fill of ditch [03001]
03004	3	Firm black deposit with occasional yellow and grey mottles. Silty sand with frequent charcoal flecks. Up to 0.25m thick	Fill of ditch [03001]
03005	3	Firm greyish brown deposit with dark yellowish brown mottles. Silty sand. Up to 0.15m thick	Fill of ditch [03001]
03006	3	Firm light yellowish brown deposit with light greyish brown mottles. Silty sand	Natural estuarine deposit
03007	3	Linear cut, 1.1m wide and 0.28m deep. Gently sloping concave sides breaking gradually to a concave base. Aligned approximately north northwest to south southeast	Ditch
03008	3	Hard light greyish brown deposit with yellowish brown mottles. Silty sand with occasional charcoal flecks. Up to 0.12m thick. Find (001) probably from this context	Fill of ditch [03001]
03009	3	Firm black deposit mottled with yellowish brown. Silty sand with frequent charcoal flecks	Fill of ditch [03007]
03010	3	Firm greyish brown deposit with yellowish mottles. Silty sand with occasional charcoal flecks. 0.12m thick	Fill of ditch [03007]
04001	4	Moderately firm mid to dark brown sandy silt. 0.32m thick	Topsoil
04002	4	Linear cut, 2.6m wide and 0.65m deep. Steep sides breaking gradually to a broad flattish base. Aligned approximately north to south	Ditch
04003	4	Linear cut, at least 0.9m wide and 0.3m deep. Steep sides breaking gradually to a gently concave base. Aligned approximately north to south	Ditch

APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
04004	4	Linear cut, at least 0.9m wide and 0.3m deep. Steep sides breaking gradually to a gently concave base. Aligned approximately east to west	Ditch
04005	4	Linear cut, approximately 3.5m wide and 1.45m deep. Very steep sides breaking gradually to a concave base. Aligned approximately north northeast to south southwest	Ditch (or channel)
04006	4	Soft mid to light brownish grey silty fine sand with frequent small mollusc (snail) shells. Up to 0.25m thick	Fill of cut [04007]
04007	4	Irregular sub circular cut, at least 1m by 1.2m in plan and 0.25m deep. Very gently sloping sides breaking gradually to an irregular broadly concave base	Shallow pit. Possibly a natural feature
04008	4	Soft light brownish/orange yellow silty fine sand. Laminated deposit	Natural estuarine deposit
04009	4	Soft deposit comprising bands of mid grey-brown and light yellow sandy silt with occasional charcoal flecks. Up to 0.2m thick	Fill of ditch [04004]
04010	4	Quite soft mid to dark brownish grey sandy silt. 0.14m thick	Fill of ditch [04004]
04011	4	Moderately firm mid greyish brown sandy silt with occasional charcoal flecks. 0.3m thick	Fill of ditch [04002]
04012	4	Firm very dark blackish grey organic silt, quite 'peaty'. 0.1m thick	Fill of ditch [04002]/[04026]
04013	4	Quite soft mid grey sandy silt, 0.34m thick	Fill of ditch [04005]
04014	4	Quite soft deposit comprising bands of mid grey-brown and light yellow sandy silt with occasional charcoal flecks. Up to 0.25m thick	Fill of ditch [04032]
04015	4	Soft mid to dark, slightly bluish, grey sandy silt. 0.6m thick	Fill of ditch [04005]
04016	4	Moderately firm light whitish brown deposit with dark grey patches. Sandy silt. 0.15m thick	Fill of ditch [04002]. Possibly alluvium
04017	4	Firm very dark blackish grey very organic ('peaty') silt. 0.1m thick	Fill of ditch [04002]. Possible former fen/marsh land surface
04018	4	Moderately firm mid to light, slightly bluish, grey sandy silt. Up to 0.17m thick	Fill of ditch [04002]
04019	4	Soft deposit comprising bands of light yellowish brown and dark grey sandy silt with occasional charcoal flecks. Up to 0.28m thick	Fill of ditch [04003]
04020	4	Soft light yellowish brown silty fine sand. 0.06m thick	Fill of ditch [04002]
04021	4	Quite soft mid brownish grey sandy silt, 0.2m thick	Fill of ditch [04022]
04022	4	Quite soft light brown silty sand, 0.1m thick	Fill of ditch [04002]
04023	4	Moderately firm mid orange brown silty sand, 0.06m thick	Layer
04024	4	Firm mid brown deposit with whitish brown sandy streaks and patches. Sandy silt, 0.26m thick	Fill of/over ditch [04026]
04025	4	Soft light yellowish brown silty sand, up to 0.16m thick	Fill of ditch [04026]

APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
04026	4	Linear cut, at least 1.2m wide and 0.35m deep. Steep sides breaking gradually to a gently concave base. Aligned approximately north northeast to south southwest	Re-cut of ditch [04002]
04027	4	Firm dark brown deposit mid to light orange mottles. Sandy silt, 0.11m thick	Deposit
04028	4	Firm very dark brown silt, 0.09m thick	Possible former land surface
04029	4	Moderately firm dark brownish grey sandy silt, 0.08m thick	Fill of ditch [04003]
04030	4	Firm dark brown sandy silt, 0.4m thick	Modern backfill of [04031]
04031	4	Rectangular cut, 0.48m wide and 0.4m deep. Vertical sides breaking sharply to a flat base	Modern intrusion
04032	4	Linear cut, at least 1m wide and 0.33m deep. Steep sides breaking gradually to a very gently concave base. Aligned approximately east to west	Ditch
04033	4	Firm very dark brown silt, 0.15m thick	Possible former land surface
04034	4	Moderately firm mid to dark grey sandy silt, 0.05m thick	Fill of ditch [04026]
04035	4	Soft light grey silty fine sand, 0.1m thick	Fill of ditch [04026]
04036	4	Moderately firm dark grey sandy silt, 0.06m thick	Fill of ditch [04032]
05001	5	Moderately firm dark brown sandy silt with occasional coal fragments and occasional brick fragments. 0.24m thick	Topsoil
05002	5	Substantial cut feature, only partially revealed. At least 13m by 1.8m in plan and at least 1.1m deep. Moderately steep sides (< 1 in 1) breaking gradually to a gently concave base. See also [05003]	Large feature. Possible channel or pond
05003	5	Substantial cut feature, only partially revealed. At least 13m by 1.8m in plan and at least 1.1m deep. Moderately steep sides (< 1 in 1) breaking gradually to a gently concave base. See also [05002]	Large feature. Possible channel or pond
05004	5	Linear cut, 1.6m wide and up to 0.8m deep. Steep sides breaking gradually to a concave base. Aligned approximately north northwest to south southeast	Ditch
05005	5	Moderately firm mid brown deposit with patches of light yellowish brown. Sandy silt. At least 0.25m thick	Layer
05006	5	Quite soft light brownish yellow deposit with fine dark brown laminations. Silty fine sand, up to 0.44m thick	Fill of cut [05002]
05007	5	Firm to stiff mid grey deposit with moderate rusty streaking. Silt, up to 0.22m thick	Fill of cut [05002]
05008	5	Firm very dark brownish grey highly organic 'peaty' silt, up to 0.13m thick	Fill of cut [05002]
05009	5	Moderately firm mid, slightly bluish, grey sandy silt, at least 0.3m thick	Fill of cut [05002]
05010	5	Quite soft light brownish grey silty fine sand, up to 0.22m thick	Fill of cut [05002]
05011	5	Soft very light brown silty fine sand at least 0.2m thick. A laminated deposit	Alluvium

APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
05012	5	Quite soft deposit comprised of dark brownish grey and light yellow laminations. Silty fine sand, 0.18m thick	Fill of cut [05003]
05013	5	Firm to stiff mid grey silt with moderate rusty streaks, up to 0.17m thick	Alluvium
05014	5	Firm dark greyish brown sandy silt, up to 0.1m thick	Fill of cut [05003] and ditch [05004]
05015	5	Firm very dark brownish grey 'peaty' organic silt, up to 0.12m thick	Fill of ditch [05004]
05016	5	Moderately firm mid to dark grey sandy silt, 0.3m thick	Fill of cut [05003] and ditch [05004]
05017	5	Soft light greyish brown silty fine sand, up to 0.3m thick	Fill of cut [05003] and ditch [05004]
05018	5	Loose purple deposit of cinders or slag, at least 0.1m thick	Modern roadway deposit
05019	5	Firm dark brown sandy silt, 0.7m thick. Plastic pipe at base of deposit	Modern service
05020	5	Linear cut, 0.4m wide and 0.7m deep. Vertical sides breaking sharply to a flattish base. Aligned approximately east to west	Cut for modern drain
05021	5	Linear cut, at least 2.8m wide and 0.12m deep	Cut for modern roadway
05022	5	Firm dark greyish brown deposit with occasional light yellow laminations. Silt, 0.18m thick	Fill of cut [05002]
05023	5	Cut. Base of feature established by hand-auger bore-hole at approximately +0.125m OD. Same feature as [05002] & [05003]	Large feature. Possible channel or pond
06001	6	Soft dark grey silty sand, including modern glass and demolition debris	Topsoil
06002	6	Linear cut, at least 2.3m wide and 1.12m deep. Moderately steep concave sides, breaking gradually to a concave base. Aligned approximately southwest to northeast	Ditch
06003	6	Firm light yellowish brown silty sand with frequent small shells. 0.38m thick	Upper fill of (over?) ditch [06002]. Possible alluvial deposit
06004	6	Soft dark grey to black silty sand, with frequent charcoal. Possibly quite organic. 0.26m thick. Find (002) probably from this context	Fill of ditch [06002]
06005	6	Soft dark grey to black silty sand with frequent charcoal. 0.1m thick	Fill of ditch [06002]
06006	6	Soft greyish white sandy silt. 0.1m thick	Fill of ditch [06002]
06007	6	Moderately firm light grey deposit, speckled with orange. Sandy silt, 0.25m thick	Fill of ditch [06002]
06008	6	Firm bluish grey silty sand 0.1m thick	Fill of ditch [06002]
06009	6	Firm grey and orange silty sand, 0.1m thick	Fill of ditch [06002]
06010	6	Linear cut, at least 2.1m wide and 1.2m deep. Moderately steep concave sides breaking gradually to a concave base. Aligned approximately southwest to northeast	Ditch
06011	6	Moderately firm yellowish brown sandy silt, 0.36m thick	Upper fill of (over?) ditch [06010]. Possible alluvial deposit

APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
06012	6	Loose dark grey to black silty sand, 0.38m thick. Lens of ashy material. Find (003) probably from this context	Fill of ditch [06010]
06013	6	Moderately firm light grey and orange sandy silt. 0.21m thick	Fill of ditch [06010]
06014	6	Moderately firm light grey sandy silt with occasional charcoal flecks. 0.46m thick	Fill of ditch [06010]
06015	6	Moderately firm grey silty sand with orange speckles. 0.25m to 0.3m thick	Fill of ditch [06010]
06016	6	Firm bluish grey sandy silt, 0.17m thick	Fill of ditch [06010]
06017	6	Possible linear cut, partially revealed. At least 0.17m deep and at least 0.4m wide. Concave sides	Possible ditch
06018	6	Moderately firm dark grey silty sand, 0.15m thick	Fill of feature [06017]
06019	6	Loose yellowish orange sandy silt, 0.13m thick	Fill of feature [06017]
06020	6	Linear cut, 1.5m wide and 0.38m deep. Moderately steep sides breaking gradually to a concave base. Aligned approximately north northeast to south southwest	Ditch
06021	6	Firm yellowish grey sandy silt, 0.1m thick	Fill of ditch [06020]
06022	6	Moderately firm light grey deposit with orange flecks. 0.38m thick.	Fill of ditch [06020]
06023	6	Linear cut, 1.55m wide and 0.6m deep. Concave sides continuous with a concave base. Aligned approximately west northwest to east southeast	Ditch
06024	6	Moderately firm grey deposit with white patches. Sandy silt, with small shells	Fill of ditch [06023]
06025	6	Loose dark grey or black organic sandy silt with occasional white patches and fine crushed shells. 0.2m thick. Find (004) probably from this context	Fill of ditch [06023]
06026	6	Loose light grey deposit with darker grey streaks and patches. 0.4m to 0.45m thick	Fill of ditch [06023]
06027	6	Irregular linear cut, at least 0.32m wide and up to 0.58m deep. Very steep sides breaking sharply to a flattish base	Intrusion – possible animal burrow
06028	6	Moderately firm mottled yellow-brown sandy silt, 0.15m thick	Fill of cut [06027]
06029	6	Firm greyish brown silty sand, 0.5m thick	Fill of cut [06027]
06030	6	Soft yellowish orange silty sand. At least 0.35m thick	Natural estuarine deposit
06031	6	Linear cut, 1.45m wide and 0.55m deep. Concave sides continuous with a concave base. Aligned approximately north northeast to south southwest	Ditch
06032	6	Moderately firm dark orange grey deposit mottled with lighter grey patches. 0.29m thick. Find (005) probably from this context	Fill of ditch [06031]
06033	6	Soft light grey speckled orange sandy silt, 0.13m thick	Fill of ditch [06031]
06034	6	Soft mottled orange grey sandy silt. 0.13m thick	Fill of ditch [06031]
06035	6	Firm dark orange-brown silt, at least 0.02m thick	Natural deposit

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CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
06036	6	Moderately firm mixed dark brown and light yellow sandy silt, up to 0.09m thick	Layer. Possible disturbance by cultivation
06037	6	Moderately firm mixed dark brown, grey and light yellow sandy silt	Fill of cut [06038]
06038	6	Irregular linear cut, at least 0.5m deep	Intrusion – possible animal burrow
06039	6	Soft light brown silty fine sand, at least 0.1m thick	Fill of cut [06043]
06040	6	Soft dark grey sandy silt with occasional charcoal. Less than 0.01m thick	Fill of cut [06043]
06041	6	Soft light brown silty fine sand, 0.12m thick	Fill of cut [06043]
06042	6	Soft dark grey sandy silt with occasional charcoal and occasional small fragments of burnt bone. Less than 0.02m thick	Fill of cut [06043]
06043	6	Linear cut, partially revealed as at least 2m wide and at least 0.25m deep. Aligned approximately northeast to southwest	Possibly the western side of a ditch or channel
06044	6	Soft light brown silty fine sand, at least 0.25m thick	Natural estuarine deposit
06045	6	Soft light grey silty fine sand, at least 0.1m thick	Fill of cut [06043]
06046	6	Linear cut, 0.93m wide and 0.38m deep. Concave sides continuous with a flattish concave base. Aligned approximately west northwest to east southeast, turning sharply towards north northeast at its eastern end.	Ditch
06047	6	Firm yellowish brown sandy silt, 0.15m thick	Fill of ditch [06046]
06048	6	Soft orange brown deposit with grey streaks. Silty sand, 0.35m thick	Fill of ditch [06046]
06049	6	Loose yellow speckled orange silty sand, 0.3m thick	Natural estuarine deposit
06050	6	Firm and sticky orange-brown silty sand	Natural estuarine deposit
06051	6	Linear cut, 0.63m wide and 0.36m deep. Steep straight sides breaking gradually to a flattish concave base. Aligned approximately north northeast to south southwest, turning sharply towards east southeast at its southern end	Ditch
06052	6	Moderately firm mottled grey and orange brown silty sand, up to 0.2m thick	Fill of ditch [06051]
06053	6	Moderately firm orange brown silty sand with grey streaks. 0.15m thick	Fill of ditch [06051]
06054	6	Sub-rectangular cut, 0.6m wide and 0.45m deep. Steep or vertical sides breaking to uneven concave base	Post-hole or small pit
06055	6	Firm orange-yellow sandy silt, 0.07m thick	Fill of cut [06054]
06056	6	Moderately firm mottled grey and orange brown silty sand, 0.6m thick	Fill of cut [06054]
06057	6	Moderately firm mottled orange brown and grey silty sand, 0.2m thick	Fill of ditch [06051]
06058	6	Sub-rectangular cut, 0.6m wide and 0.4m deep. Steep sides breaking gradually to a flat base	Post-hole or small pit
06059	6	Firm yellowish brown deposit, mottled grey. Sandy silt, 0.25m thick	Fill of cut [06058]
06060	6	Soft mid grey ashy silt, 0.1m thick	Fill of ditch [06010]
06061	6	Loose dark grey and black silty sand, 0.13m thick	Fill of ditch [06010]
06062	6	Soft dark black 'sooty' silty sand, 0.03m thick	Fill of ditch [06002]

APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
06063	6	Soft dark black 'sooty' silty sand, 0.03m thick	Fill of ditch [06002]
07001	7	Moderately firm dark greyish brown sandy silt with frequent grits and occasional small brick or tile fragments	Topsoil
07002	7	Firm dark grey deposit with frequent light yellowish brown mottles. Sandy silt, 0.14m thick	Layer
07003	7	Firm to stiff dark grey silt with 30% rusty orange mottles. 0.1m thick. Finds (006) probably from this context	Layer. Possibly alluvium
07004	7	Soft light whitish brown silty fine sand, up to 0.03m thick	Layer. Possibly alluvium
07005	7	Moderately firm mid greyish brown sandy silt, 0.11m thick	Layer
07006	7	Firm dark brown silt	Layer. Possibly alluvium
07007	7	Linear cut, 1.9m wide and 0.63m deep. North side at approximately 1 in 1, south side very steep, both breaking gradually to a very gently concave base. Aligned approximately east to west.	Ditch
07008	7	Linear cut, 2.78m wide and 0.86m deep. Steep convex sides breaking gradually to a broad flattish base. Aligned approximately east to west	Ditch
07009	7	Firm dark brownish grey silt with frequent dark (organic?) mottles. Up to 0.16m thick	Fill of ditch [07007]
07010	7	Soft, plastic and sticky mid grey sandy silt, 0.24m thick	Fill of ditch [07008]
07011	7	Moderately firm dark greyish brown sandy silt with occasional small brick or tile fragments. 0.16m thick	Layer. Subsoil or former topsoil
07012	7	Very firm dark grey silt up to 0.04m thick	Layer. Possible former land surface
07013	7	Moderately firm mid greyish brown sandy silt with moderate small snail shells. 0.14m thick	Fill of ditch [07007]
07014	7	Soft light yellowish brown silty fine sand, up to 0.28m thick	Fill of ditch [07007]
07015	7	Moderately firm very dark brownish grey organic ('peaty') silt. 0.08m thick	Fill of ditch [07007]
07016	7	Firm mid grey silt, 0.14m thick	Fill of ditch [07007]
07017	7	Quite soft mid greyish brown silty sand with moderate small snail shells. 0.24m thick	Fill of ditch [07008]
07018	7	Soft light yellowish brown silty fine sand. 0.24m thick	Fill of ditch [07008]
07019	7	Firm dark brownish grey silt with frequent dark (organic?) mottling. 0.14m thick	Fill of ditch [07008]
07020	7	Firm dark brownish grey silt with frequent dark (organic?) mottling. 0.12m thick	Fill of ditch [07008]
07021	7	Soft very dark brownish grey to black 'peaty' deposit of fibrous organic material. 0.14m thick	Fill of ditch [07008]
07022	7	Firm dark greyish brown sandy silt, 0.55m thick. Plastic drain pipe in base	Modern drainage

APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
07023	7	Linear cut, 0.26m wide and 0.55m deep. Vertical sides breaking sharply to a flat base. Aligned approximately east to west	Cut for drain (07022)
07024	7	Firm very dark brownish grey deposit with speckles of light brownish yellow. Silt (quite organic), 0.1m thick	Layer. Possibly alluvium
07025	7	Firm to stiff deposit, 50% dark grey and 50% very dark brownish grey. Silt, highly organic, 0.04m thick	Layer. Possibly alluvium
07026	7	Firm to stiff dark grey deposit with moderate rusty streaking. Silt 0.07m thick	Layer. Possibly alluvium
07027	7	Soft light brownish grey silty sand, up to 0.16m thick	Alluvium
07028	7	Soft light brownish yellow silty sand, 0.07m thick	Alluvium
07029	7	Soft light brownish grey silty sand with moderate mid orange streaking, 0.08m thick	Alluvium
07030	7	Moderately firm dark brown silt with light brown mottles. At least 0.23m thick	Alluvium
07031	7	Firm dark brown sandy silt with moderate rusty staining. 0.2m thick	Fill of ditch [07038]
07032	7	Soft mid brownish yellow silty fine sand, with some bluish discolouration. Up to 0.2m thick. Lower interface very irregular	Fill of ditch [07038]
07033	7	Firm to stiff dark grey (slightly bluish) sandy silt. Up to 0.25m thick	Fill of ditch [07038]
07034	7	Firm very dark brownish grey 'peaty' silt, 0.16m thick	Fill of ditch [07038]
07035	7	Soft mid to light grey (slightly bluish) silty fine sand. Up to 0.16m thick	Fill of ditch [07038]
07036	7	Soft mid grey sandy silt, 0.4m thick	Fill of ditch [07038]
07037	7	Soft mid to light grey silty fine sand, 0.13m thick	Fill of ditch [07038]
07038	7	Linear cut, at least 2.1m wide and 1.18m deep. Steep sides breaking gradually to a concave base. Aligned approximately north northeast to south southwest	Ditch
07039	7	Finds recovered during excavation of deposit (07031). Possibly intrusive	Finds recovery
07040	7	Soft light yellowish brown sandy silt	Natural estuarine deposit
08001	8	Moderately firm mid to dark brown sandy silt, 0.16 to 0.18m thick (probably truncated)	Topsoil
08002	8	Soft light brownish yellow or orange silty fine sand. At least 1.2m thick. A laminated deposit	Natural estuarine deposit
08003	8	Linear cut, at least 1.9m wide and 1.1m deep. Steep sides breaking gradually to a narrow flat base. Aligned approximately north to south	Ditch
08004	8	Soft mottled mix of light orange brown and mid grey sandy silt, 0.35m thick	Fill of ditch [08003]
08005	8	Soft mid grey sandy silt, up to 0.22m thick	Fill of ditch [08006]
08006	8	Elongated sub-circular cut, at least 3m by 2.8m in plan and 0.55m deep. Gently sloping sides breaking gradually to a gently concave base	Possible shallow pit or pond

APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
08007	8	Soft light greyish brown silty fine sand with frequent small snail shells. 0.48m thick	Fill of cut [08006]
08008	8	Linear cut, 2.2m wide and 0.55m deep. Steep sides breaking gradually to a flattish or very gently concave base. Aligned approximately northeast to southwest	Ditch
08009	8	Soft very light greyish brown silty sand, with frequent 'peaty' silt inclusions. 0.18m thick	Fill of ditch [08008]
08010	8	Moderately firm mid to dark greyish brown sandy silt. Up to 0.26m thick	Former topsoil
08011	8	Soft very dark brownish grey 'peaty' silty sand, 0.08m thick	Fill of cut [08006]
08012	8	Soft light grey silty fine sand, 0.16m thick	Fill of cut [08006]
08013	8	Soft mid grey silty sand, up to 0.14m thick	Fill of cut [08006]
08014	8	Soft mid to light grey silty fine sand, 0.1m thick	Fill of ditch [08003]
08015	8	Firm but plastic light grey clayey silt, 0.15m thick	Fill of ditch [08003]
08016	8	Linear cut, partially revealed as at least 0.5m wide by 0.5m long and 0.11m deep. Steep sides breaking gradually to a flattish base. Aligned approximately northwest to southeast	Possible shallow ditch
08017	8	Soft light brownish yellow silty fine sand, 0.1m thick	Fill of cut [08016]
08018	8	Soft very dark grey sandy silt with occasional charcoal flecks and occasional fleck of mid red fired clay. 0.01m thick	Fill of cut [08016]
08019	8	Linear cut, 2.1m wide and 0.54m deep. Steep uneven sides breaking gradually to a concave base. Aligned approximately south southeast to north northwest	Ditch
08020	8	Soft light whitish yellow silty sand with moderate small snail shells. Up to 0.13m thick	Fill of ditch [08019]
08021	8	Firm very dark brownish grey organic ('peaty') silt, 0.21m thick	Fill of ditch [08019]
08022	8	Firm mid grey silt with frequent dark brownish grey organic mottling. 0.13m thick	Fill of ditch [08008]
08023	8	Moderately firm very dark brownish grey 'peaty' organic silt. 0.06m thick	Fill of ditch [08008]
08024	8	Soft mid to light grey sandy silt, 0.28m thick. Laminated deposit	Fill of ditch [08008]
08025	8	Moderately firm mid to light grey sandy silt, 0.17m thick	Fill of ditch [08008]
08026	8	Moderately firm mid to light grey sandy silt, up to 0.3m thick	Fill of ditch [08008]
08027	8	Moderately firm light greyish brown and mid to light grey silty sand, 0.06m thick	Layer
08028	8	Soft light grey sandy silt, 0.2m thick	Fill of ditch [08019]
08029	8	Moderately firm mid to light grey sandy silt, 0.2m thick	Fill of ditch [08019]
09000	9	Moderately firm greyish brown sandy silt, 0.3m to 0.35m thick	Topsoil

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CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
09001	9	Firm orange-brown sandy silt, 0.25m thick	Subsoil
09002	9	Firm mottled dark grey silt (black towards base), probable high organic content. 0.16m thick	Fill of cut [09003]
09003	9	Sub-oval (or possibly linear) cut partially revealed as 1.64m by 1.5m in plan and 0.45m deep. Steep concave sides broadly continuous with a concave base. Possibly aligned north to south	Pit, or possible linear terminus
09004	9	Firm mottled orange-grey sandy silt with occasional small pebbles. 0.3m thick	Fill of pit [09003]
09005	9	Firm orange brown silt with grey speckles. 0.2m thick	Fill of pit [09003]
09006	9	Loose grey silty sand, 0.05m thick	Natural deposit
09007	9	Sub-circular cut, 1.38m wide and 0.62m deep. Steep straight sides breaking sharply to a gently concave base	Pit
09008	9	Circular cut, 0.68m wide and 0.19m deep. Concave sides continuous with a concave base	Pit
09009	9	Firm bluish grey deposit with orange patches. Silt and sandy silt. 0.24m thick	Fill of pit [09007]
09010	9	Firm light grey deposit with orange streaks. Sandy silt, 0.12m thick	Fill of pit [09007]
09011	9	Moderately firm orange silty sand with some light grey streaks. 0.4m thick	Fill of pit [09007]
09012	9	Firm grey and orange silt with patches of orange silty sand. 0.27m thick	Fill of pit [09007]
09013	9	Firm bluish grey silt, 0.19m thick	Fill of pit [09008]
09014	9	Loose orange-grey silty sand, 0.08m thick	Fill of pit [09008]
09015	9	Firm dark black organic silt, up to 30mm thick	Fill of pit [09003]
10001	10	Soft dark greyish brown silty sand with occasional small brick or tile fragments. 0.18m thick	Topsoil
10002	10	Soft mid greyish brown sandy silt, up to 0.45m thick	Topsoil – possibly made ground or levelling
10003	10	Soft light brownish yellow silty fine sand, 0.16m thick	Alluvium
10004	10	Firm dark brown silt with mid orange mottles and staining. At least 0.1m thick	Alluvium
10005	10	Firm to stiff light bluish grey clayey silt, up to 0.05m thick	Alluvium
10006	10	Firm/plastic dark brown silt, at least 0.3m thick	Alluvium
10007	10	Linear cut, up to 1.55m wide and 0.76m deep. South side steep, north side less so, both breaking gradually to a concave base. Aligned approximately east to west	Ditch
10008	10	Linear cut, 1m wide and 0.62m deep. Steep sides breaking gradually to a concave base. Aligned approximately east to west	Ditch or possible natural channel

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CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
10009	10	Linear cut, 0.95m wide and 0.78m deep. Steep convex sides breaking sharply to a narrow flat base. Aligned approximately northwest to southeast	Ditch
10010	10	Linear cut, at least 1.6m wide and 0.64m deep. Steep, uneven convex sides breaking gradually to a flattish very gently concave base. Aligned approximately east northeast to west southwest	Ditch
10011		Articulated animal skeleton deposited in cut [10010]	Animal carcass in ditch [10010]
10012	10	Linear cut, at least 1.25m wide and 0.65m deep. Steep sides breaking gradually to a gently concave base. Aligned approximately southwest to northeast	Ditch
10013	10	Soft mid brownish grey sandy silt with moderate small snail shells. 0.12m thick	Fill of ditch [10007]
10014	10	Soft light yellowish brown silty fine sand, 0.1m thick	Fill of ditch [10007]
10015	10	Firm very dark brownish grey silt (quite 'peaty' or organic). 0.15m thick	Fill of ditch [10007]
10016	10	Soft light yellowish brown silty fine sand, 0.05m thick	Fill of ditch [10007]
10017	10	Firm mid grey sandy silt, 0.2m thick	Fill of ditch [10007]
10018	10	Moderately firm light brownish grey silty fine sand, 0.22m thick	Fill of ditch [10007]
10019	10	Firm light greyish brown sandy silt, 0.5m thick	Fill of ditch [10009]
10020	10	Moderately firm light grey silty fine sand, 0.33m thick	Fill of ditch [10009]
10021	10	Soft very light yellowish brown silty fine sand, 0.16m thick	Fill of ditch [10008]
10022	10	Firm light grey sandy silt, up to 0.12m thick	Fill of ditch [10008]
10023	10	Soft light brown silty fine sand, 0.26m thick	Fill of ditch [10008]
10024	10	Firm dark brown sandy silt, 0.4m wide and 0.45m deep. Electric cable at the base of the deposit	Modern service
10025	10	Linear cut 0.4m wide and 0.45m deep. Vertical sides breaking sharply to a flat base. Aligned approximately east to west	Cut for modern service (10024)
10026	10	Soft light brownish yellow silty fine sand, 0.27m thick	Fill of ditch [10010]
10027	10	Moderately firm mid grey silty sand, up to 0.16m thick. Fine laminations occasionally visible	Fill of ditch [10010]
10028	10	Moderately firm mid orange brown silty fine sand, 0.25m thick	Fill of ditch [10010]
10029	10	Moderately firm mid to dark grey sandy silt, 0.15m thick. Forms the matrix around animal carcass (10011)	Fill of ditch [10010]
10030	10	Moderately firm dark brown sandy silt, 0.2m wide and 0.5m thick. Sectional cylindrical ceramic land drain in the base	Land drain
10031	10	Linear cut, 0.2m wide and 0.5m deep. Vertical sides. Aligned approximately east to west	Cut for land drain [10030]

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CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
10032	10	Firm mid to dark greyish brown with moderate mid orange mottles. Sandy silt with occasional small black (coal?) fragments. 0.18m thick, and apparent over the northern 14m of the trench	Layer
10033	10	Soft light whitish brown silty sand with moderate small snail shells. Up to 0.24m thick	Fill of cut [10034]
10034	10	Irregular/elongated cut, at least 2.75m by 0.5m in plan and 0.24m deep. Gently sloping sides breaking gradually to a flattish base. Longest axis apparently northwest to southeast	Shallow cut, derivation and function not clear. Possibly naturally formed
10035	10	Soft light whitish brown silty sand, with dark brown 'peaty' inclusions. Up to 0.2m thick	Fill of ditch [10012]
10036	10	Firm very dark grey silt (very organic). Up to 0.16m thick	Fill of ditch [10012]
10037	10	Firm mid bluish grey silt, up to 0.18m thick	Fill of ditch [10012]
10038	10	Firm mid grey silt, 0.06m thick	Fill of ditch [10012]
10039	10	Soft light brown silty fine sand, up to 0.08m thick	Fill of ditch [10012]
10040	10	Soft light whitish yellow silty fine sand, 0.06m thick	Fill of ditch [10012]
10041	10	Quite soft mid brown silty fine sand, up to 0.07m thick	Fill of ditch [10012]
10042	10	Soft light greyish brown sandy silt, 0.16m thick. Fine laminations intermittently visible	Fill of ditch [10008]
11001	11	Moderately firm mid to dark brown sandy silt with occasional small coal and brick or tile fragments	Topsoil
11002	11	Soft light yellowish brown silty fine sand, at least 0.1m to 0.15m thick (a general deposit)	Natural estuarine silt
11003	11	Moderately firm mid greyish yellow sandy silt with occasional charcoal. 0.32m thick	Fill of cut [11004]
11004	11	Linear cut, 0.4m wide by at least 0.9m long and 0.32m deep. Very steep sides breaking gradually to a gently concave base. Aligned approximately north to south	Narrow ditch or channel
11005	11	Soft light whitish brown silty sand, 0.35m wide and 0.13m deep. Occasional charcoal flecks and fragments	Fill of ditch [11004]
11006	11	Linear cut, at least 0.32m wide by 8.5m long and 0.12m deep. Very steep sides breaking gradually to flattish, slightly uneven, base. Aligned approximately east to west. See also [11016]	Ditch or channel
11007	11	Firm dark grey silt, 0.05m thick	Fill of ditch [11008]
11008	11	Curvilinear cut, 0.48m wide by at least 3.6m long and 0.28m deep. Steep sides breaking sharply to a flattish base. Feature inscribes the northeast quadrant of a gentle arc	Narrow ditch or channel

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CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
11009	11	Very firm mid grey silt up to 0.21m thick	Fill of ditch [11010]
11010	11	Linear cut, 1.1m wide by at least 2.1m long and 0.78m deep. Very steep sides breaking gradually to a concave base. Aligned approximately north northeast to south southwest	Ditch
11011	11	Duplicated context- see (1134)	
11012	11	Linear cut, 1.94m wide by at least 2.1m long and 0.8m deep. Steep sides breaking gradually to a flattish, gently concave, base	Ditch (re-cut of [11032])
11013	11	Soft light olive-yellowish brown silty sand with occasional charcoal flecks and fragments. 0.17m thick	Fill of cut [11014]
11014	11	Linear cut, at least 0.6m wide by at least 1.3m long and 0.22m deep. Quite steep sides breaking gradually to a gently concave base. Aligned approximately east southeast to west northwest. Terminates on the line of [11010]	Ditch
11015	11	Soft dark brownish grey silty sand with occasional charcoal flecks, 0.07m thick. Slightly disturbed, probably by burrowing animals	Fill of cut [11016]
11016	11	Linear cut, at least 0.32m wide by 8.5m long and 0.2m deep. Very steep sides breaking gradually to flattish, slightly uneven, base. Aligned approximately east to west, with a flattish terminus at the eastern end. See also [11006]	Ditch or channel
11017	11	Moderately firm light yellowish brown silty sand with occasional small charcoal flecks. 0.1m thick and 0.75m wide. Only apparent along the east side of the cut	Fill of ditch [11010]
11018	11	Moderately firm mid grey deposit with occasional rusty mottles. Sandy silt with occasional charcoal flecks, 0.35m thick	Fill of ditch [11010]
11019	11	Moderately firm light brown silty fine sand, up to 0.15m thick	Fill of ditch [11010]
11020	11	Firm mid grey deposit with rusty mottles. Sandy silt with occasional charcoal flecks and fragments. 0.13m thick	Fill of ditch [11010]
11021	11	Plastic and sticky mid grey silt, 0.17m thick	Fill of ditch [11010]
11022	11	Quite soft mid greyish brown silty fine sand with frequent small snail shells. 0.08m thick	Tertiary fill of ditch [11012]
11023	11	Firm very dark brownish grey silt, with organic staining and inclusions. 0.08m thick	Fill of ditch [11012]
11024	11	Soft light whitish yellow silty fine sand, 0.09m thick	Fill of ditch [11012]
11025	11	Very firm very dark brownish grey silt with possible organic staining. 0.05m thick	Fill of ditch [11012]
11026	11	Firm mid grey silt, 0.11m thick	Fill of ditch [11012]
11027	11	Quite soft light whitish yellow silty fine sand, 0.08m thick	Fill of ditch [11012]

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CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
11028	11	Firm mid grey deposit with patches and laminations of light whitish yellow. 0.19m thick	Fill of ditch [11012]
11029	11	Firm mix of mid to dark grey silt and very dark brownish grey organic silt. 0.23m thick	Fill of ditch [11012]
11030	11	Moderately firm light yellowish brown sandy silt, 0.2m thick	Fill of ditch [11012]
11031	11	Moderately firm mid to light greyish brown sandy silt, 0.13m thick. Fine laminations apparent	Fill of ditch [11032]
11032	11	Linear cut, at least 0.5m wide and 0.55m deep. Steep sides (only part of the eastern side surviving). Aligned north northeast to south southwest	Ditch (re-cut as [11012])
11033	11	Firm mid brownish grey sandy silt. 0.22m thick	Fill of ditch [11032]
11034	11	Firm mid grey sandy silt with occasional rusty mottles. Includes occasional small fragments and flecks of charcoal. Up to 0.34m thick	Fill of ditch [11012]
11035	11	Soft very dark brownish grey or black 'peaty' organic silt. 0.02m thick	Fill of ditch [11016]
11036	11	Quite soft light whitish yellow-brown silty fine sand with occasional small charcoal flecks and fragments. 0.2m thick	Fill of ditch [11016]
11037	11	Firm dark grey sandy silt with occasional charcoal flecks and fragments, 0.18m thick	Fill of cut [11004]
11038	11	Firm mid grey sandy silt, 0.03m thick	Fill of cut [11004]
11039	11	Firm dark brown silt. A general deposit – finer grained than overlying (11002)	Natural estuarine silt
11040	11	Moderately firm mid to light brown sandy silt, 0.08m thick	Fill of cut [11004]
11041	11	Soft, crumbly/friable mid orange silt, possibly quite organic. 0.12m thick	Fill of cut [11004]
11042	11	Soft very dark brownish grey/black 'peaty' silt, up to 0.02m thick	Fill of cut [11004]
11043	11	Firm light yellowish brown silty fine sand, 0.18m thick	Fill of cut [11004]
11044	11	Quite soft light whitish yellow-brown silty fine sand with occasional small charcoal fragments. Up to 0.12m thick. See also (11005)	Fill of [11045]
11045	11	Linear cut, 0.35m wide and 0.12m deep. Very steep sides breaking gradually to a flattish base. Aligned approximately east to west. See also [11006]	Narrow ditch or channel
11046	11	Moderately firm mid brownish grey sandy silt, 0.07m thick	Fill of cut [11008]
11047	11	Quite soft very dark brownish grey to black 'peaty' silt, 0.01m thick	Fill of cut [11008]
11048	11	Moderately firm mid grey deposit with rusty mottles. Sandy silt with occasional small charcoal fragments. 0.14m thick	Fill of cut [11008]
11049	11	Quite soft very dark brownish grey sandy silt with occasional charcoal. Up to 0.08m thick	Fill of cut [11014]
11050	11	Very firm very dark grey silt, 0.04m thick	Fill of ditch [11010]
12001	12	Moderately firm dark brown sandy silt, up to 0.35m thick	Topsoil

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CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
12002	12	Linear cut, at least 0.75m wide and 0.28m deep. Gently sloping sides breaking gradually to a very gently concave base. Aligned approximately southwest to northeast. Truncated to the north	Possible shallow ditch
12003	12	Linear cut, 0.7m wide by at least 1.5m long and 0.35m deep. Steep sides breaking gradually to a concave base. Aligned approximately southwest to northeast	Ditch
12004	12	Linear cut, 1.8m wide by at least 1.5m long and 0.42m deep. Steep north side breaking gradually to an uneven gently concave base. Aligned approximately southwest to northeast	Ditch – possibly a re-cut of [12005]
12005	12	Linear cut, at least 0.6m wide by 1.5m long and 0.15m deep. Sides break gradually to a concave base. Aligned approximately southwest to northeast	Ditch
12006	12	Quite soft light greyish brown silty sand with occasional charcoal flecks. 0.19m thick	Fill of ditch [12004]
12007	12	Moderately firm deposit. A mottled mix of mid grey with light greyish brown and dark rusty staining. Sandy silt, 0.28m thick	Fill of ditch [12004]
12008	12	Moderately firm light bluish grey silty fine sand with occasional charcoal flecks and occasional small mid red fired clay fragments	Layer
12009	12	Soft mid grey sandy silt, 0.18m thick. Includes fine light grey laminations	Fill of ditch [12003]
12010	12	Soft light to mid grey silty fine sand, 0.12m thick	Fill of ditch [12002]
12011	12	Firm dark grey sandy silt with occasional small mid red fired clay fragments and occasional charcoal fragments. Up to 0.03m thick	Deposit
12012	12	Soft light greyish brown silty fine sand, 0.24m thick	Fill of ditch [12004]
12013	12	Soft mid grey silty fine sand, 0.14m thick	Fill of ditch [12005]
12014	12	Quite soft slightly bluish mid grey sandy silt with occasional charcoal flecks. 0.18m thick	Fill of ditch [12002]
12015	12	Soft light to mid brownish yellow silty fine sand. A general deposit	Natural estuarine silt
12016	12	Soft mixed dark brown and yellowish brown sandy silt with occasional modern brick fragments. At least 0.25m thick	Backfill of modern intrusion [12017]
12017	12	Linear cut, at least 1.4m by 1.8m in extent. Very steep sides	Modern service cut
12018	12	Soft mixed dark brown and light brownish yellow sandy silt, 0.25m thick. ‘Horse shoe’ profile sectional ceramic land drain at base of deposit	Land drain
12019	12	Linear cut, 0.18m wide and 0.25m deep. Vertical sides breaking sharply to a flat base. Aligned east to west	Cut for land drain (12018)
12020	12	Pea-gravel, with a modern ceramic drain-pipe at the base of the deposit	Modern service
12021	12	Linear cut, 0.6m wide and at least 12m long. Vertical sides	Cut for modern service (12020)
12022	12	Moderately firm light brownish grey silty fine sand, up to 0.25m thick	Fill of cut [12002]
12023	12	Soft dark greyish brown sandy silt, with frequent tree and grass roots	Modern turf

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CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
13001	13	Loose greish brown silty sand with moderate brick, tile and glass fragments. At least 0.2m thick (truncated)	Topsoil
13002	13	Loose to firm mixed orange grey to whitish grey sandy silt, 0.2m thick	Layer
13003	13	Linear cut, 0.95m wide and 0.45m deep. Concave sides continuous with a concave base. Aligned approximately north northeast to south southwest	Ditch
13004	13	Moderately firm mixed mid grey and light yellowish brown clay with silty sand. 1.6m wide and 0.15m thick	Fill of ditch [13003]
13005	13	Firm grey silty sand, 0.23m thick	Fill of ditch [13003]
13006	13	Soft light brown silty sand, 0.05m thick	Fill of ditch [13003]
13007	13	Moderately firm brownish grey sandy silt, 0.2m thick	Fill of ditch [13003]
13008	13	Soft light brown silty sand with clay, 0.1m thick	Fill of ditch [13003]
13009	13	Linear cut, 1.65m wide and 0.67m deep. Concave sides continuous with a concave base. Aligned approximately north northeast to south southwest	Ditch
13010	13	Firm brownish grey sandy silt with frequent small shells. 0.85m thick	Fill of ditch [13009]
13011	13	Firm dark brownish grey organic silt, 0.08m thick	Fill of ditch [13009]
13012	13	Firm mid grey silt with rusty mottles. 0.3m thick	Fill of ditch [13009]
13013	13	Firm mid greyish brown sandy silt, 0.28m thick	Fill of ditch [13009]
13014	13	Solid brick wall foundation, approximately 0.7m wide	Modern foundation
13015	13	Moderately firm mid brown sandy silt. A general deposit	Natural estuarine silt
	13		
14001	14	Moderately firm brownish grey silty sand with moderate glass and brick fragments. 0.3m thick	Topsoil
14002	14	Moderately firm yellowish grey sandy silt, at least 0.3m thick	Natural estuarine silt
14003	14	Firm mid brown silt, at least 0.4m thick	Natural estuarine silt
14004	14	Linear cut, 2.23m wide and 0.7m deep. Steep sides breaking gradually to a narrow gently concave base. Aligned approximately northwest to southeast	Ditch
14005	14	Mottled and 'streaky' light grey and orange sandy silt with frequent small fired clay fragments. 0.27m thick	Fill of ditch [14004]
14006	14	Moderately firm dark grey deposit with lighter grey patches. Sandy silt with occasional small fragments of mid red fired clay. 0.15m thick	Fill of ditch [14004]
14007	14	Moderately firm orange-grey sandy silt. 0.3m thick	Fill o ditch [14004]
14008	14	Linear cut, up to 0.5m wide and 0.3m deep. Steep straight sides breaking sharply to narrow concave base. Aligned approximately north to south	Narrow ditch
14009	14	Firm greyish brown deposit with some orange patches. Sandy silt with moderate small mid red fired clay fragments and charcoal flecks	Deposit

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CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
14010	14	Firm dark grey silty sand with moderate small mid red fired clay fragments and charcoal flecks. Up to 0.15m thick	Fill of ditch [14008]
14011	14	Moderately firm light grey silty sand, 0.05m thick	Fill of ditch [14008]
14012	14	Firm dark grey silty sand, 0.1m thick	Fill of ditch [14008]
15000	15	Firm dark brown to greyish brown sandy clay (silt?) with occasional small pebbles and charcoal flecks. Up to 0.3m thick	Topsoil
15001	15	Firm reddish brown silt, with yellow and grey patches	Natural estuarine deposit
15002	15	Friable yellowish brown sandy silt, with whitish grey layers/laminations. Up to 0.5m thick	Natural estuarine silt
15003	15	Linear cut, 1.14m wide by at least 2.2m long and 0.58m deep. Steep sides breaking gradually to a narrow flat base. Aligned approximately notheast to southwest	Ditch
15004	15	Firm brownish grey deposit with rusty mottles. Sandy silt with occasional charcoal flecks	Fill of ditch [15003]
15005	15	Firm grey sandy silt with occasional charcoal flecks. Up to 0.12m thick	Fill of ditch [15003]
15006	15	Linear cut, 0.3m wide and 0.28m deep	Cut for modern service (15007)
15007	15	Firm dark brown and grey silty sand with occasional small stones. 0.28m thick. Drain pipe at base of deposit	Modern drain
15008	15	Linear cut, 1.9m wide by at least 1.8m long and 0.7m deep. Moderately steep sides breaking imperceptibly to a concave base. Aligned approximately east to west	Ditch
15009	15	Firm brown silty sand with occasional small pebbles and occasional charcoal flecks. 0.34m thick	Fill of ditch [15008]
15010	15	Firm greyish brown deposit, mottled with light brown and pale grey. Silty sand with occasional charcoal flecks and occasional lenses of pale grey silty sand. 0.32m thick	Fill of ditch [15008]
15011	15	Firm to friable grey deposit with lenses of beige and light brown and rusty stains. Silty sand, up to 0.1m thick	Fill of ditch [15008]
15012	15	Linear cut, 2.15m wide by at least 3.5m long and up to 0.35m deep. Gently sloping concave sides breaking imperceptibly to a flattish gently concave base. Aligned approximately north northeast to south southwest	Ditch
15013	15	Soft greyish brown silty sand with rusty stains. 0.2m thick	Fill of ditch [15003]
15014	15	Friable/firm (dry) blackish brown deposit, mottled with brown. Sandy silt, probably with decayed organic component	Fill of ditch [15012]
15015	15	Firm grey silty sand with occasional charcoal flecks. 0.22m thick. Deposit displays fine light grey laminations	Fill of ditch [15012]

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CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
15016	15	Soft light grey fine sand, with yellowish brown laminations. 0.1m thick	Fill of ditch [15012]
15017	15	Linear cut, up to 0.35m wide and 0.6m deep. Very steep sides breaking quite sharply to a flat base. Aligned approximately east to west	Cut for modern drain (15018)
15018	15	Firm mix of blackish grey, brown and grey silt with occasional gravel, 0.6m thick.	Fill of cut [15017]. Modern drain
15019	15	Linear cut, 0.2m wide and up to 0.54m deep. Vertical sides. Aligned approximately east to west	Cut for modern drain [15017]
15020	15	Firm to stiff brownish grey deposit, mottled with yellowish brown and brown. Silty sand with occasional gravel and occasional small fragments and flecks of charcoal. 0.54m thick. Plastic pipe at the base of the deposit	Modern drain
15021	15	Linear cut, up to 0.3m wide and 0.2m deep. Vertical sides. Aligned east to west	Cut for drain (15022)
15022	15	Firm mixed light grey, brown and yellowish brown silt and silty sand, 0.2m thick	Probable land drain
15023	15	Compact brownish grey silty sand with frequent slag, charcoal and gravel. At least 1.8m by 2.25m in plan and 0.4m thick	Deposit
15024	15	Loose grey sand and gravel, up to 0.15m thick, and extending at least 15m in plan	Modern deposit
15025	15	Compact/cemented blackish grey deposit comprising clayey sand with slag/clinker, concrete fragments and gravel. Up to 0.25m thick	Modern deposit
15026		Compact/cemented mixed grey, dark grey and blackish grey deposit comprising sand, slag/clinker, ash and other fire residues, with occasional brick fragments and charcoal. Up to 3.5m broad in section and up to 0.25m thick	Modern deposit
15027	15	Cemented/stiff light brownish grey deposit, mottled with pale beige. Silty sand with moderate charcoal and occasional fine sand patches. Up to 3.2m broad in section and 0.27m thick	Deposit
15028	15	Stiff/cemented (dry) grey clayey sand with brown mottles. Moderate charcoal flecks and gravel. Up to 0.25m thick	Modern deposit
15029	15	Linear cut, 0.25m wide and 0.4m deep. Vertical sides breaking gradually to a concave base	Cut for modern service (15030)
15030	15	Firm brownish grey silty sand with gravel and lumps of light brown silty sand. 0.4m thick. Cable revealed at base of the deposit	Modern (defunct) electrical service in cut [1529]
16001	16	Moderately firm mid to dark brown sandy silt with occasional coal and brick fragments. 0.35m thick	Topsoil
16002	16	Firm dark brown silt, at least 0.4m thick. A general deposit	Natural estuarine silt

APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
16003	16	Firm mid grey sandy silt, 0.16m thick	Fill of ditch [16004]
16004	16	Linear cut, 0.63m wide and 0.17m deep. Quite steep sides breaking gradually to a gently concave base. Aligned approximately north northwest to south southeast	Ditch
16005	16	Moderately firm mid grey sandy silt, 0.2m thick	Fill of ditch [16006]
16006	16	Linear cut, 0.7m wide and 0.58m deep. Steep, concave sides (near vertical towards the base) breaking gradually to a narrow flattish base. Aligned approximately north northwest to south southeast	Ditch
16007	16	Quite soft mid brownish grey sandy silt with frequent small mollusc shells. 0.17m thick	Deposit
16008	16	Linear cut, at least 1.4m wide and 0.42m deep. Steep sides (near vertical towards the base) breaking gradually to flattish uneven base. Aligned west northwest to east southeast	Ditch or channel
16009	16	Firm/stiff very dark brownish grey silt, 0.06m thick	Fill of ditch [16014]
16010	16	Firm mid to dark grey silt, up to 0.15m thick	Fill of ditch [16014]
16011	16	Firm mid to dark grey sandy silt with occasional rusty mottles. 0.22m thick	Fill of ditch [16014]
16012	16	Moderately firm light brown silty sand, 0.16m thick	Fill of ditch [16006]
16013	16	Moderately firm light greyish brown silty sand, 0.14m thick	Fill of ditch [16006]
16014	16	Linear cut, 1.6m wide and 0.34m deep. Gently sloping sides breaking imperceptibly to a very gently concave base. Aligned north northwest to south southeast	Ditch. Probably a re-cut of [16006]
16015	16	Firm very dark brownish grey organic silt, up to 0.13m thick	Fill of ditch [16008]
16016	16	Firm mid grey silt, 0.24m thick	Fill of ditch [16008]
16017	16	Soft light yellowish brown silty fine sand, 0.12m thick. Fine laminations apparent	Fill of ditch [16008]
16018	16	Linear cut, at least 1.55m wide and 0.4m deep. Very steep sides breaking gradually to a flattish uneven base. Aligned west northwest to east southeast	Ditch or channel
16019	16	Very firm or stiff very dark brownish grey organic silt, up to 0.14m thick	Fill of ditch [16018]
16020	16	Firm mid grey silt with occasional rusty mottles. 0.17m thick	Fill of ditch [16018]
16021	16	Soft light whitish yellow-brown silty sand, 0.12m thick. Fine laminations intermittently apparent	Fill of ditch [16018]
16022	16	Firm slightly bluish mid grey silt with rusty mottles. 0.24m thick	Fill of ditch [16023]
16023	16	Linear cut, at least 1m wide and 0.22m deep. Truncated northeast side breaks gradually to a flattish base	Ditch or channel
16024	16	Firm slightly bluish mid grey silt with rusty mottles. 0.24m thick	Fill of ditch [16025]
16025	16	Linear cut, at least 0.3m wide and 0.24m deep. Truncated southwest side breaks gradually to a flattish base. Aligned west northwest to east southeast	Ditch or channel

APPENDIX A. CONTEXT SUMMARY

CONTEXT	TRENCH	DESCRIPTION	INTERPRETATION
16026	16	Firm or stiff light bluish grey clayey silt, 0.05m thick	Natural estuarine silt
16027	16	Firm to stiff mid to dark brown silt with moderate light rusty staining. At least 0.58m thick	Natural estuarine silt
17001	17	Firm dark brown sandy silt with occasional modern brick fragments and nails. 0.3m thick	Topsoil
17002	17	Firm light brownish yellow silty fine sand, 0.06m thick	Natural estuarine silt
17003	17	Firm dark brown silt with light rusty mottles, approximately 0.08m thick	Natural estuarine silt
17004	17	Firm to stiff light bluish grey clayey silt, 0.08m thick	Natural estuarine silt
17005	17	Firm to stiff dark brown silt at least 0.36m thick	Natural estuarine silt
17006	17	Moderately firm light brownish grey silty sand with frequent small snail shells	Fill of ditch [17007]
17007	17	Linear cut, 2.46m wide by at least 1.8m long and 0.48m deep. Vertical sides breaking gradually to a flattish base. Aligned approximately west northwest to east southeast	Ditch
17008	17	Firm very dark greyish brown 'peaty' organic silt, 0.12m thick	Fill of ditch [17007]
17009	17	Moderately firm deposit comprising laminations of mid grey sandy silt and light whitish brown silty fine sand. 0.15m thick	Fill of ditch [17007] – alluvium
17010	17	Soft mid greyish brown sandy silt, up to 0.2m thick	Fill of ditch [17007]
17011	17	Soft mid greyish brown sandy silt, up to 0.1m thick	Fill of ditch [17007]
17012	17	Soft light brownish yellow silty fine sand, up to 0.07m thick	Fill of ditch [17007]
17013	17	Firm mid grey sandy silt with occasional rusty mottles. 0.05m thick	Fill of ditch [17007]

APPENDIX B: The Roman Pottery

I.M. Rowlandson and H.G. Fiske

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Introduction

Three hundred and thirty three sherds (4.962 kg, 5.84 RE, maximum vessel count 241) were recovered in total. All but one sherd (a medieval green-glazed sherd from context 4006) were dated to the Roman period.

Much of the activity dated to the mid 2nd to 3rd centuries AD and a high proportion of Nene Valley grey ware was present amongst the assemblage as would be expected for a site of that period in this part of Lincolnshire. Limited evidence for activity on the site in the early Roman period was present although no pre conquest Iron Age wares were noted. Evidence for occupation on the site stretching into the later 3rd to perhaps 4th century AD was recorded from ditch 6023 but it was noticeable that there were few of the larger colour-coated forms and shell-gritted wares that might be expected from a site occupied in the 4th century AD. It would appear likely that few, if any new ceramic vessels reached the Millfield Nurseries site by the 4th century AD.

The range of pottery present was what might be expected from this part of Lincolnshire and was similar to an assemblage studied by the authors from Clay Lake Bank site (Rowlandson and Fiske 2020).

Methodology

An archive has been produced to comply with the requirements of the Study Group for Roman Pottery (Darling 2004) using the codes and system developed by the City of Lincoln Archaeological Unit following the requirements of the Lincolnshire Handbook (Darling and Precious 2014; Tomber and Dore 1998; Jennings (ed.) 2019). A tabulated summary by context and a sherd archive are presented below. The dates provided represent the pottery recorded here: the main text of the report and other specialist contributions should be consulted to ascertain the overall date attributed to each context.

The pottery by context

SCSP21 Dating Summary							
Context	F No	F Type	Spot date	Comments	Sherd	Weight (g)	Total RE %
00002	00002	Finds	Roman	A single wheel-made sherd.	1	7	0
00003	00003	Finds	M2-3	A sherd from a Nene Valley grey ware bowl mimicking samian form 36.	1	12	3
00004	00004	Finds	Roman	A single wheel-made sherd.	1	5	0
00005	00005	Finds	M2-3	A small group including Nene Valley grey ware and shell-gritted sherds.	6	81	9
00006	00006	Finds	M2-3	A small group including Nene Valley grey ware and a white ware sherd.	2	32	5

SCSP21 Dating Summary							
Context	F No	F Type	Spot date	Comments	Sherd	Weight (g)	Total RE %
02008	02004	Ditch	Roman	A single shell-gritted sherd from a large jar or bowl.	1	49	0
03003	03001	Ditch	M2-3	A single sherd of Nene Valley grey ware.	1	5	0
03004	03001	Ditch	M2-3	A small group including samian, a Nene Valley grey ware lid, a grey ware narrow-necked jar (form as Dannell & Wild 1987 Fig. 46.143 with burnished chevrons on neck), and shell gritted sherds. Further similar sherds came from sample 6.	29	201	97
03009	03007	Ditch	M2-3	Sherds of Nene Valley grey ware including the base from a bowl or dish.	2	40	0
04006	04007	Possible pit	Medieval/ Roman	A small group including Nene Valley grey ware and a grog-gritted sherd. A green-glazed sherd should date to the medieval period.	3	17	0
04009	04004	Ditch	Roman	A single grey ware sherd.	1	7	0
04011	04002	Ditch	M2-3	A small group of Nene Valley grey ware including a sherd from a necked jar.	3	64	14
04013	04005	Ditch or channel	Roman	A single shell-gritted sherd.	1	23	0
04014	04032	Ditch	ML2	A sherd from a flagon with an expanded top ring rim (as Perrin 1996 No. 220).	1	19	37
04015	04005	Ditch or channel	Roman	Shell-gritted sherds from a single vessel.	3	98	0
06004	06002	Ditch	3C+	A small group including samian, a Nene Valley grey ware lipped bowl, Nene Valley colour-coated ware, the rim from a small flagon, and a shell-gritted jar with an undercut rim.	12	166	114
06005	06002	Ditch	3C+	A medium sized group including sherds from a colour-coated beaker with a cornice rim, a Nene Valley grey ware lipped bowl, a shell-gritted necked jar, and further small sherds from sample 3.	41	315	61
06006	06002	Ditch	M2-3	A single Nene Valley grey ware sherd.	1	1	0
06007	06002	Ditch	3C	A small group including colour-coated ware, Nene Valley grey ware wide-mouthed jars one with rouletting (as Perrin 1999 Fig. 57.45), and a plain-rimmed dish.	8	127	68
06008	06002	Ditch	M2-3	A small group of Nene Valley grey ware.	2	22	0
06009	06002	Ditch	Roman	A single grey ware sherd.	1	7	0
06011	06010	Ditch	M2-3	A small group including Nene Valley grey ware and white ware.	3	31	0
06012	06010	Ditch	3C	A medium sized group including sherds from a colour-coated jar or flagon, a colour-coated lipped dish, and a Castor box lid. Nene Valley grey ware forms included a wide mouthed jar with burnished wavy line decoration and a copy of the samian form 36 dish. Grey wares included wide-mouthed jars with rouletted decoration (form as Perrin 1999 Fig. 57.45).	25	483	31
06013	06010	Ditch	3C+	A small group including a sherd from a large shell-gritted jar, a colour-coated vessel possibly a Castor box lid, and grey ware.	4	154	2

SCSP21 Dating Summary							
Context	F No	F Type	Spot date	Comments	Sherd	Weight (g)	Total RE %
06015	06010	Ditch	Roman	Two grey ware sherds.	2	42	0
06016	06010	Ditch	L1-2?	A sherd from a grey ware jar or beaker with a pedestal base.	1	56	0
06022	06020	Ditch	L1-2?	Sherds from a white ware flagon or jar.	2	77	0
06025	06023	Ditch	L2-3	A small group including sherds from a colour-coated vessel with barbotine decoration (possible phallus), grey ware and shell-gritted ware.	8	82	0
06026	06023	Ditch	M3-4	A fresh medium sized group including a sherd from a Nene Valley mortarium, a mica-dusted vessel, painted Parchment ware, a colour-coated jar or bowl, and a colour-coated beaker (as Howe et al 1980 Fig. 3.34). Nene Valley grey ware included a lipped bowl, a necked jar, and a large bowl with rouletted decoration.	34	666	37
06029	06027	Possible animal burrow	M2-3	A small group including a basal fragment from a grey ware jar, a colour-coated sherd, oxidised ware, Nene Valley grey ware, and shell-gritted ware.	13	219	0
06032	06031	Ditch	M2-3	A medium sized group including sherds from Nene Valley grey ware necked jars and a large proportion of a shell-gritted storage jar with scored wavy line decoration (as Perrin 1999 Fig. 72.469 with a neater scored wavy line), sherds from this vessel were also present in sample 5.	82	1434	40
06033	06031	Ditch	M2-3	A single sherd of Nene Valley grey ware.	1	50	0
06048	06046	Ditch	Roman	A single grey ware sherd.	1	2	0
06053	06051	Ditch	ML2?	A sherd of Nene Valley grey ware and a sherd from a shell-gritted dish.	2	16	7
06057	06051	Ditch	Roman?	A single oxidised sherd.	1	2	0
06060	06010	Ditch	M2+	A sherd from a colour-coated cornice-rimmed beaker, possibly a Colchester product (fabric as Tomber & Dore 1998 COLCC2) and a Nene Valley type colour-coated sherd possibly from a flagon.	2	16	8
06061	06010	Ditch	L2-3	A small group of Nene Valley grey ware including sherds from lipped bowls (e.g. Perrin 1996 No. 232).	5	113	19
06062	06002	Ditch	M2-3	A small group including samian, Nene Valley grey ware, and a shell-gritted jar with a triangular rim (as Perrin 1999 Fig. 71.449).	7	91	26
07002	07002	Layer	Roman	A single abraded shell-gritted sherd.	1	6	0
07010	07008	Ditch	L2-3	A small group including sherds from a Nene Valley grey ware wide-mouthed jar and a shell-gritted jar.	3	33	0
07035	07038	Ditch	M2-3	A single sherd of Nene Valley grey ware.	1	8	0
08004	08003	Ditch	M2-3	A single sherd of Nene Valley grey ware.	1	34	0
11009	11010	Ditch	Roman?	A single abraded shell-gritted sherd.	1	3	0
11013	11014	Ditch	Roman?	Abraded sherds from a shell-gritted jar.	2	7	6
11017	11010	Ditch	Roman?	A single shell-gritted scrap.	1	1	0
11028	11012	Ditch	Roman?	A small, heavily abraded group, including shell-gritted and oxidised sherds.	3	26	0

SCSP21 Dating Summary							
Context	F No	F Type	Spot date	Comments	Sherd	Weight (g)	Total RE %
11049	11014	Ditch	Roman?	A small group from sample 2 including shell-gritted scraps and fired clay.	5	8	0
14010	14008	Ditch	Roman?	A single abraded shell-gritted sherd.	1	4	0

The pottery by ware type

SCSP21 Fabric Summary							
Fabric code	Fabric group	Fabric details	Sherd	Sherd %	Weight (g)	Weight %	Total RE %
SAM	Samian	Undifferentiated	4	1.20%	7	0.14%	5
AMPH?	Amphora	Miscellaneous amphorae	1	0.30%	9	0.18%	0
MONV	Mortaria	Nene Valley mortaria	1	0.30%	94	1.89%	0
CC1	Fine	Colour coated fabric 1	28	8.41%	271	5.46%	41
COLC	Fine	Colchester colour-coated	1	0.30%	3	0.06%	8
NVMIC	Fine	Nene Valley colour-coated with mica overslip	9	2.70%	249	5.02%	0
CR	Oxidised	Roman cream wares (various)	5	1.50%	129	2.60%	37
NVPA	Oxidised	Nene Valley parchment ware	1	0.30%	6	0.12%	0
OX	Oxidised	Misc. oxidized wares	2	0.60%	4	0.08%	0
OX?	Oxidised	Misc. oxidised wares	3	0.90%	5	0.10%	0
GREY	Reduced	Miscellaneous grey wares	33	9.91%	455	9.17%	110
GREY?	Reduced	Miscellaneous grey wares	5	1.50%	19	0.38%	0
IAGR	Reduced	Native tradition/transitional gritty wares	2	0.60%	22	0.44%	0
IAGR2	Reduced	Iron Age tradition 'Gritty': Site fabric 2	40	12.01%	1301	26.22%	32
NVGW	Reduced	Nene Valley grey ware	88	26.43%	1254	25.27%	204
NVGW?	Reduced	Nene Valley grey ware	8	2.40%	86	1.73%	96
NVGY	Reduced	Earlier Nene Valle grey ware	10	3.00%	326	6.57%	0
NVGY?	Reduced	Earlier Nene Valle grey ware	2	0.60%	19	0.38%	0
SHEL	Calcareous	Miscellaneous undifferentiated shell-tempered	46	13.81%	634	12.78%	51
SLSHB	Calcareous	Bourne shell gritted	2	0.60%	23	0.46%	0
MISC	Misc	Misc uncategorised	35	10.51%	17	0.34%	0
PRO	Post Roman	Post-Roman Pottery	1	0.30%	3	0.06%	0
FCLAY?	Fired Clay	Fired Clay	6	1.80%	26	0.52%	0

SCSP21 Form Summary							
Form	Form Type	Form Description	Sherd	Sherd %	Weight (g)	Weight %	Total RE %
A	Amphora	Unclassified form	1	0.30%	9	0.18%	0
BK	Beaker	Unclassified form	6	1.80%	65	1.31%	0
BK?	Beaker	Unclassified form	1	0.30%	4	0.08%	0
BKCOR	Beaker	Cornice rim	2	0.60%	8	0.16%	18
BKPR	Beaker	Plain upright rim	4	1.20%	10	0.20%	19
B	Bowl	Unclassified form	1	0.30%	3	0.06%	5

SCSP21 Form Summary							
Form	Form Type	Form Description	Sherd	Sherd %	Weight (g)	Weight %	Total RE %
B36	Bowl	Copy of Samian form 36	3	0.90%	59	1.19%	18
BFL	Bowl	Flange rimmed (eg Gillam 1970 Types 218-220)	8	2.40%	250	5.04%	70
BPR	Bowl	Plain rimmed	1	0.30%	25	0.50%	13
BL	Bowl- large	Large	2	0.60%	29	0.58%	0
BD	Bowl/dish	-	6	1.80%	160	3.22%	0
CLSD	Closed	Form	44	13.21%	599	12.07%	0
D452	Dish	as Gillam 337 GB Cam 16 copy	1	0.30%	12	0.24%	7
DFL	Dish	Flange rimmed (eg Gillam 1970 Types 218-220)	1	0.30%	16	0.32%	10
DPR	Dish	Plain rim	1	0.30%	49	0.99%	11
FTR	Flagon	Ringed dominant top ring	1	0.30%	19	0.38%	37
FJ	Flagon/jar	Unclassified form	19	5.71%	396	7.98%	0
FS	Flask	Or exceptionally small flagon	1	0.30%	27	0.54%	82
J	Jar	Unclassified form	7	2.10%	259	5.22%	44
JNAT	Jar	Native tradition	40	12.01%	1301	26.22%	32
JNK	Jar	Necked	11	3.30%	270	5.44%	53
JNN	Jar	Narrow-necked	14	4.20%	72	1.45%	72
JUR	Jar	Undercut rim	1	0.30%	13	0.26%	9
JWM	Jar	Wide-mouthed as RPNV 3-5	7	2.10%	258	5.20%	58
JBK	Jar/Beaker	Small jar or beaker	1	0.30%	56	1.13%	0
JB	Jar/Bowl	Unclassified form	2	0.60%	12	0.24%	6
JBL	Jar/Bowl	Large	5	1.50%	188	3.79%	0
JBK	Jar/Bowl	Necked	2	0.60%	18	0.36%	5
L	Lid	Unclassified form	1	0.30%	22	0.44%	11
LBX	Lid	Castor box lid	3	0.90%	27	0.54%	2
M	Mortaria	Unclassified Form	1	0.30%	94	1.89%	0
-	Unknown	Form uncertain	135	40.54%	632	12.74%	2

Samian

Four sherds of samian from three vessels were recovered. One sherd was identified as a bowl (ditch 03001). The low level of samian from this site would fit with the assemblage recovered from Spalding Clay Lake Bank and would fit with other small assemblages from basic rural sites in the area (Rowlandson et al. 2020).

Amphora

A single possible amphora fragment was recovered from ditch 6010. Other similar sites in the area have also only produced limited evidence of imported amphora (Rowlandson et al. 2020). More significant groups of amphora have been found during excavations at larger settlements in southern Lincolnshire such as Bourne (eg. Darling 1997, 2005, 2011b), Stainfield (Davies 1995) and Sleaford (see discussion in Rowlandson et al. 2015). Those living in more nucleated settlements appear to have had greater access to amphora and their contents than those in more basic rural sites.

Mortaria

A single fragment from a Nene Valley type mortarium was recovered from ditch 6023 was likely to date to the 3rd to 4th century AD. The low level of mortaria from this assemblage would fit with a similar pattern observed by previous investigations in the vicinity of Baston and other sites in the area where there were typically few mortaria in circulation in comparison with the other coarse ware vessel types (Darling et al. 2020; Rowlandson et al. 2020).

Other fine wares

Nene Valley type colour-coated ware (CC1) were relatively well represented. Beakers were well represented including plain rimmed (BKPR, ditch 60023) and cornice rimmed types (BKCOR, ditch 6002). Other forms included a lipped dish (DFL), a flagon or jar and fragments from a Castor Box lid, possibly all from the same vessel (LBX, ditches 6002 and 6010). The range of forms was what might be expected from a site predominantly occupied in the later 2nd to 3rd centuries AD.

A single sherd from a light-fired Nene Valley type paint decorated 'parchment ware' vessel was recorded from ditch 6023. The vessel was probably a flagon or a jar. These types of vessels were produced sporadically from the 2nd century AD onward with many dated to the 4th century AD. This small sherd cannot be more closely dated than this broad date range.

Nene Valley type mica dusted ware was recorded from ditch 6026 from an ellipsoidal vessel, probably a flagon. Small quantities of these types of wares are known from the Nene Valley and Lincoln although they are typically rare (Darling and Precious 2014).

A single sherd from a cornice-rimmed beaker with a dark colour-coat and orange body was recorded from ditch 6010 (COLC). This vessel had similarities with the products of the Colchester colour-coated industry. A similar beaker with rough-cast surface treatment has been recorded by the author from the Langrville Parish (Rowlandson and Fiske 2018). Symonds has noted that the identification of some of these colour-coated can be difficult (1990) and other industries such as Pakenham and other continental industries may have made similar vessels (Tomber and Dore 1998; cf. Bruet et al. 2010).

Oxidised wares

White wares present (CR) mostly consisted of sherds from flagons with one diagnostic rim from a vessel with an expanded top rim (FTR, Gillam 1970, Type 5) likely to date to the later 1st to earlier 2nd century AD.

Other oxidised wares included five body sherds, probably all of Roman date (OX and OX?). No diagnostic forms were evident on the sherds retrieved from these vessels.

Reduced wares

A total of 12 sherds of the distinctive early Roman grey wares in the NVGY group were recorded from ditches 6010, 6023 and 6027. These grey wares have been characterised by Precious on sites from the south of Lincolnshire (2001; Davies 1993; 1995). Similar products were recorded from Phase 1 at Orton Hall Farm by Perrin (1996, No. 61-7 and discussion). Forms present from the SCSP21 assemblage appear to have been jars or beakers but no rims were present. This small assemblage suggests there was probably some activity on the site in the pre-Hadrianic period.

Nene Valley grey ware (NVGY) with light-fired cores and fumed grey surfaces were more numerous than standard sandy grey wares. These wares were produced at sites in the Nene Valley (Perrin 1999) and perhaps elsewhere (eg. near Stamford, Nick Cooper, ULAS pers. com.). The range of forms present included a lid, barbotine decorated copies of samian Drag. 36 bowl, lipped bowls, a large bowl with rouletted decoration, necked jars (some with cordoned decoration), wide-mouthed jars some with burnished wavy line (Perrin 1999 Fig. 56.19-20). A heavily burnt rim from a small flagon was also probably in the NVGW fabric. The range of forms present is what might be expected from a site in this area in the later 2nd to 3rd century AD (Darling et al. 2020; Rowlandson et al. 2020). It would suggest that most of the grey wares in use on the site were produced within 25km of the site.

There was a small range of grey bodied reduced sandy grey wares (GREY) present. These vessels had similarities with the forms produced in Nene Valley grey wares. A number of kilns are known from the Lindsey region of Lincolnshire producing a distinctive range of forms (Cleary et al. 2020; Samuels 1983) but there are now also a growing number of kilns from the South Kesteven and Boston areas of Lincolnshire at Grantham, north of Spalding and most probably at Great Casterton into Rutland (Rowlandson and Fiske 2020; 2023; Swan 1984) that were producing grey wares with similar stylistic influences to the products of the Nene Valley (Perrin 1994, 120-1). The forms present from this assemblage included lipped bowls, a bowl with a plain rim a narrow necked jar (form as Dannell and Wild 1987 Fig. 46.143 with burnished chevrons on neck) and wide-mouthed jars with rouletted decoration on the shoulder (form as Perrin 1999 Fig. 57.45). A local production source in the South Holland, Boston, South Kesteven or Peterborough area would appear most likely for the pottery recorded.

Transitional wares

There were a restricted range of 'native tradition' transitional wares (IAGR) they included a shell and grog-gritted sherd from ditch 3001 and a comb decorated sherd, probably from a large jar decorated in the Late La Tène III style (Knight 2002). A large proportion of a shell-gritted storage jar with scored wavy line decoration (IAGR2, form as Perrin 1999 Fig. 72.469 with a neater scored wavy line was recovered from ditch 6031. This vessel probably dated to the mid 1st to earlier 2nd century AD. The small range of transitional wares from this site suggested some activity may have occurred on the site in the early Roman period. A limited range of transitional wares were also recorded from the Spalding Clay Lake Bank site where it was suggested that they represented activity 'in the Hadrianic period or earlier' (Rowlandson et al. 2020).

Shell-gritted wares

A total of 46 sherds from 43 vessels were attributed to the generic SHEL code. Regrettably the condition of the pottery precluded the identification of the Punctate Brachiopod shells often seen within the fabrics from southern Lincolnshire and the South Midlands shell-gritted industries (eg. Tomber and Dore 1998, HAR SH). The sherds present were all most probably from jar or large bowls. Surface rilling was noted on one sherd (ditch 6002) and the rims were mostly necked type jars including an example with an under-cut rim (JUR, ditch 6002). Carbonised deposits were noted on four of these vessels suggesting that some were utilised as cooking pots for at least the later part of their life. These forms were similar to those noted from the Spalding Clay Lake Bank site (Rowlandson et al. 2020).

The range of shell-gritted pottery from this site and similar groups in the Welland valley (Rowlandson et al. 2020; Darling 2007) have a greater affinity with groups from the Nene Valley (Rollo 2001; Perrin 1996; 1999) than with assemblages from the Lincoln and Sleaford areas (Darling and Precious 2014; Rowlandson et al. 2010 & 2015). Although it was not possible to attributed the SHEL group to a specific production area, fossiliferous Jurassic deposits occur in a number of locations in the south Lincolnshire and the Nene Valley area and it is likely that the majority of the pottery in this ware group was produced fairly locally.

Only two sherds from two vessels were attributed the Bourne type shell-gritted fabric (SLSHB, Tomber and Dore 1998, BOGS SH). This suggests that this Spalding site was provisioned from a different source, perhaps more locally or upstream along the River Welland, as one would expect Bourne type shell-gritted wares to be better represented from a site with activity in the 2nd to 3rd centuries AD.

Post-Roman and miscellaneous wares

One green glazed medieval sherd (PRO) was noted from possible pit 4007 and 35 tiny fragments weighing 17g from bulk sample 5 (ditch 6031) were recorded under the MISC miscellaneous code.

Six small ceramic scraps were recorded from ditches 3001 and 11014. All of them appeared likely to be fired clay (FCLAY?).

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Recommendations

- All of the pottery is stable and should be deposited along with the rest of the archive in the relevant museum.
- The key vessels have been paralleled and no illustration is recommended.
- Further investigations in the area appear likely to produce a greater quantity of Roman pottery
- The small quantity of samian from this project so far would not benefit from being shown to a samian specialist at present. In the event of further investigations and a larger more significant samian assemblage being retrieved the four sherds from this part of the project should also be considered as part of any final report.

Full sherd archive

SCSP21 Full Sherd Archive											
Context	Fabric	Form	Decoration	Vessels	Alt	Comments	Sherd	Weight	Rim diam	Rim eve	Sample
00002	GREY?	CLSD		1	BURNT	BS	1	7	0	0	
00003	NVGW	B36		1	ABR	RIM	1	12	24	3	
00004	GREY?	-		1	VAB	BS	1	5	0	0	
00005	NVGW	JBL		1		BS	1	31	0	0	
00005	NVGW	J		1		RIM	1	6	18	7	
00005	NVGW	CLSD		1	CONCRETION	BS	2	6	0	0	
00005	SHEL	JB		1	CONCRETION	RIM	1	9	0	2	
00005	SHEL	CLSD		1	CONCRETION	BS	1	29	0	0	
00006	NVGW	JBNK		1		RIM NECK	1	14	20	5	
00006	CR	CLSD		1	CONCRETION	BS	1	18	0	0	
02008	SHEL	JBL		1	ABR	BS	1	49	0	0	
03003	NVGW	-		1		BS	1	5	0	0	
03004	GREY	CLSD		1		BS	2	7	0	0	6
03004	NVGW	L		1	CARBON DEP	RIM	1	22	18	11	

SCSP21 Full Sherd Archive											
Context	Fabric	Form	Decoration	Vessels	Alt	Comments	Sherd	Weight	Rim diam	Rim eve	Sample
03004	FCLAY?	-		0	ABR	ORANGE-BROWN; POORLY MIXED; 1 SURFACE SURVIVES; FCLAY OR VESSEL?	4	23	0	0	6
03004	SHEL	-		1	ABR	BS	1	1	0	0	6
03004	IAGR	CLSD		1	ABR	BS; SHELL & GROG	1	12	0	0	6
03004	GREY?	-		1	VAB	BS	1	5	0	0	6
03004	GREY	JNN	BL NECK	1		RIM NECK; 3 SHERDS FROM SAMPLE 6 (10g)	14	72	10	72	6
03004	NVGW	CLSD	BDL	1		BS	1	21	0	0	
03004	SHEL	CLSD		1	BURNT	BASE	1	16	0	0	
03004	SHEL	J		1	CONCRETION	RIM	1	12	14	9	
03004	SAM	B		1		RIM	1	3	18	5	
03004	NVGW	-		1	VAB	BS	1	7	0	0	
03009	NVGW	CLSD		1	ABR	BS	1	6	0	0	
03009	NVGW	BD		1	BURNT OVER BREAK	BS	1	34	0	0	
04006	PRO	-		1	ABR	BS; GREEN GLAZE EXT; MEDIEVAL	1	3	0	0	
04006	NVGW	-		1	VAB	BS	1	4	0	0	
04006	IAGR	CLSD	COMB	1	VAB	BS GROG	1	10	0	0	
04009	GREY	CLSD		1	VAB	BS; FINE FABRIC	1	7	0	0	
04011	NVGW	JNK		1	ABR	RIM	1	22	16	14	
04011	NVGW	CLSD		1	ABR	BS	1	7	0	0	
04011	NVGW	CLSD		1	CARBON DEP INT	BASE	1	35	0	0	
04013	SHEL	CLSD		1	ABR	BS	1	23	0	0	
04014	CR	FTR		1	BURNT	RIM	1	19	6	37	
04015	SHEL	CLSD		1	ABR	BS	3	98	0	0	
06004	GREY	BFL		1		RIM; HIGH FIRED; ?FABRIC	2	37	21	7	
06004	SHEL	CLSD		1		BS	1	12	0	0	
06004	GREY	-		1		BS; HIGH FIRED	1	10	0	0	
06004	NVGW	BFL		1	BURNT; CONCRETION	RIM	1	46	20	16	
06004	NVGW	CLSD		2	ABR	BS	2	16	0	0	
06004	NVGW?	FS		1	BURNT; ABR	RIM NECK HANDLE SCAR	1	27	4	82	
06004	CC1	LBX	ROUZ	1	ABR	BS	1	3	0	0	
06004	SAM	-		1	BURNT	BS	2	2	0	0	
06004	SHEL	JUR		1	CARBON DEP	RIM	1	13	16	9	
06005	NVGW	-		8	ABR	BS	8	55	0	0	

SCSP21 Full Sherd Archive											
Context	Fabric	Form	Decoration	Vessels	Alt	Comments	Sherd	Weight	Rim diam	Rim eve	Sample
06005	GREY	CLSD		1		BS	1	6	0	0	
06005	NVGW	-		1	ABR	RIM	1	1	0	2	3
06005	NVGW	-		7	ABR	BS SCRAPS	7	4	0	0	3
06005	SHEL	-		8		BS	8	29	0	0	3
06005	OX?	-		1	ABR	BS	1	2	0	0	3
06005	SHEL	JNK		1	ABR	RIM	1	26	24	4	
06005	SHEL	-		2	ABR	BS	2	8	0	0	
06005	GREY	BFL		1		RIM; HIGH FIRED	1	18	24	7	
06005	GREY	-		1	VAB	BS	1	8	0	0	
06005	GREY	BPR		1	VAB	RIM	1	25	20	13	
06005	NVGW	JB		1		RIM	1	3	14	4	
06005	NVGW	-		1		BS	1	9	0	0	
06005	NVGW	-		1		BS	1	3	0	0	
06005	NVGW	B36	BA	1	ABR	RIM	1	17	22	7	
06005	NVGW	BFL		1		RIM	1	24	16	14	
06005	CC1	BK	STRING	1		BASE PEDESTAL	1	51	0	0	
06005	GREY	-		1	ABR	BS	1	1	0	0	3
06005	NVGW	BD		1		BASE	1	20	0	0	
06005	CC1	BKCOR		1		RIM	1	5	8	10	
06006	NVGW	-		1		BS	1	1	0	0	
06007	NVGW	JWM	ROUZ	1	CONCRETION	RIM GIRTH; AS PERRIN 1999 FIG. 57.45	1	15	20	36	
06007	NVGW	JWM		1	ABR	RIM GIRTH	1	43	27	11	
06007	NVGW	J		1	ABR	RIM	1	3	14	10	
06007	NVGW	DPR		1		RIM BASE	1	49	28	11	
06007	NVGW	-		1	ABR	BS	1	3	0	0	
06007	SLSHB	CLSD		1	ABR	BS	1	5	0	0	
06007	GREY	-		1	ABR	BS; ?SLGY	1	4	0	0	
06007	CC1	CLSD		1		BS	1	5	0	0	
06008	NVGW	CLSD		2		BS	2	22	0	0	
06009	GREY	CLSD		1		BS	1	7	0	0	
06011	NVGW?	CLSD		1	VAB	BS	1	5	0	0	
06011	CR	-		1	VAB	BS	1	15	0	0	
06011	NVGW?	BD		1	VAB	BASE	1	11	0	0	
06012	NVGW?	CLSD		1	ABR; BURNT	BS	1	4	0	0	
06012	SHEL	-		2	VAB	BS	2	29	0	0	
06012	GREY	JWM	ROUZ	1		BS GIRTH; ?NOT SAME VESSEL	1	88	0	0	
06012	GREY	JWM	ROUZ	1		RIM GIRTH	1	79	24	11	
06012	CC1	FJ	ROU	1	ABR	BS	8	106	0	0	
06012	AMPH?	A		1	VAB	BS; ?DR20	1	9	0	0	
06012	NVGW?	CLSD		1	ABR	BS	1	9	0	0	

SCSP21 Full Sherd Archive											
Context	Fabric	Form	Decoration	Vessels	Alt	Comments	Sherd	Weight	Rim diam	Rim eve	Sample
06012	NVGW	JWM	BWL EXT	1		BS NECK; AS PERRIN 1999 FIG. 56.19-20	1	12	0	0	
06012	NVGW	B36	BAVE	1	ABR	RIM	1	30	28	8	
06012	NVGW	-		4	ABR	BS	4	21	0	0	
06012	NVGW	JBL		2	ABR	BS	2	73	0	0	
06012	CC1	DFL		1	ABR	RIM CHAMFER	1	16	18	10	
06012	CC1	LBX	ROUZ	1	ABR	RIM	1	7	0	2	
06013	GREY	BD		1	ABR	BASE	1	50	0	0	
06013	CC1	LBX	ROUZ	1		BS	1	17	0	0	
06013	SHEL	-		1	VAB	BS	1	4	0	0	
06013	SHEL	JNK	SHG	1	CARBON DEP EXT; CONCRETION	RIM GIRTH	1	83	0	2	
06015	NVGY	CLSD		1	ABR	BS	1	18	0	0	
06015	GREY	-		1		BS	1	24	0	0	
06016	NVGY	JBK		1		BASE PEDESTAL	1	56	0	0	
06022	CR	FJ		1		BS	2	77	0	0	
06025	SLSHB	CLSD		1	CONCRETION	BS SHLDR	1	18	0	0	
06025	CC1	BK	BA	1		BS; ?PHALLUS	3	12	0	0	
06025	NVGY	-		2	VAB	BS	2	33	0	0	
06025	NVGY?	-		2	ABR	BS	2	19	0	0	
06026	NVGW	-		2	ABR	BS	2	15	0	0	
06026	NVGW	BFL		1	CARBON DEP EXT	RIM	1	48	26	7	
06026	CC1	BKPR		1		RIM	1	1	8	7	
06026	NVMIC	CLSD		1	VAB	BS	1	49	0	0	
06026	CC1	BKPR	ROU	1		RIM	3	9	8	12	
06026	CC1	CLSD		1		BASE	1	11	0	0	
06026	CC1	BK?		1		BS	1	4	0	0	
06026	CC1	BK		1		BS	1	1	0	0	
06026	NVMIC	FJ		1		BS GIRTH; ELLIPSOIDAL	8	200	0	0	
06026	CC1	-		1		BS	1	9	0	0	
06026	NVGW	BD		1	ABR	BASE	1	11	0	0	
06026	GREY	CLSD		1		BS	1	10	0	0	
06026	NVGY	-		1	ABR	BS	1	15	0	0	
06026	OX	CLSD		1	ABR	BS	1	2	0	0	
06026	SHEL	-		3		BS	3	70	0	0	
06026	NVGW	BL	ROUZ	1		BS	2	29	0	0	
06026	NVGW	JNK		1		BS NECK GIRTH	2	53	0	0	
06026	MONV	M		1	BURNT OVER BREAK	BASE	1	94	0	0	
06026	NVPA	CLSD	PA	1		BS	1	6	0	0	
06026	NVGW	JNK	CORD	1		RIM	1	29	15	11	

SCSP21 Full Sherd Archive											
Context	Fabric	Form	Decoration	Vessels	Alt	Comments	Sherd	Weight	Rim diam	Rim eve	Sample
06029	OX	-		1		BS	1	2	0	0	
06029	SHEL	-		2	ABR	BS	2	7	0	0	
06029	CC1	BK		1		BS	1	1	0	0	
06029	NVGY	J		1	ABR; CONCRETION	BASE	1	190	0	0	
06029	NVGW	-		1		BS	2	3	0	0	
06029	GREY?	-		2	ABR	BS	2	2	0	0	
06029	NVGY	-		4	ABR	BS	4	14	0	0	
06032	IAGR2	JNAT	SWL	1		RIM GIRTH BASE; SWL WITHIN TWO SCORED HORIZONTAL LINES; OX/R/OX; 16 SHERDS FROM SAMPLE 5 (298g, 0.04 RE)	40	1301	30	32	5
06032	NVGW	JNK		1		RIM NECK	1	13	16	8	
06032	NVGW	CLSD		1	ABR	BS	2	12	0	0	
06032	NVGW	JNK	CORD	1		BS NECK	1	14	0	0	
06032	MISC	-		35	VAB	BS SCRAPS	35	17	0	0	5
06032	NVGW	-		3		BS	3	77	0	0	
06033	NVGW	CLSD		1		BASE FTG	1	50	0	0	
06048	GREY	-		1		BS	1	2	0	0	
06053	NVGW	CLSD	LA	1		BS	1	4	0	0	
06053	SHEL	D452		1		RIM	1	12	22	7	
06057	OX?	-		1	VAB	BS	1	2	0	0	
06060	COLC	BKCOR		1		RIM	1	3	6	8	
06060	CC1	FJ	ROU	1		BS	1	13	0	0	
06061	NVGW	BFL		1		RIM BASE	1	70	22	12	
06061	NVGW	BFL		1		RIM	1	7	17	7	
06061	NVGW	JBL		1		BS	1	35	0	0	
06061	NVGW	-		1		BS FLAKES	2	1	0	0	
06062	NVGW?	JNK		1	ABR	RIM; SOME ?GROG; UPPER NV?	3	30	18	14	
06062	NVGW	CLSD		1		BS	1	14	0	0	
06062	SHEL	J	RILL	1	CARBON DEP; CONCRETION	RIM SHLDR	1	41	18	12	
06062	SAM	-		1		BS	1	2	0	0	
06062	NVGW	JBNK		1	ABR	BS	1	4	0	0	
07002	SHEL	-		1	VAB	BS	1	6	0	0	
07010	SHEL	CLSD		1	VAB	BASE	1	12	0	0	
07010	NVGW	JWM		1	ABR	BS	2	21	0	0	
07035	NVGW	-		1		BS	1	8	0	0	
08004	NVGW	BD		1	BURNT OVER BREAK	BASE	1	34	0	0	

SCSP21 Full Sherd Archive											
Context	Fabric	Form	Decoration	Vessels	Alt	Comments	Sherd	Weight	Rim diam	Rim eve	Sample
11009	SHEL	-		1	VAB	BS	1	3	0	0	
11013	SHEL	J		1	CARBON DEP EXT	RIM	2	7	16	6	
11017	SHEL	-		1	ABR	BS	1	1	0	0	
11028	OX?	-		1	VAB	BS	1	1	0	0	
11028	SHEL	-		2	VAB	BS	2	25	0	0	
11049	FCLAY?	-		0	VAB	FORMLESS SCRAPS	2	3	0	0	2
11049	SHEL	-		3	VAB	BS SCRAPS	3	5	0	0	2
14010	SHEL	-		1	VAB	BS	1	4	0	0	

APPENDIX C: POST-ROMAN POTTERY

Dr Anne Irving and Anna Jedrzejewska

POTTERY

Introduction

All the material was recorded at archive level in accordance with the guidelines laid out in Barclay *et al* (2016). A total of 7 sherds from a maximum 6 vessels, weighing 48g was recovered from the site.

Methodology

The material was laid out and viewed in context order. Sherds were counted and weighed by individual vessel within each context. The pottery was examined visually and using x20 magnification. This information was then added to an Access database. An archive of the pottery is included in Table 1.

Results

Table 1, Archive of the Pottery

Cxt	TR	Cname	Full name	Fabric	Form	NoS	NoV	W (g)	Part	Description
001	3	BOUA	Bourne-type Fabrics	B	Jar/bowl	1	1	10	BS	internal glaze
04006	4	BOUA	Bourne-type Fabrics	B	Jar/bowl	1	1	3	BS	glaze
07039	7	NCBCB	19th Century Brown-bodied Earthenware		Mug	2	1	3	Rim	black transferred print; ca 1950
10032	10	LERTH	Late Earthenwares		Garden pot	1	1	2	Rim	abraded
15009	15	BERTH	Brown glazed earthenware	oxidised	Jar/ bowl	1	1	29	BS	abraded
15009	15	CREA	Creamware		Flat	1	1	1	BS	abraded
TOTAL						7	6	48		

Discussion

All the sherds in this small group of pottery shows signs of abrasion and may be redeposited. The assemblage is mostly early modern in date. Two medieval sherds are also present. The material was recovered from layer (10032), ditch fill (15009) and possible pit fill (04006). Three sherds were recorded as a finds recovered during mechanical excavation in Trench 3 - (001) and during exploration of deposit (07031) - (07039).

CERAMIC BUILDING MATERIAL

Introduction

All the material was recorded at archive level in accordance with the guidelines laid out by the ACBMG (2001). Four fragments of Ceramic Building Material, weighing 398g, was recovered from the site.

Methodology

The material was laid out and viewed in context order. Fragments were counted and weighed within each context. The ceramic building material was examined visually and using x20 magnification. This information was then added to an Access database. An archive of the Ceramic Building Material is included in Table 2.

Results

Table 2, Archive of the Ceramic Building Material

Cxt	TR	Cname	Full name	Fabric	NoF	W (g)	Description	Date
005	3	TEG	Tegula	Oxidised; fine silty	1	113	soot	Roman
06011	6	BRK	Brick	Dark oxidised; fine silty	1	25	abraded	Roman?
06032	6	TEG	Tegula	Oxidised; fine silty	1	224	same tile; flange, possible cutaway	Roman
07002	7	BRK	Brick	Dark oxidised; fine silty	1	36	abraded	Roman?
TOTAL					4	398		

Discussion

The CBM is Roman in date. The Roman tiles (TEG) were recovered from ditch fill (06032) along with Roman pottery, and (005) was recovered during mechanical excavation in Trench 3. Fragments of bricks were found in the layer (07002) with Roman pottery, and in ditch fill (06011).

CONTEXT DATES

The dating in Table 3 is based on the evidence provided by the finds detailed above.

Table 3, Spot dates

Cxt	Date	Comment
001	Mid 12th to 15th	Date on a single sherd
005	Roman	Date on a CBM
04006	Mid 12th to 15th	
06011	Roman?	Date on a CBM
06032	Roman	Date on a CBM
07002	Roman?	Date on a CBM
07039	1950	Date on a single sherd
10032	Mid 18th to 20th	Date on a single sherd
15009	Late 18th to 19th	

ABBREVIATIONS

BS	Body sherd	NoV	Number of vessels
CXT	Context	TR	Trench
NoS	Number of sherds	W <g>	Weight <grams>

REFERENCES

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APPENDIX D

The Finds (Non-ceramic)

By Gary Taylor

Artefacts recovered during investigations on land at Spalding Common, Spalding, Lincolnshire (SCSP21), are reported, below.

The finds were examined and reported in accordance with ClfA guidelines (2020) and the *Lincolnshire Archaeological Handbook* (Lincolnshire County Council 2019). All the finds were examined and reported in July 2023.

Metal Finds

Introduction

Four metal items weighing a total of 10g were recovered.

Results

Table 1: The Metal Finds

Context	Material	Description	No.	Wt(g)	Context date
06025	iron	sheet	1	2	
06025 Δ2	lead	sheet	1	6	
10032	iron	Nails, possible one item – both parts have broken terminals but do not obviously link	2	2	
Totals			4	10	

Note: Δ = small/special recorded find

Provenance

The metal items were recovered from a ditch fill (06025), and a layer (10032).

Discussion

A fragment of iron sheet and a probable nail, possibly in two pieces, were recovered. A small piece of lead sheet was also found. None of the metal items are readily datable.

Potential and Recommendations

As a very small assemblage of uncertain identification, the metal items are of limited potential and can be discarded.

The Glass

By Gary Taylor

Introduction

Three pieces of glass weighing a total of 1g were recovered.

Condition

Although naturally fragile the glass is in moderate condition but occurs in small splinters.

Results

Table 2: The Glass

Context	Description	No.	Wt(g)	Context date
10029 ◇1	Very pale green splinters	3	1	19 th century

Note: ◇ = environmental sample (and number)

Provenance

The glass was recovered from a ditch fill (10029).

Discussion

Very small fragments of glass of probable 19th century date were recovered through environmental sampling. It seems likely that the material is intrusive, due to bioturbation or other soil disturbances.

Potential and Recommendations

The glass assemblage is of negligible potential; the minute pieces are probably intrusive in the deposit they were recovered from. No further work is required, and the glass can be discarded.

The Clay Tobacco Pipe

Introduction

The clay pipe was analysed in accordance with guidelines prepared by Davey (1981). One piece of pipe weighing 2g was recovered.

Condition

The clay pipe is in good condition.

Results

Table 3, The Clay Tobacco Pipe

Context	Bore diameters, /64"						Total	Wt(g)	Comments	Context date
	9	8	7	6	5	4				
15009						1	1	2	stem	19 th century

Provenance

The tobacco pipe was recovered from a ditch fill (15009). It is probably a local product, likely to have been made in Spalding itself.

Discussion

A single clay pipe stem of 19th century date was retrieved.

Potential and Recommendations

The clay pipe is of limited potential but provides tentative dating evidence. No further work is required. The material can be discarded.

Other Finds

Introduction

Twenty-eight other finds weighing a total of 936g, were recovered.

Results

Table 4: The Other Finds

Context	Material	Description	No.	Wt(g)	Context date
03004	stone	Probable whetstone, Roman?	1	20	Roman?
	cinder	cinder	1	1	
	stone	Burnt fractured cobble	1	39	
03009 Δ3	bone	Needle, broken near head; head flattens and widens	1	2	Roman
06005 Δ1	bone	Uncertain; roughly cut bone point, broken at opposite terminal, possible burnt at broken end. 25mm x 6mm. Possible double-ended peg??	1	1	Roman
06025	stone	Possible quern?? Fractured gritstone, 1 face very smooth	1	53	Roman or medieval??
06028	cinder	Cinders, 1 quite glassy	2	3	Late post-medieval?
06029	cinder	cinders	5	2	
	slag	Iron smithing slag, slightly magnetic	2	2	
	cinder	Cinder, slightly magnetic mortar adhering	1	3	
06056	slag	Iron smithing slag, slightly magnetic	3	3	
	cinder	cinder	1	1	

Context	Material	Description	No.	Wt(g)	Context date
08010	stone	Burnt fractured cobble	1	158	
	stone	Natural water-worn cobble	1	453	
08018	stone	Burnt fractured cobble	1	54	
10032	cinder	Cinder, slightly magnetic mortar adhering	1	2	
	cinder	cinder	1	1	
14005	slag	Iron smelting slag, Roman or medieval	1	18	Roman or medieval
	stone	Burnt fractured cobble	1	116	
14011	cinder	cinder	1	4	
Totals			28	936	

Provenance

The other finds were recovered from ditch fills (03004, 03009, 06005, 06025, 14005, 14011), the fills of a possible animal burrow (06028, 06029), posthole or pit fill (06056), former topsoil (08010), the fill of a possible shallow ditch (08018), and a layer (10032).

Discussion

A fragmentary whetstone was recovered from (03004). It has a sub-rectangular cross-section and is probably of Roman date. Similar examples are found throughout the Roman period (Crummy 1995, fig 114; 111-113), though the simple functional form is used to the medieval period.

Cinders/clinker fragments provide almost 50% of the other finds assemblage. They indicate high temperature process. At least one is quite glassy, indicating heating at elevated temperatures that would be more typical of the late post-medieval period.

Several burnt cobble fragments were also found. These may have been pot boilers which were used for heating fluids, water specifically. Pot boilers are particularly prevalent in prehistoric contexts but were used perhaps as late as the early medieval period.

Two worked bone items were recovered. One is a needle formed on a splinter of bone (03009). The point survives and is lightly polished through use. Towards the head the shaft widens and flattens, though the top of the head is broken off. This type of needle, with a spatulate head, would have been used in the manufacture of textiles or the sewing of cloth and they occur commonly on Roman domestic sites (*ibid.*, fig 70; 65-7).

The second worked bone, from (06005), is a crudely cut point, broken at the opposite end. This is of uncertain nature and identification but may be part of an item previously identified as 'double-ended ?pegs'. Several complete examples of these roughly worked bone items have been found in Colchester in mid to late Roman levels (*ibid.*, fig 194; 158-9).

A fragment of coarse gritstone, probably from the Derbyshire area, was recovered from (06025). This item has one very smooth flat face. Other than this prominent wear-trace, the piece has no distinctive features. However, the material and the wear suggest this is a fragment of a quern, probably of Roman or medieval date.

A few pieces of slag were also collected. Most of this small assemblage is iron smithing slag though there is also one piece of iron smelting slag. Iron production and working, both smelting and smithing, usually generate large quantities of slag residues, often with substantial pieces (Historic England 2018, 5), whereas the quantities here are small. This may suggest that iron smithing did not take place in the investigated area but perhaps close by. The single piece of smelting slag is very probably an import to the site, perhaps brought as metallurgy for tracks or other surfaces; smelting tended to take place close to the ore source and, with the possible exception of bog ore, iron ores are not known in the Spalding area.

A probably natural stone, a water-worn cobble, was also retrieved. Although natural is was probably imported to the site as the Spalding area lacks geological stone deposits.

Potential and Recommendations

The other finds are of limited-moderate potential. A few pieces indicate Roman activity at the site and there are functional indicators of tool use (whetstone), textile work (needle), food grinding (quern), possible industrial process (slags), and high temperature activities (burnt stones, cinders).

The worked stones, bones and slags should be retained for archive-deposition, but the remainder of the material can be discarded. No further work is required.

CONTEXT DATE SUMMARY

The dating in the following Table is based on the evidence provided by the finds detailed above.

Table 5: Summary of context dating

Context	Date (Century AD)	Comments
03004	Roman?	Based on 1 stone
03009	Roman	Based on 1 bone
06005	Roman	Based on 1 bone
06025	Roman or medieval??	Based on 1 stone
06028	Late post-medieval?	Based on cinders
06029		
06056		
08010		
08018		
10029	19 th century	Based on minute glass, possibly intrusive
10032		
14005	Roman or medieval	Based on 1 slag
14011		
15009	19 th century	Based on 1 clay pipe

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Abbreviations

CIfA Chartered Institute for Archaeologists

No. Number

Wt(g) Weight (grams)

APPENDIX E

Briquetage

Introduction

Briquetage (the fired clay remnants from equipment used in saltmaking) was retrieved from a development site at Spalding Common. A programme of archaeological evaluation by trial trenching had been requested as the site contained cropmarks. The site lies to the southwest of Spalding, immediately west of the north end of Cowbit Wash, at NGR TF 2344 2004.

In total, a small collection of 139 pieces of briquetage, weighing 1158.61g (mean 8.3g) was examined (Table 1).

Archaeological Background

Salterns of Iron Age and/or Roman date are well known in the Spalding area of the Fenland (Hallam 1970, Hayes and Lane 1992; Lane and Morris 2001; Lane 2018). Saltern sites of Iron Age date investigated in the area include Lane 2001a, Morris 2011, along with Roman sites in Spalding (eg Hallam 1970; Wood *et al* forthcoming).

The SCSP 21 site is located in the Fenland on silty marine alluvial soils of the former saltmarshes.

The Briquetage from Spalding Common SCSP 21

Nature of the Briquetage Assemblage

Examination of briquetage from the site and its grouping follows the classifications designed for studying the Fenland material (Morris 2007). Fenland briquetage studies saw the material divided into four categories –

Containers,

Supports (eg pedestals, clips, bars etc),

Structural (hearth/oven remains) and

Miscellaneous, the unidentifiable pieces.

At Spalding Common the briquetage collected was divided thus:

Containers – 36 (25.9%)

Supports – 4 (2.9%)

Structural – 5 (3.6%)

Miscellaneous – 94 (67.6%)

Method of Analysis

Each piece of briquetage was examined macroscopically and a general briquetage classification assigned (as above). Each piece was weighed and evidence of the intensity of use (bleaching) of the briquetage was noted, judged by the visible presence of saltwater residues. For the container class each piece was measured for wall thickness. Only small pieces were present and neither height/depth of the container nor its shape in plan or section could be determined. Where present, rim-types were recorded (Table 1).

Pedestals and other support items were measured for height and diameter where possible and described.

Containers

With the rare exception of occasional lead pans on a limited number of Roman sites, containers on the majority of known pre-medieval coastal salt-producing sites in Britain take the form of ceramic flat-based pans or gutter-shaped troughs in which strengthened brine was heated to crystallize into salt. When collected, fragments of the ceramic containers are extremely common finds on the former coastal salterns. At Spalding Common identifiable container sherds formed 25.9% of the items collected. This is probably lower than the actual number present as many of the small, fragmentary Miscellaneous items were probably container fragments.

Of the Container sherds the majority were body sherds from the wall of the vessels, although it is difficult to determine with flat-based and vertical sided ceramic containers whether the generally small sherds are wall or base sherds. Two of the Containers sherds are from the junctions of wall and base and a single rim (rounded in shape) was present. Wall sherds vary between 5 and 15mm thick, typical of the Late Iron Age/Roman examples. Eight were found in Layer 10032 and seven in Topsoil, the remainder from Ditch and Pit fills.

Containers in the Fenland are generally of two main forms, gutter-shaped troughs, which dated chiefly to the Middle Iron Age or earlier and flat-based pans, which were predominantly of Late Iron Age and Early Roman date. No gutter-shaped containers were identified in this small collection.

Supports

Supports are the ceramic items that hold the containers in position during crystallization of the brine in the hearths or ovens. Found on almost all saltmaking sites they are categorized as follows:

Pedestals, usually hand-squeezed cylinders of clay or squared-off blocks.

Spacer/clips, which are used unfired and applied to the rims of adjacent containers to stabilize and hold firm multiple containers on a hearth/oven.

Bars – thin rolled pieces of clay used in a variety of positions to further stabilize containers within a hearth/oven.

Platforms – these are described elsewhere as like flooring slabs but used on their side to support a container. Such objects are difficult to identify and their use as either supports when placed on edge, or laid flat as flooring pieces covering the flue of the heating structure difficult to prove.

Bricks/slabs – these are square or rectangular pre-fired clay objects used either to support the containers directly or to provide a firm and flat surface for the pedestals to stand on.

Only two pedestal fragments were recognisable at Spalding Common, both from Trench 3. Trench 3 also yielded a possible Bar fragment, used in stabilizing the Containers in the Hearth/Oven, and, from Trench 9, a spacer clip.

No other supporting devices were found.

Structural

Structural pieces, that is items thought to be part of the hearths or ovens used to heat the brine, are also rare at SPSC 21. The largest single structural piece came from 06005, with smaller pieces from Trenches 7 and 10. These are pieces with one single relatively flat and smoothed surface that has heavy salt bleaching on the surface (see below).

Miscellaneous

Inevitably, in a collection of industrial waste, there will be pieces whose original form and function cannot be identified. There are 94 such pieces in the Spalding Common collection. Many are small and originally were probably Containers.

Bleaching/ Intensity of use

The colours of briquetage can offer some indication of the frequency of use. In Table 1 they have been adjudged either as nil bleaching, as light, as moderate, or as heavily bleached.

Late Iron Age/Roman containers from the Fenland and East Coast sites tend to have this salt bleach, a yellow/white deposit, adhering to and ingrained in the briquetage, and indicating prolonged or repeated contact with salt water. This chlorine bleaching effect, caused by the heated brine altering the normally orange-red iron-rich colour of the fabric clay matrix, is rarely evident in substantial amounts on the pre-Late Iron Age briquetage in Lincolnshire. From the Late Iron Age onwards, however, many of the fabrics of the often-used containers are bleached to a creamy white/yellow colour throughout.

Many of the Miscellaneous pieces do not exhibit salt bleaching although some of the identifiable pieces have light or moderate bleaching, indicating their prolonged contact with

brine. As stated earlier the pieces of likely Structural material, hearth or oven, are moderate to heavily bleached on one smoothed surface.

Dating of salterns

Dating of salterns is particularly challenging. Without scientific dating the problems in saltmaking site chronology are numerous. Even the presence of dateable domestic pottery sherds on the sites is not necessarily proof of dating of the industrial saltmaking unit. Once out of use as a saltern the slightly mounded nature of the saltern sites makes them attractive to later, pioneer, settlers of the area, as has been shown to occur on the Fenland sites.

In the Fenland, Middle Iron Age salterns are identifiable from the gutter-shaped troughs. The form of these containers changes from gutter-shaped to flat-based in the Later Iron Age and Roman period in both the Fenland and East Coast sites. Moreover, containers from the Later Iron Age/Roman sites tend to have substantial salt bleaching and numerous associated pedestals and other stabilising items.

Discussion

The Briquetage

The fired clay material from the Spalding Common is briquetage and takes the form of fragments of Container, Supports and Hearth/Oven pieces. However, the amount of briquetage recovered is very small compared to that present on an actual salt production area. For example, the excavated saltern at Cowbit Wash some 5km south of Spalding Common yielded some 3531 pieces of briquetage. Moreover, there is very little of the Support equipment (Pedestals and Clips etc) at Spalding Common and Structural (Hearth/Oven remains) that are usually present on the site of a working saltern.

It is highly likely that a saltern is present somewhere in the immediate vicinity and is the origin of the briquetage found in the trenches at Spalding Common. The briquetage generally, however, appears unlike the typical Roman collections from the area and would appear to be more akin to the Later Iron Age examples excavated at Cowbit (eg Morris 2011). The Cowbit Wash saltern indicated at least two phases with dates of the second phase between 185-95BC (Lane 2002a).

Dating of Briquetage

In their current fragmentary state, none of the individual briquetage pieces are precisely dateable. They appear not to be *in situ* but redeposited in ditch and pit fills with Roman pottery.

While in this case the briquetage is found alongside domestic pottery of Roman date significant quantities of such pottery on a saltern site are usually explained by later use of the industrial site for settlement purposes, rather than being contemporary with the saltern. When active, the saltern would require being positioned at the extreme end of the tidal range, a risk-

ridden location not favourable for permanent settlement. Moreover, after a saltern has been decommissioned, usually because of changing, drying, landscape conditions, its location would prove favourable for settlement, given the slight elevation created by the waste ashes etc from the once active Hearth/Oven[s].

Based on the general absence of shell-gritted container sherds common at the Cowbit Wash site dated to 185-95 cal BC (Lane 2001a), or cut rim troughs typical of the Middle Iron Age sites, for example Outgang Road, Langtoft (Lane 2001b), along with the relative paucity of bleaching of the Container sherds (Morris 2011), the most likely date for the briquetage is around the first century BC.

Conclusion

Briquetage in small quantities was collected from the Spalding Common site. The site lies on marine alluvial sediments. Like many other examples of industrial waste material briquetage is seldom found away from the actual site of its use. Given that fact and the presence here of all the typical categories of briquetage found on working saltern sites, it is suggested that a saltern is to be found in the immediate vicinity of the site, although no salt working features were located in the trenches excavated. Any domestic pottery may be later than the use of the site as a saltern. Should any further work be conducted on the site in the future, location of the actual saltern area would be a key aim. The use of Geophysical survey in detecting the site is recommended.

Conservation

Items of briquetage retained will not require special storage or conservation measures ahead of deposition in museum or similar repository.

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Tables

Table 1. List of Briquetage from Spalding Common

APPENDIX G

Millfield Nursery, Spalding Common, Spalding, Lincolnshire - SCSP21 and SCSG23 Environmental Archaeology Report

Introduction

Eight samples and a column of eleven samples (Table 1 and Figs 1 and 2) were taken from the evaluation and subsequent excavations conducted by Witham Archaeology at Millfield Nursery, Spalding Common, Spalding, Lincolnshire (SCSP21 and SCSG23). All the dated samples have been assigned to the Romano-British period, with the bulk provisionally placed in the 2nd and 3rd centuries and sample 11 spot dated to the 1-2nd century although pottery from the continuation of the ditch is dated to the 2-3rd C.. The majority of the samples also derive from ditch deposits and one (sample 1) from an undated horse burial. Sample 11 was taken as a column of 8 litre samples through the fills of ditch 18199. This was primarily to establish if the environmental conditions changed during the ditches filling, for instance whether fen or marine conditions developed. The fills of several of the ditches on site are characterised by an organic rich/darker horizon (see archaeological reports for SCSP21 and SCSG23 and Fig 3). In the Spalding area such organic horizons reflect a post-occupation period of wetland development associated with a late Roman and post-Roman rise in sea level. The paler mineral sediments forming the upper infilling of these Roman ditches are typically freshwater or marine sediments associated with the late and post-Roman inland movement of the coastline (see Rackham *et al* - Wygate Park).

The samples were initially submitted to the Environmental Archaeology Consultancy for processing and assessment for the potential recovery of biological materials including charred plant remains for information on crop-husbandry and processing and other human activities at the site. Selected remains have subsequently been subjected to post-excavation analysis. In addition to the samples the small collections of animal bone recovered by hand during the evaluation and subsequent excavation have been identified and are reported.

Table 1. Millfield Nursery, Spalding Common – SCSP21 and SCSG23. Samples collected for environmental study

sample no.	context no.	samp. vol (l).	sample weight (kg)	context type	period
1	10029	33	43.5	Fill of ditch 10010, matrix around horse burial	undated
2	11049	37	43	Fill of cut 11014	Roman?
3	06005	40	45	Fill of ditch 06002	3 rd + C.
4	06003	38	40.5	Upper fill (alluvial?) of ditch 06002	3 rd + C.
5	06032	40	46	Fill of ditch 06031	Mid 2-3 rd C.
6	03004	40	48	Fill of ditch 03001	Mid 2-3 rd C.
10	18165	25	33	Organic rich fill of cut 18146	2-3 rd C.
11	18186	30	35	Charcoal rich tip line fill of ditch 18182	2-3 rd C.
12	0-10	8	10	Column through fills of ditch 18199 - top	RB?
12	10-20	8	10	"	RB?
12	20-30	8	10	"	RB?
12	30-40	8	10	"	RB?
12	40-50	8	10	"	RB?
12	50-60	8	10	"	RB?
12	60-70	8	10	"	RB – mid 2-4 th C.
12	70-80	8	10	"	RB?
12	80-90	8	10	"	RB?
12	90-100	8	10	"	RB?
12	100-110	6	8	Column through fills of ditch 18199 - bottom	RB?

Methods

The soil samples were processed in the following manner. Sample volume and weight was measured prior to processing. The samples were washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet-sieve of 1.0mm mesh for the residue. The wet residues from samples 1-4 were then washover floated for the recovery of snails, charred material and organics and added to the flot, but for samples 5 and 6 after floating in the Siraf tank, the residues were then dried and the dried residues refloated in a bowl for the efficient recovery of charred material, producing two flots. Samples 10 and column sample 12 were washover floated to recover all the organics, charred remains and snail shells, while the sample 11 residue was dried and then refloated, producing two flots. The basal five samples of column <12> produced organic material during the first flotation so this was washover floated and retained wet, with the residue dried for sorting.

Fig. 1. Location of the samples (in red) from the evaluation trenches



Fig. 2. The location of the environmental samples (in green) in the Area A excavations and Evaluation Trench 6.

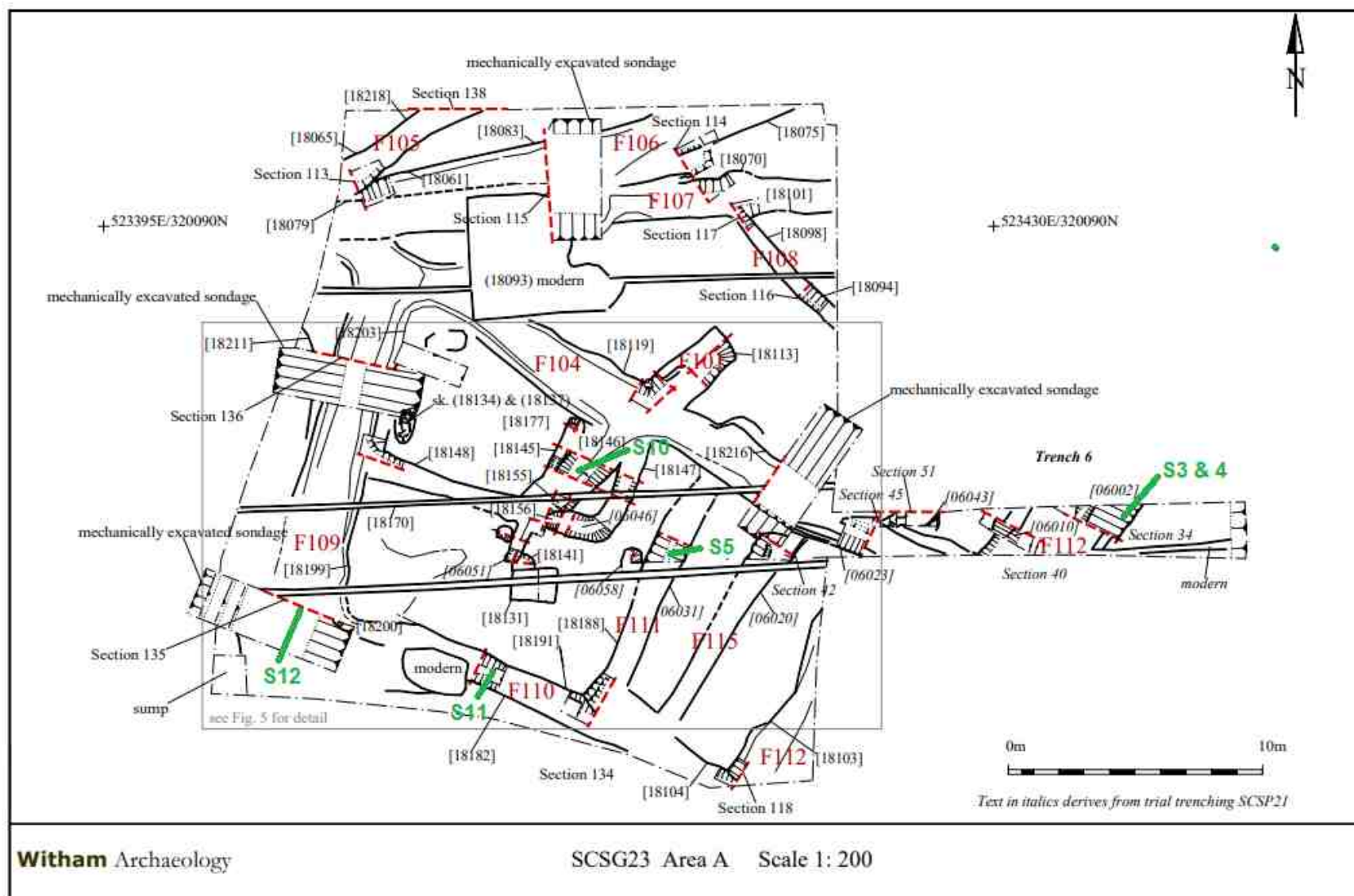
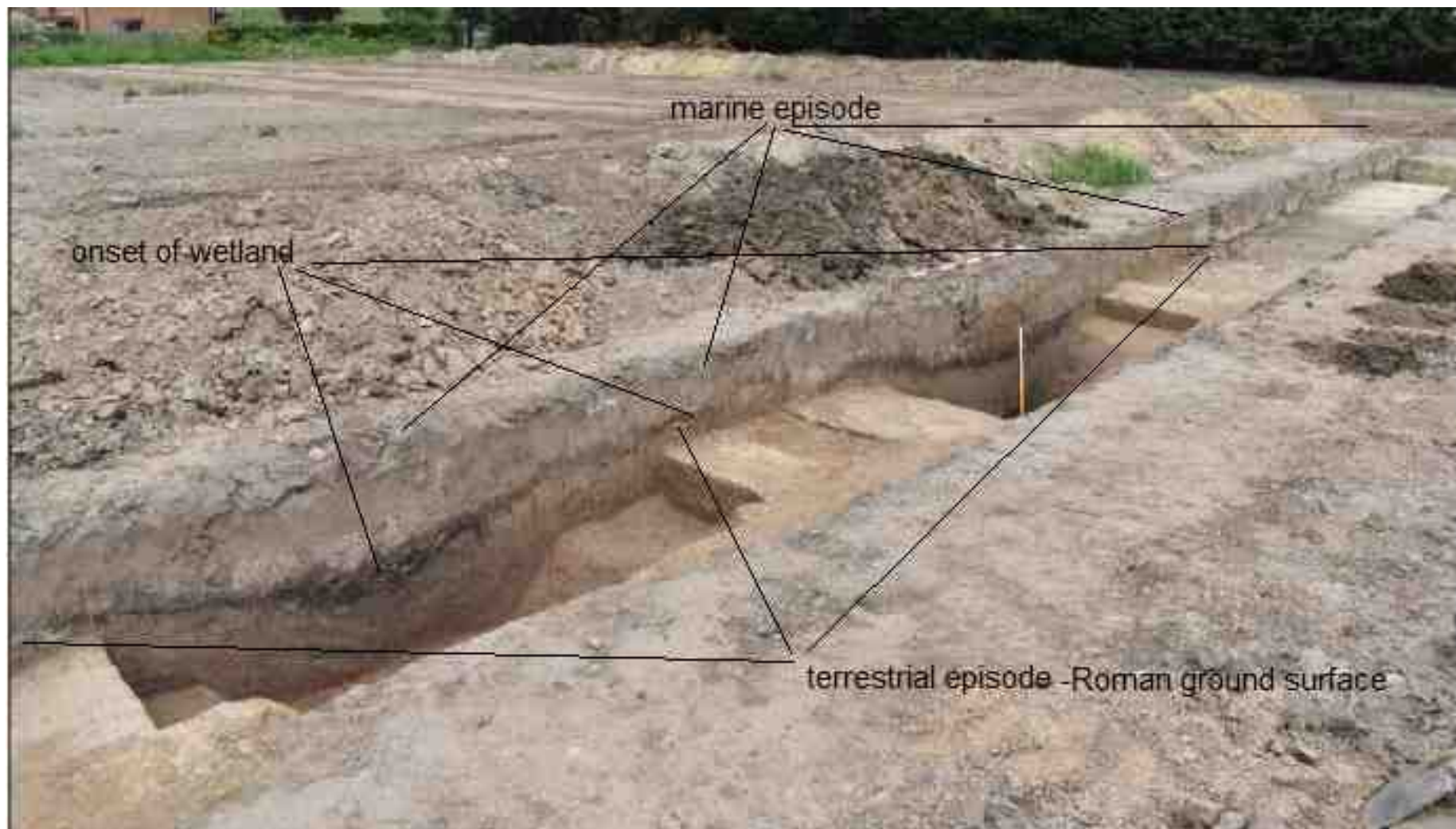


Fig. 3. Broad interpretation of a characteristic ditch section showing the organic horizon interpreted as associated with a period of wetland development. (image -Fig. 9 - taken from evaluation report). Context 04012 in ditches 04002 and 04005 would represent the initial development of the wetland phase. The pale silts above the dark horizon in the ditch sequences are still dominated by freshwater aquatic snails, the marine episode is at the top of the sequence and the overburden removed by machine.



The dry and wet volumes of the flots were measured, and the volume and weight of the dried residues recorded.

The residues were sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheets and bagged independently. A magnet was run through the residues in order to recover magnetised material such as hammer scale and prill. The residues were then discarded. The flots were divided into fractions using a stack of sieves for ease of assessment and scanned using a stereo-binocular microscope, with a magnification of up to x40. The presence and abundance of charred plant remains was recorded, along with the frequency of charcoal fragments larger and smaller than 2mm, the larger pieces being potentially identifiable and thus suitable for analysis. Other biological evidence in the flots was also noted, including un-charred plant material, bones, snails, ostracods, foraminifera and insect remains. The item frequency of the charred plant and other environmental remains was scored using a scale (see Table 3). The flots were then bagged. The flots and finds from the sorted residues constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified with the results summarised below in Tables 2 and 3 and selected material was studied further and are presented in Tables 4-9.

Results

The samples washed down to a residue of silt crumb, silt concretions, root pseudomorphs, worm granules and archaeological and environmental debris. Stone was absent from all samples except 5 and 6 where a little flint, limestone and quartz occurred. The bulk of the mineral component in these samples derives from marine sedimentation either prior to or post-occupation which is generally stone free silts and fine sands.

The archaeological finds (Table 1) included pottery from six samples, corroded iron in one, tiny fragments of probable ceramic building material (possibly intrusive through soil processes) in three, glass chips in samples 10 and 12/30-40cm, burnt stone in sample six, fired earth in four samples, animal bone, marine shell in one, and a magnetic fraction in all the bulk samples and the top of the column that produced occasional flakes of hammer scale and 'slag'. The pot sherds in sample 5 appear to be from a vessel. Samples 2, 3, 5 and 6 contained material that could be classed as deriving from 'ash', and samples 1, 2, 3, 4, 5, 6, 10, 11 and the top five samples of the column contained brown siliceous slags, with the top two samples of the column producing what might be small fragments of smithing slag. Many of the samples produced small quantities of coal and cinder in the flot but whether this is intrusive from recent or modern deposits or contemporary is not known. The siliceous slags, possible smithing slags, small quantities of hammer scale and the small fragments of coal and cinder could derive from Roman smithing activities at the site. The density of these finds is low suggesting any smithy was probably beyond the areas excavated. The use of coal for smithing in the Roman period is known from sites in the Fens. There appears to be no evidence for recent or post-medieval smithing on the site that could account for these finds which could have moved down through the soil for some distance as a result of soil processes such as earthworm activity. Sample 11 produced 615 grammes of fired earth. Several of the fragments had one surface, but not a second. This material seems too bulky for briquetage and may be more consistent with structural baked/fired clay associated with a hearth or oven feature.

Table 2: Spalding Common – SCSP21 and SCSG23. Archaeological finds from the sample

sample	cont	vol in l.	residue vol. in ml.	pot no/wt g	Fe no/wt g.	CBM wt	Burnt stone g.	Fired earth g.	magnetic comp. g.	hammer-scale no. fl'k/sph	bone wt g.	marine shell wt g.	other
1	10029	33	200					46+	0.2		73		Glass – 2 sherds; a little slag in mag. component; a little coal and cinder in flot; contaminated by polystyrene and plastic!
2	11049	37	350	7/7.6				3.4	2.7	1fl	126.4		Poss. pot fabric among fired earth; occ. coal & cinder in flot; fuel ash slag and lots 'ash' in flot; polystyrene in flot;
3	06005	40	100	22/41.6	1/1				0.6	1sph	24		Fe- corroded iron; a little slag in mag. component; a little coal & cinder in flot, also 'ash';
4	06003	38	123			0.6			0.6	4fl 1sph	1		A little slag in mag. component & flot; coal & cinder in flot;
5	06032	40	600	20/336 + crumbs					0.4	2sph	3.8		Pot – fragmented vessel?; a little coal, cinder & slag in flot; a little siliceous 'ash' in 2 nd flot;
6	03004	40	750	13/58			58	60	0.4		194.2		Fired earth – may include pot fabric?; a little slag in mag. component & flot;; a little coal, cinder, siliceous slag, fuel ash slag and 'ash' in the flot;; burnt stone- fire-cracked quartz;
10	18165	25	250			0.4			3.8	5fl 13sph	12.6	<0.2	Coal & cinder-1.6g, a little coal, cinder and slag also in flot; glass x2 –small clear chips-modern?
11	18186	30	1000	7/78				615	1.6	14fl 3sph	1.4		Fired earth- all with one surface-oven/kiln lining? Fired earth and slag in mag. component; 'ash' in flot;
12	0-10	8	30						2	13fl 9sph	-		Smithing slag in mag. component; a little fuel ash slag in flot;
12	10-20	8	24						0.9	5fl 3sph			A little smithing slag in mag. component; a little coal, cinder & slag in flot;
12	20-30	8	20						1.5	6fl			A little slag in flot & mag. component; also a little coal, cinder & slag in flot;
12	30-40	8	20			0.2			3.2	1fl	0.1		A little slag & poss. corroded iron in mag fraction; also a little coal, cinder & glassy slag in flot; glass x1 – fine chip clear glass-modern?
12	40-50	8	20						0.8		0.1		A little slag and poss. iron corrosion in mag. fraction;
12	50-60	8	-						-				
12	60-70	8	100	1/0.4					-				
12	70-80	8	200						-				
12	80-90	8	120						-				
12	90-100	8	125						-				
12	100-110	6	20						-				

fl-flake and sph- spheroidal hammerscale

The environmental finds include charcoal, charred cereals, charred weed seeds, charred herbaceous stems (including possible straw), uncharred plant remains, mammal and fish bones, rare marine mollusc shells and bird eggshell, small terrestrial vertebrates, aquatic and terrestrial molluscs, ostracods, *Daphnia* (water fleas), foraminifera and occasional insects. Many of the insects are probably intrusive (having walked in before the sampling) but some of those in the waterlogged deposits may be contemporary. There is evidence suggesting the survival of a little organic material in some of the samples and the base of column sample 12, 50-110cm, produced well preserved organic remains, but with the deposits immediately above producing degraded organic remains, partially mineralised material or no organic remains. Sub samples of 'unprocessed' deposit were retained from the column sequence for potential pollen analysis, which could yield information on the character of the local environment during the Roman period.

Charcoal is abundant in two of the samples (6 and 11), these include small and medium roundwood, twigs, some larger fragments, but much comminuted material. These samples also include herbaceous stems and fragments of 'straw sized' stems and nodes. Straw type stems also occurred in samples 3 and 4. These coincide with higher densities of 'ash', also identified in samples 2, 3 and 5. The concentrations of charcoal and 'ash' in samples 6 and 11 suggest a primary deposit of ashes from a fire, but whether this was a domestic fire or an 'industrial' fire is not known. The fired clay in sample 11 suggests this assemblage probably derives from an oven structure or clay lined hearth, while abundant charred cereal grain and weed seeds in sample 6 might suggest the final cleaning or possible parching of grain prior to milling, although with possible straw also present the material burnt and charred on the fire may have come from several sources. Charred cereal remains are abundant in only one sample, 6, but charred seeds were fairly common in several (Table 4). Cereal chaff was generally absent, but some of the herbaceous stems probably derive from cereal straw. Wheat and barley, with rare oat and possible rye, have been identified but there is very little evidence for the larger pulses (pea and bean), with just a couple of larger items potentially crop legumes. Charred and uncharred seeds occur in most of the samples, generally in some numbers, and organic and calcareous oospores of the green freshwater alga *Chara* (stoneworts) are very abundant in several of the samples.

Bones of domestic animals occur in the samples but are not abundant. Fragments of horse, cattle, sheep/goat and pig have been identified, and a single fragment of a bird carpometacarpus of chicken size but not yet identified was recorded in sample 4. Just two fragments of bird eggshell, provisionally identified as chicken were recorded from all the samples. Several of the samples have produced small numbers of fish bones with stickleback the most abundant, followed by eel and a few other small fish. Most of these bones indicate very small fishes and they probably reflect the natural fauna in some of the ditches, but those from the evaluation samples may derive from food remains. Considering the site lies in Spalding an absence of marine elements in the food remains is perhaps surprising with just one sample (10) producing fragments of mussel and cockle shell.

The palaeoenvironmental evidence includes small vertebrates, terrestrial and aquatic snails, ostracods, foraminifera, uncharred plant remains and occasional beetle fragments. The basal samples of the column through the fills of ditch 18199 contained well preserved organic debris with rich assemblages of uncharred plant remains (Tables 5 and 6) and some insects, while other samples produced numerous aquatic snails, oospores of green algae, ostracods and foraminifera. The small vertebrates include bones of mouse, field vole, water vole, newt and frog/toad.

Table 3. Spalding – SCSP21 and SCSG23. Environmental finds from the eight processed samples and column sample 12.

sample	context	vol. in l.	flot vol. ml	char- coal */*	charr'd grain *	charr'd chaff *	charr'd seed *	uncharr'd seeds	mineral seed *	insects*	snail *	bird eggshell wt g.	Comment
1	10029	33	8	1/1	-			2	1		1		Uncharred seed – <i>Ranunculus</i> (aquatic), <i>Chenopodium</i> , <i>Urtica</i> , <i>Fumaria</i> , <i>Juncus</i> (Table 5); animal bone – 96 fragments (none burnt) – horse (partial skeleton), indet; snails – see Table 7;
2	11049	37	48	4/5	2	1	2	2	5#		5		Charred grain – spelt wheat?, wheat, barley and wheat chaff, weed seeds (Table 4); uncharred seeds – <i>Fumaria</i> , <i>Chenopodium</i> , <i>Ranunculus</i> (aquatic), <i>Urtica</i> , <i>Sambucus</i> , <i>Stellaria</i> , <i>Juncus</i> (also mineralised), etc (Table 5); charcoal – comminuted, but several id. frags; animal bone – 124 fragments (49 burnt), cattle, sheep/goat, cattle size, sheep size, water vole, field vole, frog/toad, stickleback, eel; snails – see Table 7
3	06005	40	40	3/5	2		3	3	3#	1	5		Charred grain – wheat, large grass, spelt chaff, grasses, <i>Rumex</i> , <i>Eleocharis</i> , culm nodes (straw?) (Table 4); uncharred – <i>Ranunculus</i> , <i>Chenopodium</i> , <i>Stellaria</i> , <i>Sambucus</i> , <i>Lemna</i> , <i>Juncus</i> (Table 5); charcoal – much comminuted but includes id. fragments incl. roundwood, twigs; animal bone – 61 fragments (26 burnt), cattle, pig, cattle size, sheep size, water vole, small fish; insects – occ frags-modern?; snails – see Table 7; ostracods, foraminifera; <i>Daphnia</i> sp.;
4	06003	38	63	3/4	1		1	4	5#	1	5		Charred grain – emmer/spelt wheat, seeds (incl. grasses) (Table 4); uncharred seeds – <i>Ranunculus</i> (aquatic), <i>Urtica</i> , <i>Rumex</i> , <i>Rubus</i> , <i>Chenopodium</i> , <i>Lemna</i> , <i>Chara</i> ; mineralised seed? – <i>Juncus</i> , <i>Chara</i> (Table 5); charcoal – comminuted, including 'straw', other herbaceous stems; animal bone – 4 fragments (2 burnt), ind, water vole, frog/toad, stickleback, eel, small fish; snails – Table 5; ostracod;
5	06032	40	28	3/4		1	2/3	5	5	2	5		Charred wheat chaff, weed seeds, <i>Eleocharis</i> (Table 4); uncharred – <i>Ranunculus</i> (aquatic), <i>Sambucus</i> , <i>Chenopodium</i> , <i>Lemna</i> , <i>Juncus</i> , <i>Chara</i> ; mineralised seed <i>Chara</i> (Table 5); charcoal – comminuted with a few identifiable fragments; animal bone – 12 fragments (2 burnt), cattle size, sheep size, field vole, small fish; snails – See Table 7; ostracods; insects – occ. frags;
6	03004	40	400	5/5+	4	1	5	1		2	2	1	Charred grain – barley, wheat, grasses, <i>Eleocharis</i> , <i>Schoenoplectus</i> , Cyperaceae, straw/herbaceous stems (Table 4); uncharred seeds – <i>Ranunculus</i> (aquatic), <i>Chenopodium</i> , <i>Lemna</i> , <i>Juncus</i> , <i>Chara</i> (Table 5); charcoal – lots id. fragments – includes small and medium Roundwood, large fragments, occ. twigs, 'straw' and herbaceous stems; animal bone – 130 fragments (67 burnt), horse, cattle, sheep/goat, sheep size, cattle size, mouse, newt, frog/toad, eel, small fish; bird eggshell – 1x cf chicken; snails – see Table 7; ostracods; insects – occ. fragments- walked in?;
10	18165	25	20	3/4	?		1	2			1		Indet. charred grain, a couple seeds (Table 4); uncharred <i>Ranunculus</i> , <i>Lemna</i> , <i>Juncus</i> , <i>Chenopodium</i> , <i>Urtica</i> (Table 5); charcoal – comminuted but with some identifiable fragments; animal bone – 62 fragments (1 burnt), sheep size, indet.; marine shell – mussel, cockle; snail – see Table 7; <i>Daphnia</i> sp.;
11	18186	30	255	5/5	1	2	5		2		1		Charred grain- emmer/spelt barley, emmer & spelt chaff, <i>Rumex</i> , small legumes, <i>Eleocharis</i> , sedges, grasses, tubers, other species, 'straw?', herbaceous stems, hazel nutshell (1), lots seeds, 'straw' abundant; uncharred – <i>Atriplex</i> , <i>Medicago</i> / <i>Trifolium</i> , <i>Eleocharis</i> , <i>Schoenoplectus</i> , <i>Carex</i> , etc (Table 5); charcoal – abundant, several; larger frags, roundwood, twigs; animal bone – 4 fragments (2 burnt), indet, water vole (incl. burnt), snails – Table 7; ostracods;

sample	context	vol. in l.	flot vol. ml	char- coal */*	charr'd grain *	charr'd chaff *	charr'd seed *	uncharr'd seeds	mineral seed	insects*	snail *	bird eggshell wt g.	Comment
12	0-10	8	8	1/2	1		1	4	5#		5		Charred grain- free-threshing wheat, oat/grass (Table 4); uncharred <i>Chenopodium</i> , <i>Lemna</i> , <i>Juncus</i> , <i>Chara</i> , etc (Table 6); charcoal – comminuted; animal bone – vole, stickleback; snails – see Table 8; ostracods;
12	10-20	8	14	1/2	1			2	5#		5		Charred grain – barley (Table 4); uncharred <i>Chenopodium</i> , <i>Papaver</i> , <i>Stellaria</i> , <i>Lemna</i> , <i>Juncus</i> , <i>Chara</i> ; mineralised <i>Chara</i> -abundant (Table 6); charcoal – comminuted; animal bone – eel, stickleback; snails – see Table 8; ostracods;
12	20-30	8	10	1/1	1			1	5#		5	1	Charred grain –free-threshing wheat, barley (Table 4); uncharred seed – <i>Chenopodium</i> , <i>Chara</i> ; mineralised – <i>Chara</i> (Table 6); charcoal – very little; animal bone – stickleback; bird eggshell – cf chicken x1; snails – see Table 8; caddis larval cases; ostracods;
12	30-40	8	7	1/1				1	1		3		Uncharred seeds - <i>Chenopodium</i> ; mineralised seed - <i>Chara</i> ; animal bone – 1 fragment, indet, stickleback; snails – see Table 6; ostracods;
12	40-50	8	100w					2			1		Degraded organics, some identifiable seed?-wet flot; indet small vertebrate; snails – see Table 8;
12	50-60	8	100w					3/4					Uncharred seeds – several taxa, incl. <i>Sambucus</i> , <i>Urtica</i> ; organics degraded, but some seeds present;
12	60-70	8	100w					4/5		2			Uncharred seeds – abundant – see Table 6, also bark; insects – caddis larval cases and beetle fragments; <i>Daphnia</i> sp.; preserved organics – seeds, wood fragments, etc
12	70-80	8	100w					5		4/5			Uncharred seed- abundant, incl. <i>Chenopodium</i> , <i>Rumex</i> , <i>Ranunculus</i> (aquatic), etc; animal bone – frog/toad; insects – beetle fragments; leach egg cases; <i>Daphnia</i> sp.; good organic preservation, lots vegetable matter, seeds and insects;
12	80-90	8	120w					4/5		3			Uncharred seeds – abundant, see Table 6; insects – common beetle fragments; wood – occasional fragments; good preservation of organics- much fine vegetable material (grassy?);
12	90-100	8	120w					4/5		2/3	2		Uncharred seed – abundant, incl. <i>Ranunculus</i> (aquatic), <i>Bidens</i> , <i>Rumex</i> , <i>Sambucus</i> , etc; insect- beetle fragments; animal bone – frog/toad, stickleback; snails – see Table 8; good organic preservation – 'grassy?', iron and vivianite stained sediment crumb;
12	100-110	6	130w					5		1	2/3		Uncharred plants – abundant – see Table 6; animal bone – frog/toad, stickleback, small eel; insect –caddis larval cases; snails – see Table 8; <i>Daphnia</i> sp.; good organic preservation, fine fibrous vegetable matter, ('grassy'?)

HNS – hazel nutshell; */*- frequency of >2mm/<2mm fragments of charcoal

* frequency of items: 1=1-10; 2= 11-50; 3=51-150; 4=151-250; 5=>250

some *Juncus* seeds have been classed as mineralised (white) but may not technically be

'w' – wet flot;

Several elements of this material have been further analysed to understand the economy and environment of the site.

Charred Plant remains (John Giorgi)

All identifiable charred plant remains were sorted and identified from the flots using a binocular microscope (with a magnification of up to x40) together with modern and charred reference material and reference manuals (Cappers *et al* 2006; Jacomet 2006). All the charred remains were counted with the exception of charcoal and small unidentifiable and unquantifiable cereal grain fragments (less than 2mm) which were scored using the following rating system: + =1-10; ++=11-50; +++=51-150; ++++=151-250; +++++=250+ items. The results are shown in Table 4, taxonomic order for the wild plants following Stace (2005) which was also used for ecological data together with Ellenberg (1988), Hanf (1983) and Wilson and King (2003). Ten of the 19 samples produced identifiable charred plant remains, over a thousand charred items being counted consisting mostly of wild plant/weed seeds (80% of the quantified remains) together with cereal grains (19%) and a little charred cereal chaff (1%).

Cereals

Variable amounts of charred cereal debris (grains in nine and chaff in five) were recovered from the ten samples, with over a half (c 60%) recovered from ditch [03001] fill (03004) sample 6, with only occasional, small or modest amounts of charred cereal remains in the other nine samples. Preservation was generally poor with just over 50% of the quantified grains being unidentifiable.

The two best represented identifiable cereals were wheat (*Triticum*) and barley (*Hordeum vulgare*) in seven and four samples respectively. The wheat debris included evidence of hulled wheat (*Triticum dicoccum/spelta*) in six samples, identified on the basis of both grains and chaff fragments in four samples each, six diagnostic hulled wheat chaff fragments in ditch [18182] fill (18186) (sample 11) showing the presence of spelt (*Triticum spelta*) and also emmer wheat (*T. dicoccum*) albeit on the basis of just a single glume base; one hulled wheat grain was also tentatively identified as spelt. Five grains of free-threshing wheat (*Triticum aestivum/turgidum*) were also found in two upper fills of the column through Ditch section [18199] in the south-west corner of Area A.

The barley grains were virtually all found in the rich grain assemblage from ditch fill (03004) and included hulled and twisted grains indicative of six-row hulled barley; a few barley rachis fragments were also found in the same ditch fill. An oat (*Avena*) grain and a possible rye (cf *Secale cereale*) grain were also recovered from separate samples. There were a good number of large ribbed hollow nodes and internode fragments in several samples which may belong to burnt cereal straw which would have been a valuable asset on site with uses for flooring (bedding), thatching and fuel.

Current archaeobotanical evidence shows that hulled wheat (mainly spelt) and hulled barley were the main cereal crops grown during the Romano-British period with less evidence for the cultivation of emmer and free-threshing wheat (Greig 1991, 309; Carruthers and Hunter Dowse 2019, 65-66, Lodwick 2017, 16). All these cereals may have been used for making bread, hulled wheat and free-threshing wheat containing the proteins required for making a well-risen loaf

while barley may have been used for making flat bread and griddle cakes (Cool 2006, 70-71) as well as for animal fodder. The one oat and rye grain are probably cereal weeds.

Other foodstuffs

Other potential food remains may be represented by the few large legume seeds in two samples from ditch fills (03001) and (18182) but poor preservation and the absence of a hilum meant that it was not possible to identify these remains to species which were broadly identified as *Vicia/Lathyrus/Pisum* (vetch/tare/vetchling/pea) and as such may be from wild rather than cultivated pulses. Archaeobotanical remains of pulses are not particularly common in Romano-British deposits (Lodwick 2017, 33) although they probably played an important role in the diet at the time (Cool 2006, 127). A single fragment of charred hazel (*Corylus avellana*) nut shell in ditch fill (18186) may represent debris from nuts collected for food from shrubby/hedgerow/woodland habitats close-by.

Wild plant remains

Wild plant/weed seeds made up the bulk of the charred plant assemblages from the site dominated by the remains of wetland species. There was a small range of potential arable weeds represented by occasional and small numbers of charred seeds although these provide limited information on crop husbandry; *Galium aparine*, represented by a few seeds in five samples, is a loam indicator found in clays and loam soils and its presence along with *Chenopodium/Atriplex* (goosefoots/oraches) in a few samples, may point to the cultivation of nutrient rich soils; on the other hand, the good representation of small-seeded leguminous weeds, specifically *Medicago/Trifolium* (medick/trefoil) may indicate poor soil fertility, such plants occurring in soils with low nitrogen levels, perhaps as a result of over cropping in some areas around the site. Both *Galium aparine* and another possible cereal weed *Bromus* (brome), may be indicators of the winter sowing of cereals.

A good range of wetland species (aquatic, semi-terrestrial and bankside/marshland plants) represented in the samples were dominated by the remains of Cypercaeae (sedges etc) including good representation (including mineralised seeds) of *Eleocharis paustris/uniglumis* (spike-rush), *Schoenoplectus lacustis/ tabernaemonani* (club rush) and *Carex* (sedges). Some of these sedges may point to the cultivation of damper areas of ground or may be from wetland plants growing in ditches around the edges of fields although both *Eleocharis* and *Schoenoplectus lacustis/tabernaemonani*, along with occasional and a small number of records for *Sparganium erectum* (branched bur-reed) and *Oenanthe fistulosa* (tubular water-dropwort) are all characteristic of a Reed and Tall Swamp (slow moving shallow water) plant community as defined by Ellenberg (1988). These plants may have been collected from the surrounding fenland for various uses on site including perhaps roofing/flooring materials, for basket making and fuel.

There was also a small range of potential grassland plants represented by occasional and small numbers of seeds of *Plantago major* (greater plantain), *P. lanceolata* (ribwort plantain) and *Rhinanthus minor* (yellow rattle), good numbers of small and large-seeded wild grasses (Poaceae indet) and perhaps some of the *Carex* species. These remains may perhaps represent the burnt remains of grassland plants collected from areas around the site for use as hay fodder and/or fuel.

There were also good numbers of charred thin ribbed stem fragments in two samples that may belong to a number of the wild plants in these samples.

The composition of the individual charred plant assemblages and spatial distribution

The charred plant remains in the ten samples were from ditches from across the site, seven of the ten only containing occasional or small amounts of material (40 items or less) with low densities (0.1 to 1.3/litre) of cereal debris and wild plant/weed seeds (mostly Cyperaceae seeds), with the grain accidentally burnt during final processing and food preparation mixed with fuel debris probably from hearths from small-scale (domestic) activities that may have been taking place at some distance from these features.

Three of the samples, however, produced larger assemblages; ditch fill (06005) (sample 3) at the far eastern end of Excavation Area A produced a fairly good amount of charred material (item density 3.1/litre) consisting of a little cereal debris, mainly grains (16%) and a little chaff (1%) of hulled wheat, but mostly the remains of wild plants (83%), mainly wetland plants (Cyperaceae) but also possible straw fragments. These remains largely represent residues of burnt fuel mixed with a small number of accidentally burnt grains deposited into the ditch from activities close-by.

Fill (03004) (sample 6) from ditch [03001], north of Excavation Area A (in Evaluation Trench 3 – Fig. 1), produced a larger charred plant assemblage (item density of 6/litre) consisting mostly of cereal grains (57%) of mainly hulled barley with a few barley rachis fragments (1%), the other 43% again consisting mainly of the remains of wetland species (mostly Cyperaceae), weed seeds and stem fragments (possibly straw and stems of other plants). The proportions of quantified remains, however, do not take into consideration the unsorted finer fraction of the flot which produced additional material, particularly large numbers of Cyperaceae seeds (especially *Eleocharis*) and fairly good amounts of small wild grass seeds and thin ribbed stem fragments. These remains are broadly similar to the previous sample, mostly representing residues of burnt fuel (as represented by collected wetland plants) together with grains accidentally burnt perhaps while being dried before storage or use, this debris perhaps representing the clean out of a hearth/oven perhaps close-by which was subsequently dumped into the ditch.

The largest quantified charred plant assemblage was from ditch fill (18186) (sample 11) with a relatively high item density 21.8/litre, from a ditch (18182) on the southern boundary of excavation Area A. The charred plant remains consisted of only a little cereal debris (2% grains and 2% chaff) of hulled wheat and barley, the other 96% made up of wild plants represented mainly by seeds of wetland species, again mostly Cyperaceae, particularly *Eleocharis* and to a lesser extent *Schoenoplectus* and *Carex*, along with the remains of several potential grassland plants including a good number of small wild grass seeds; there was also a good number of *Medicago/Trifolium* seeds that may be from grassland habitats or represent cereal weeds although there were few other potential arable weeds in this sample. Again stem fragments (including possible straw) were present in fairly good amounts. These charred remains represent a little debris from the final stages of crop-processing (including the de-husking of hulled wheats) and food preparation mixed with a large amount of burnt fuel debris, as represented by both collected wetland and grassland plants, the ditch serving as a receptacle for this debris from activities perhaps taking place close-by.

Table 4. Millfield Nursery, Spalding Common, Spalding – SCSP21 and SCSG23: The Charred Plant Remains

	Date	?RB	3rdC+		2 nd -3 rd C.				ROMANO-BRITISH/2 nd - 4 th C.		
	Feature	ditch	ditch		ditch	ditch	ditch	ditch	ditch		
	Feature number	11014	06002		06031	03001	18146	18182	18199		
	Context number	11049	06005	06003	06032	03004	18165	18186			
	Sample number	2	3	4	5	6	10	11	12	12	12
	Depth of sample (cm)								0-10	10-20	20-30
	vol sample (l)	37	40	38	40	40	25	30	8	8	8
	vol flot (ml)	48	40	63	28	400	20	255	8	14	10
LATIN_NAME	ENGLISH										
Cereal grains											
cf <i>Triticum spelta</i>	?spelt wheat	1									
<i>T. dicoccum/spelta</i>	emmer/spelt wheat	1		1				1			
<i>T. cf. dicoccum/spelta</i>	?emmer/spelt wheat			1		1		2			
<i>T. aestivum/turgidum</i> type	free-threshing wheat								2		1
<i>T. cf. aestivum/turgidum</i> type	?free-threshing wheat								1		1
<i>Triticum</i> sp(p).	wheat	2	6	1		3					1
cf. <i>Triticum</i> sp(p).	?wheat	5	2			1		1			
cf. <i>Secale. cereale</i>	?rye					+					
<i>Hordeum vulgare</i> L.	barley, hulled twisted					12					
<i>H. vulgare</i> L.	barley, hulled straight					2					
<i>H. vulgare</i> L.	barley, hulled indet.					4					
<i>H. vulgare</i> L.	barley, indet twisted					6					
<i>H. vulgare</i> L.	barley, indet straight					4					
<i>H. vulgare</i> L.	barley, indet	1				15		1		1	1
cf. <i>H. vulgare</i>	?barley					18		1			
<i>Avena</i> sp.	oat										1
Cerealia indet.	indet. cereal (estimate)	12	12	7		70		6	2		
Cerealia indet.	indet cereal fragments <2mm	+	+	+		+		+		+	
cf Cerealia indet.	?indet cereal fragments						2		2		
Cereal chaff											
<i>Triticum dicoccum</i> Schubl	emmer wheat glume bases							1			
<i>T. spelta</i> L.	spelt wheat spikelet bases/forks							3			
<i>T. spelta</i> L.	spelt wheat glume bases							3			
<i>Triticum</i> sp(p).	wheat glume bases	2	1		1			3			
<i>Triticum</i> sp.	wheat spikelet bases							1			
<i>Hordeum vulgare</i> L.	barley rachis					2+					

	Sample number	2	3	4	5	6	10	11	12	12	12
Other plant/weed seeds											
<i>Ranunculus flammula</i> L.	lesser spearwort							1			
<i>Corylus avellana</i> L.	hazel nut shell fragments							1			
<i>Chenopodium</i> spp.	goosefoot etc					+		5			
<i>Atriplex</i> spp.	orache					+		10			
<i>Rumex</i> sp(p).	dock	1	7			2+		20			
<i>Malva</i> sp.	mallow							1			
<i>Vicia/Lathyrus</i> spp.	vetch/tare/vetchling (<2mm)							2			
<i>Vicia/Lathyrus/Pisum</i> sp.	vetch/tare/vetchling/pea (>2mm)					1		1			
<i>Vicia/Lathyrus/Pisum</i> spp.	vetch/tare/vetchling/pea (<2mm)					2		3			
<i>Medicago/Trifolium</i> sp(p).	medicks/clovers		1		5	1+		87			
Fabaceae indet.	large legumes (frags >2mm)					2					
Fabaceae indet.	small round legumes <2mm					1					
<i>Oenanthe fistulosa</i> L.	tubular water-dropwort							1			
<i>Plantago major</i> L.	greater plantain							9			
<i>P. lanceolata</i> L.	ribwort plantain							1			
<i>Euphrasia/Odontites</i> spp.	eyebrights/bartsias							2			
<i>Rhinanthus minor</i> L.	yellow rattle							1			
<i>Galium aparine</i> L.	cleaver			1	1	2	1	1			
<i>Galium</i> sp.	bedstraws					1		1			
<i>Eleocharis palustris/uniglumis</i>	spike-rush	4 +1m	34 +17m		19	1+++		143/+18m			
<i>Schoenoplectus lacustris/ tabernaemontani</i>	club rush	3	3		2	2++		44			
<i>Carex</i> sp(p).	sedge	1	2		6	++		42			
Cyperaceae indet.	sedges etc	3	8	1	6	5++		127			
<i>Bromus</i> sp(p).	brome		1			3					
<i>Avena/Poaceae</i> indet	oat/wild grasses (large seeds)	1							1		
Poaceae indet.	wild grasses (seeds >2mm)		1	1		7+		4			
Poaceae indet.	wild grasses (seeds <2mm)		4			++	1	35			
Poaceae indet.	cereal/wild grasses culm frags		24	3		30		26			
<i>Sparganium erectum</i> L.	branched bur-reed	2	1			8		7			
indet.	thin ribbed stem fragments					33+++		32			
indet	rhizome fragments							1			
indet	tuber fragments					1		1			
charcoal	charcoal >/<2mm fragments	++++/ +++++	+++/ +++++	+++/ ++++	+++/ ++++	+++++/ +++++	+++/ ++++	+++++/ +++++	+ /++	+ /++	+ /+
Total of quantified items		40	124	16	40	240	4	650	8	1	5
<i>charred items (per litre of processed soil)</i>		<i>1.3</i>	<i>3.1</i>	<i>0.4</i>	<i>1</i>	<i>6</i>	<i>0.2</i>	<i>21.7</i>	<i>1</i>	<i>0.1</i>	<i>0.6</i>

frequency of items: +1=1-10; ++= 11-50; +++=51-150; ++++=151-250; +++++=>250 (includes scanning of unsorted fraction <2mm in sample 10; m=mineralised seeds

The Waterlogged Plant Remains

Variable amounts of uncharred seeds were present in virtually all of the samples but particularly in the lower samples of the column through the fills of ditch [18199] with the results from 13 of the samples presented in Tables 5 and 6; six from various levels within the column sample through the fills of ditch [18199] and seven from other ditch fills from across the site. The uncharred seeds from three of the basal samples of ditch [18199] were examined from wet flots while the other uncharred seeds were recorded from the dry flots.

It is difficult to separate out those uncharred seeds that may be contemporary with the sampled features from those that may be intrusive although it is likely that the rich assemblages from the basal sampled fills of ditch [18199] are contemporary – these deposits were fairly deeply buried. It is, however, more problematic with regard to the uncharred seeds from the other ditches (but all these deposits were overlain by later marine sediments) although a broadly similar range of species were represented in all the samples from all the ditches from across the site with no significant differences between the three rich basal samples from ditch [18199] and the other ditch fill samples other than in a greater species diversity in ditch [18199]. The uncharred remains mainly represented wetland species along with smaller numbers of seeds from a smaller range of plants of mostly disturbed ground and waste places.

The three studied samples of the lower fills of ditch [18199] and other ditches across the site contained similar wetland species including true aquatics *Chara* (stoneworts), *Potamogeton* (pondweed), *Lemna* (duckweed) and other aquatic/semi-terrestrial and bankside/marshland species such as *Ranunculus Batrachium* (crowfoots), *R. sceleratus* (celery-leaved crowfoot), *Alisma* (water plantain), *Eleocharis*, *Schoenoplectus lacustis/tabernaemonani*, *Carex* and other Cyperaceae. As noted above, the Cyperaceae and also *Alisma* are indicative of Ellenberg's Reed and Tall swamp (with slow-moving shallow water) plant community. Other wetland plants only in the basal fills of ditch [18199] included a good representation of *Rumex maritimus* (golden dock) along with occasional records for *Lycopus europaeus* (gypsy wort), *Hydrocotyle vulgaris* (marsh pennywort), *Oenanthe fistulosa*, *Apium* (marshwort) and *Bidens* (bur marigold) while *Juncus* (rush) seeds were only found in the other ditch fills.

There was no botanical evidence to suggest the definite presence of saline soils or salt/brackish water associated with the late Roman and post Roman rise in sea level and inland movement of the coastline. Several species including *Hydrocotyle vulgaris* and *Eleocharis palustris* are slightly salt tolerant and may occasionally be found in salt containing soils while *Ranunculus sceleratus* tolerates brackish water but may be found in both saline and non-saline situations. *Eleocharis uniglumis* and *Schoenoplectus tabernaemonani* are most common in coastal sites but also appear in freshwater or non-saline soils inland (Hill *et al* 2004). Other plant genera which could not be identified further including *Carex*, *Potamogeton*, *Juncus* and *Lemna* also include species that may be found in saline conditions. However, no species were identified that are only found in saline soils or salt/brackish water.

Table 5. Millfield Nursery, Spalding Common, Spalding – SCSP21 and SCSG23: The Waterlogged Plant Remains from the bulk sampled ditches

	Date	?RB	3 rd C+		2 nd -3 rd C			
	Feature	ditch	ditch		ditch	ditch	ditch	ditch
	Feature number	11014	06002		06031	03001	18146	18182
	context number	11049	06005	06003	06032	03004	18165	18186
	sample number	2	3	4	5	6	10	11
	vol sample (l)	37	40	38	40	40	25	30
	vol flot (ml)	48	40	63	28	400	20	255
LATIN_NAME	ENGLISH							
<i>Chara</i> spp.	stoneworts			+++	+++++	+++		++
<i>Ranunculus acris/repens/bulbosus</i>	buttercups						+	
<i>R. sceleratus</i> L.	celery-leaved crowfoot		+					
<i>R. subgen. Batrachium</i> (DC) A Gray	crowfoots	+		+++	+++	+		
<i>Papaver</i> spp.	poppy	+						
<i>Fumaria officinalis</i> L.	common fumitory	+		+				
<i>Urtica dioica</i> L.	common nettle		+					
<i>Urtica urens</i> L.	small nettle	+		+			+	
<i>Betula pendula</i> Roth	silver birch							
<i>Chenopodium hybridum</i> L.	maple-leaved goosefoot		+	++	+			
<i>Chenopodium</i> spp.	goosefoot etc	++	++	++	++	+	++	
<i>Atriplex</i> spp.	orache	++	+	++	++	+		++
<i>Stellaria media</i> (L.) Vill.	common chickweed	++	+					
<i>Polygonum aviculare</i> L.	knotgrass						+	
<i>Rumex</i> sp(p).	dock			+				+
<i>Rubus</i> spp	brambles etc.			+				
<i>Medicago/Trifolium</i> spp.	medicks/clovers							+++
<i>Euphorbia helioscopia</i> L.	sun spurge					+	+	
<i>Oxalis stricta</i> L.	Upright tallow-sorrel	+		+				
<i>Aethusa cynapium</i> L.	fool's parsley			+			+	
<i>Solanum nigrum</i> L.	black nightshade			+				
<i>Lamium</i> spp.	dead-nettles	+					+	
<i>Sambucus nigra</i> L.	elder	+	+		+			
<i>Picris</i> spp.	ox-tongues				+			
<i>Sonchus oleraceus</i> L.	smooth sow-thistle							
<i>Sonchus asper</i> (L.) Hill	spiny milk-/sow-thistle	+	+	+	+		+	
<i>Alisma</i> spp.	water-plantain		+					
<i>Potamogeton</i> spp.	pondweeds			+				
<i>Lemna</i> spp.	duckweed	+++++	+++	++++	++	+	++	+
<i>Juncus</i> spp.	rushes	+++	++		+++	+++	++	
<i>Eleocharis palustris/uniglumis</i>	spike-rush		+					+++m
<i>Schoenoplectus lacustris/tabernaemontani</i>	club rush							++
<i>Carex</i> sp(p).	sedge							+
Cyperaceae indet.	sedges etc							++
Poaceae indet.	wild grasses (short thin seeds <2mm)	++						++
Poaceae indet.	cereal/wild grasses culm node & internode frags							+
indet.	thin ribbed stem fragments			++				+

frequency of items: +1=1-10; ++= 11-50; +++=51-150; ++++=151-250; +++++=>250; m= includes mineralised seeds

Table 6. Millfield Nursery, Spalding Common, Spalding - SCSP21 & SCSG23: The waterlogged plant remains from three of the basal samples, & the top three in the column from ditch 18199

	Date	?ROMANO-BRITISH/2-4th C.					
	Feature	DITCH					
	Sample number	12	12	12	12	12	12
	Depth of sample (cm)	100-110	80-90	60-70	20-30	10-20	0-10
	vol sample (l)	6	8	8	8	8	8
	vol flot (ml)	130w	120w	100w	10	14	8
LATIN_NAME	ENGLISH						
<i>Chara</i> spp.	stoneworts		+			+++++	
<i>Ranunculus acris/repens/bulbosus</i>	buttercups		++				
<i>R. sceleratus</i> L.	celery-leaved crowfoot	+++	++	+			
<i>R. subgen. Batrachium</i> (DC) A Gray	crowfoots	+++	+++++	++			
<i>Papaver</i> spp.	poppy					+	
<i>Urtica dioica</i> L.	common nettle		++	+			
<i>Chenopodium hybridum</i> L.	maple-leaved goosefoot				+		
<i>Chenopodium</i> spp.	goosefoot etc	+++	+++	+	+	++	++
<i>Atriplex</i> spp.	orache	++	++			+	
<i>Stellaria media</i> (L.) Vill.	common chickweed	++	+			+	
<i>Rumex maritimus</i> L.	golden dock	++++	+++				
<i>Rumex</i> sp(p).	dock	+	+				
<i>Brassica/Sinapis</i> spp.	cabbages, mustards	+					
<i>Potentilla anserina</i> L.	silverweed		++				
<i>Hydrocotyle vulgaris</i> L.	marsh pennywort	+	+				
<i>Oenanthe fistulosa</i> L.	tubular water-dropwort	+	+				
<i>Oenanthe</i> spp.	water-dropwort	+	+				
<i>Conium maculatum</i> L.	hemlock	+	++				
<i>Apium</i> spp.	marshworts	+	+	+			
Apiaceae indet.	carrot family	+		++			
<i>Solanum nigrum</i> L.	black nightshade			++			
<i>Lycopus europaeus</i> L.	gypsy-wort		++	+			
<i>Mentha</i> spp.	mints		+	+			
<i>Plantago major</i> L.	greater plantain	++	++	+			
<i>Sambucus nigra</i> L.	elder		+	++			
<i>Carduus/Cirsium</i> spp.	thistles	++	+	+			
<i>Sonchus asper</i> (L.) Hill	spiny milk-/sow-thistle	+	+				
<i>Bidens</i> sp.	bur-marigolds	+					
<i>Alisma</i> spp.	water-plantain	+++	++	+++			
<i>Potamogeton</i> spp.	pondweeds	+	+				
<i>Lemna</i> spp.	duckweed	++++	+++	++++		++	++
<i>Juncus</i> spp.	rushes	+++	+++	+++++		+	+
<i>Eleocharis palustris/uniglumis</i>	spike-rush	+++	++++	++			
<i>Schoenoplectus lacustris/tabernaemontani</i>	club rush	++	+	+			
<i>Carex</i> sp(p).	sedge	++	++	+			
Cyperaceae indet.	sedges etc	++	++	++			
Poaceae indet.	wild grasses (short thin seeds <2mm)	++	++	+			
Poaceae indet.	cereal/wild grasses culm fragments	+	+				
Indet.	Small twigs/round wood fragments	++		++			
indet.	thin ribbed stem fragments	+++	+				
indet	seeds	+	+	+			
Bryophyta indet.	moss	++++	+++	+			

frequency of items: +1=1-10; ++= 11-50; +++=51-150; ++++=151-250; +++++=>250; w – wet flots, otherwise dry;

Remains of wild plants associated with disturbed (including cultivated) ground and waste places were better represented in the samples from all the ditches other than [18199] although species common to both the basal samples of ditch [18199] and the other ditch fills across the site, included: *Urtica dioica* (common nettle), *Atriplex/Chenopodium* (orache/goosefoot), *Stellaria media* (common chickweed), *Rumex*, *Solanum nigrum* (black nightshade), *Plantago major*, *Sonchus asper* (spiny milk-/sow-thistle), *Sambucus nigra* (elder) and small-seeded Poaceae, most of which are indicative of nutrient and nitrogen rich soils which may reflect human activities and rubbish tips/refuse deposits close-by. Other species exclusive to ditches other than [18199] were a number of other plants of disturbed ground and waste places also found in nutrient rich soils including *Fumaria officinalis* (fumitory), *Urtica urens* (small nettle), *Euphorbia helioscopia* (sun spurge) and *Aethusa cynapium* (fools parsley), while *Conium maculatum* (hemlock), found in nutrient rich soils in damp ground, ditches, waste ground and rubbish tips was only represented in the basal samples of ditch [18199]. Grassy areas around the ditches or perhaps the residues of gathered grassland vegetation may be represented by records of potential grassland plants, *Ranunculus acris/repens/bulbosus* (buttercups), *Plantago major*, *Carex* and Poaceae seeds.

Snail assemblages (James Rackham)

Snails are present in many of the samples but their absence or relative absence from a band of the deposits in ditch 18199 seems to be attributable to soil conditions, reflecting possibly both a period of peat formation likely to have been acid and an episode of fluctuating water table and iron salt build-up which is also likely to have led to corrosion of the shells. Samples 1, 10 and 11 also lacked shells, although in these cases the opercula of *Bithynia tentaculata* survived when the shells did not, another indication of probable slightly acid conditions removing the shells.

The abundance of aquatic species over terrestrial snails suggested that detailed quantification of the shells was not likely to appreciably increase the information from the assemblages, and combined with some budget constraints and the clear indications of a wetland environment from the waterlogged plant taxa, it was decided to sort, scan, identify and only roughly quantify the most abundant taxa in each sample (Tables 7 and 8). Shells of the blind burrowing species *Cecilioides acicula* are present in several of the samples, and common in two, these are likely to be intrusive and probably burrowed into the deposits in recent times after the area was reclaimed from the sea in the Saxon or medieval period. The other species are considered to be *in situ* and contemporary with the deposits. The terrestrial elements have both a low diversity and, apart from *C. acicula*, a low abundance. The few shells recorded are from catholic taxa or species associated with grassland. A small group of taxa typical of wet ground and marsh (Table 7) occur with a similar frequency to the grassland fauna.

Four things are clear from the snail data.

1. All the ditches have an abundant freshwater molluscan fauna and there is no evidence for any marine or saline influence, which would have introduced shells of the estuarine and brackish water species *Hydrobia ulvae* and *Hydrobia ventrosa*, both of which occur in their millions along the Lincolnshire coastal tidelines and estuaries.
2. The sampled ditch sediments appear to have been permanently underwater. The species *Anisus leucostoma* is characteristic of ditches that dry up seasonally but it is absent or present in very low abundance in these samples, while taxa characteristic of open water and moving water – *Bithynia tentaculata*, *Lymnaea peregra*, *Planorbis vortex*, *Valvata cristata* and *Valvata piscinalis* occur commonly or in abundance.

3. The abundance of aquatic mollusca is an indication that these occur *in situ* and are not introduced with ‘collected’ marshland vegetation.
4. The abundance of this aquatic fauna in ditch 18199 right up to the top of the section (Fig.4, Table 8) indicates continuous wet conditions throughout this sequence, even in the upper fills laid down at the same level as the adjacent Roman ground surface (see Figs. 4 and 5) at 1.8-2.0m OD.

Table 7. Spalding – SCSP21 and SCSG23. Molluscan taxa from samples 1-11.

	Sample	1	2	3	4	5	6	10	11
	% of sample studied								
	Context	10029	11049	06005	06003	06032	03004	18165	18186
	Feature type	Burial	ditch						
	Frequency	1	5	5	5	5	2	2	1
catholic	<i>Cecilioides acicula</i>		+++	+++	+	+	+		+
	<i>Cochlicopa lubrica</i>			1	+				
grassland	<i>Pupilla muscorum</i>					1			
	<i>Vallonia excentrica</i>			3	+		+		
wet ground/ marsh	<i>Vallonia pulchella</i>		+		+	2			
	Succinidae				+				
	<i>Galba truncatula</i>				+	+			
freshwater	<i>Anisus leucostoma</i>		+	+	+		+		
	<i>Segmentina nitida</i>				+	+			
	<i>Planorbis crista</i>				+	++			
	<i>Planorbis corneus</i>				+				
	<i>Planorbis planorbis</i>		++	++	++	+++	+	1	+
	<i>Planorbis vortex</i>			+	+	+			
	<i>Planorbis carinatus</i>				+				
	<i>Planorbis contortus</i>			+	+	+			
	<i>Planorbis laevis</i>			+	+	+			
	<i>Planorbis sp.</i>	+							
	<i>Bithynia tentaculata</i>	+	+	++	+++	+++	++	10	
	<i>Bithynia leachii</i>			+	+	+	+		
	<i>Valvata piscinalis</i>	+			+	+			
	<i>Valvata macrostoma</i>			+	+				
	<i>Valvata cristata</i>				+	+++			
	<i>Lymnaea peregra</i>				+	+++	+		
	<i>Lymnaea glabra</i>					1			
	<i>Lymnaea palustris</i>				+				
	<i>Viviparus sp.</i>				+				
	<i>Pisidium sp.</i>				+	+			

* frequency of items: *=1-10; **= 11-50; ***=51-150; ****=151-250; *****= >250;

+ - present in the sample, but not quantified.

These results indicate a wet site, with a rising water table throughout the filling of ditch 18199. Such a rising watertable can be associated with a period of rising sea level causing the ‘backing up’ of freshwater, the development of marsh (reflected by the dark band in Figures 4 and 6), and subsequently probably open water or meres across the site. Unfortunately no samples were taken from the non-archaeological upper sediments across the site, but these are assumed to be marine in origin on the basis of other sites in the area, reflecting an episode in the post-Roman period when the site lay within the tidal range. Whether the Roman and post-Roman course of the tidal Welland lay as close to the site as the modern channel is not known but the site must certainly have been inundated by tidal waters in the post-Roman period.

Table 8. Spalding – SCSP21 and SCSG23. Molluscan taxa recorded from the column sample in ditch 18199

	Sample 12	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-110
	context											
	Frequency*	5	5	5	3	1	-	-	-	-	2	2
	<i>Trochulus hispidus</i>		+									
	<i>Cochlicopa lubrica</i>	+										
	<i>Vallonia</i> sp.	+										
	Succinidae			+								
	<i>Galba truncatula</i>	+			+							
Freshwater species	<i>Anisus leucostoma</i>	+	+	+								
	<i>Segmentina nitida</i>	+	+	+								
	<i>Planorbis crista</i>	+	+	+								
	<i>Planorbis planorbis</i>	+	+	+	+							
	<i>Planorbis vortex</i>	+	+	+								
	<i>Planorbis carinatus</i>		+	+								
	<i>Planorbis contortus</i>	+	+	+	+							
	<i>Planorbis laevis</i>	+	+		+							
	<i>Planorbis albus</i>			+								
	<i>Menetus dilatatus</i>			+								
	<i>Bithynia tentaculata</i>	++	++	+	++	+					++	++
	<i>Bithynia leachii</i>	+	+	+								
	<i>Valvata piscinalis</i>	+	+	+	+							
	<i>Valvata macrostoma</i>		+	+								
	<i>Valvata cristata</i>	+	+	+								
	<i>Lymnaea peregra</i>	+	+	+	+	+						
	<i>Lymnaea palustris</i>				+							
	<i>Viviparus fasciatus</i>		+									
	<i>Acroloxus lacustris</i>			+								
	<i>Pisidium</i> sp.		+									

* frequency of items: *=1-10; **= 11-50; ***=51-150; ****=151-250; *****= >250; + - present in the sample, but not quantified.

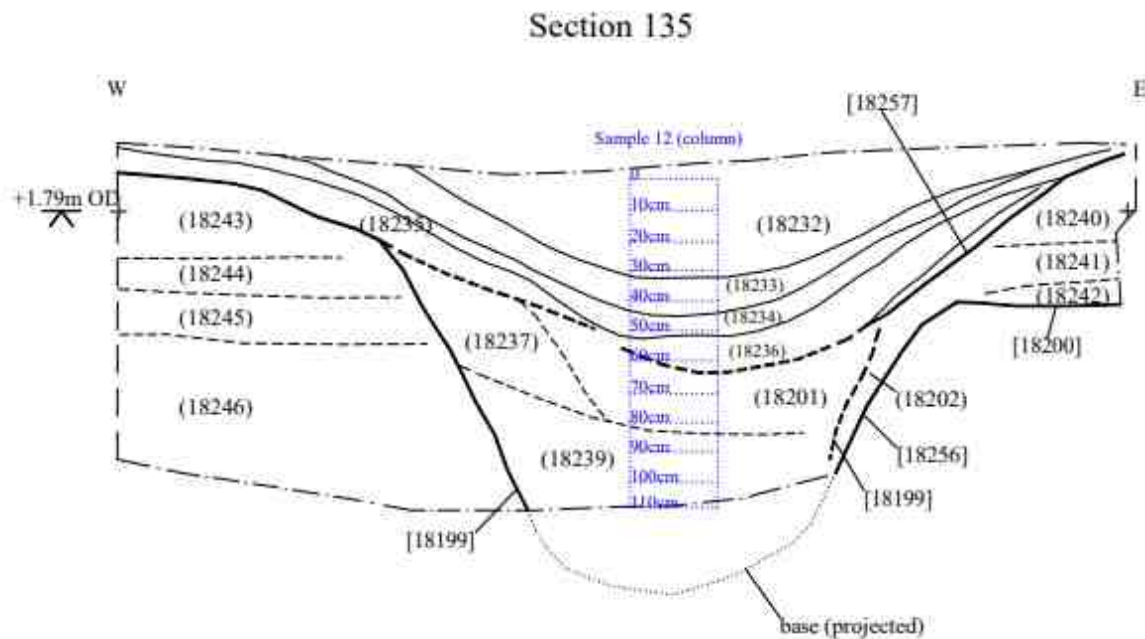
Fig. 4. Section drawing 135 for column sampled ditch 18199 (sample 12)

Fig. 5. Photograph of the column sample, sample 12, ditch 18199. The upper fills formed under equally wet conditions as the lower fills.



The freshwater character of the site in the lower and upper fills of the ditches is testified by the uncharred plant remains, aquatic snails, and other indicators such as freshwater crustaceans (ostracods), caddis fly larval cases, freshwater fleas (*Daphnia*), the sticklebacks and probably some of the other small fish (of natural rather than human origin). The only marine element recorded are a few foraminifera in sample 3, quite possibly derived from the roddon sediments the Roman site sits on, although sticklebacks can tolerate brackish water as can several of the uncharred plants identified (see above).

Animal bone and shell (James Rackham)

In addition to the samples animal bone and shells were collected by hand during the excavation of the evaluation trenches and the subsequent main excavation trench, Area A. These fragments have been recorded and catalogued following the standard procedures of the Environmental Archaeology Consultancy (see attached Archive catalogue and key). The assemblage comprised 194 bone fragments and a partial skeleton of a horse from SCSP21 and 34 fragments and a partial skeleton of a dog, plus two freshwater shells, from SCSG23. The bone assemblages together weighed a total of 13576.5 grammes, with an average fragment weight excluding the partial skeletons of 36.65 grammes. The partial horse skeleton in context 11010 comprised 277 fragments weighing 5081g. and the partial dog skeleton in context 18009 comprised 16 bones weighing a total of 139 grammes. A number of the bones were fragmented either recently or in antiquity and these where possible were reconstructed and recorded as a single record in the catalogue rather than individually. The condition of the bones was variable but in general good, with a few bones showing localised surface erosion. There is little to suggest that any discarded bones have been lost through corrosion in the soil but recovery is unlikely to have been efficient since the average fragment weight of the 494 'domestic' (ie excluding the small vertebrates such as small mammals, amphibians and fish) animal bone fragments from the samples is 0.88g compared to the 36.65g for the hand collected assemblage. While the bulk of these fragments could not be identified to species

there is nevertheless an implication that the smaller animals such as sheep/goat and dog, and probably also pig, will have been under-represented in the hand collected assemblage, bone fragments of just a few grammes or less almost certainly being missed during 'trowelling'. This has implications for the assessment of the relative abundance and importance of the different food species on the site.

Fragments of horse, cattle, sheep/goat, sheep, pig, dog, chicken and duck have been identified among the hand collected assemblage, along with two shells of the large freshwater species *Planorbarius corneus* or Great Ramshorn, a taxa rarely found in small water bodies. In the samples the additional possible food species recorded include eel, other small fish, common mussel and cockle, with a range of small terrestrial vertebrates including water vole, field vole, a mouse, a newt and frog or toad and also freshwater fishes such as stickleback, eel and other small fish many of which will have been naturally deposited in the wet environment rather than a product of human rubbish (Table 10). The relative frequency of each species in the hand collected assemblage has been analysed using fragments counts, total weight and also the frequency of anatomical zones (see Appendix; Table 10). Cattle bones are clearly dominant using all three methods, followed by frequency of sheep (or goat), then horse and finally pig among the main farm animals, although clearly the weight of horse bones far exceeds that of sheep. However these figures can only give a guide because both the level of fragmentation of each species (no. zones/no. fragments – horse – 1.43, cattle – 1.49, sheep – 1.26, pig 0.67) and the relatively large average fragment weight (ie a bias in favour of larger bones) will both impact on the proportion of each species recorded and recovered. We can assume that the smaller animals will be under-represented. Where 'samples' with bone are abundant these can offer some control but in Table 10 the samples with bone are insufficient to give any guide as to the relative frequency of the different species.

Table 9. Number of fragments, weight and number of zones in the hand collected bone and shells from contexts from SCSP21 and SCSG23.

		SCSP21			SCSG23		Average frag. wt g
species	number	weight	zones	number	weight	zones	
Horse	22 (+1*)	2225 (+5081*)	31	1	187	2	98
Cattle	67	4253	96	16	871	28	61.7
Cattle size	42	293	1	4	41		7.26
Sheep/goat	34	245	35	9	7	16	5.86
Sheep	1	22	3				
Sheep size	15	22.5	2	7	13		1.61
Pig	4	46	1	5	119	5	18.3
Dog	1	15	3	1*	139*		
Chicken	1	2					
Duck	1	1					
Unidentified	6	11		2	5.5		-
<i>Planorbarius corneus</i>				2			

* Partial skeleton

The large average fragment weight of the hand collected bones may have another explanation. There are clearly skeletons buried on the site and the low fragmentation of a number of the cattle bones, such as several intact jaws, complete bones, or juvenile bones only lacking an epiphysis suggest a lack of butchery, supported by only five bones being recognised with visible chop marks. This would be unusual in a Roman assemblage derived

from food waste so it is possible that a proportion of this ‘disarticulated’ material may also have come from burials or discarded carcasses. The partially excavated horse skeleton in Trench 10 of the evaluation (Fig. 6) lies in a cut in the base of ditch 10010 and although it is undated by finds it appears to lie stratigraphically beneath a dark grey silt that can perhaps be equated with the ‘wetland’ horizon noted above (see Figs 6 and 3) suggesting it is Roman or earlier. This is a young animal – distal humeral and proximal radial epiphysis recently fused – perhaps 18 months, but with the dpm4 still present (but about to be shed) and the m3 erupting with the m2 and p3 in wear –an age according to Silver (1969) of between 2.5 and 3.5 years, somewhat older than the epiphyses suggest. It is also possible that the horse bones in context 06012 also derive from one animal, including a mandible, pelvis and skull fragments, suggesting a possible disturbed second burial. The dog skeleton in context 18009 is adult and had a badly broken but healed femoral fraction. It must have been lame and suggests a certain level of care that the animal was kept, and presumably tended, despite the injury. A few other bones may also have been associated, but this could not be confidently ascertained.

Fig. 6. Horse burial in evaluation Trench 10 (Taken from Plate 19, Evaluation Report)



The whole assemblage is broadly assigned to the Roman period on the basis that the features lay beneath an alluvial and marine overburden and all but one sherd of the 333 recovered have been dated to the Roman period, the single sherd being medieval green glaze from the fill of pit 04007 in evaluation Trench 4. This feature produced just seven bone fragments but whether it cut through the dark ‘wetland’ horizon in Trench 4 (see Fig. 3) or lay stratigraphically beneath it is not indicated in the evaluation report. Two bones suggest the possibility of earlier archaeology on the site. They were both found in context 12007 and are horn cores of cattle previously described as ‘celtic shorthorns’, they are small – one very small, and are typically associated with later prehistory. No ceramics were recovered from Trench 12 and these finds might indicate an Iron occupation episode. The evaluation report noted briquetage ‘typical of the 1st century BC being recovered from the site, but the horn cores might fit better a bit earlier in the 1st millennium BC. Such small cattle would be very unusual in 2-3rd century Roman deposits.

The small assemblage unfortunately limits the potential of this collection but a little information can be gleaned. Juvenile and immature cattle are relatively common in the assemblage. Of nine cattle mandibles and skulls with teeth two were adult, one was sub-adult with six classified to calves or immature beasts. Of nineteen bones showing evidence for the state of epiphyseal fusion at least seven derive from calves or immature animals indicating a relatively high 'slaughter' of calves and immature cattle unless as noted above some of these derive from disturbed carcasses. Several small calf bones, some 'chewed/gnawed' suggest casualties rather than food waste and could have derived from scavenged carcasses or 'fallen stock' fed to the dogs. In contrast among the fifteen sheep (technically sheep or goat) bones with epiphyseal data only one indicates a juvenile, although of six mandible or skull fragments with teeth only one is adult with the others dying probably in their first winter or the following spring. The sheep are small and gracile suggesting little evidence for improvement of the stock from earlier Iron Age animals. All the pig bones that allow age to be estimated are juvenile or immature animals, with quite small pigs (piglets?) being utilised for food, since a small skull has been chopped longitudinally through the cranium.

As noted above the evidence for butchery is fairly rare, but a much higher proportion of fragments, 22 in total, have been burnt – rather more sheep than cattle. Eleven bones were recorded with evidence for dog gnawing or tooth marks and included cattle, horse and sheep bones.

Discussion (JG and JR)

The site was wet, probably very wet, with the ditches apparently water filled throughout the year. Almost all the samples produced evidence of these wet conditions with the uncharred plant remains dominated by wetland and aquatic plants, the snails equally showing a dominance of open water, possibly flowing, and other elements indicating a wet environment such as caddis fly larval cases, sticklebacks and ostracods, with water voles and frogs/toad the most numerous of the small terrestrial vertebrates. The few terrestrial snails 'washed' into the ditches suggest local grassland and wet grassland or marshy vegetation, but the plants also indicate species of disturbed (including possible cultivated) ground and 'waste' places suggesting a probable human or grazing animal impact on local areas. If the sequence recorded in ditch 18199 was repeated across the site - 'almost a certainty except perhaps where the Roman ground surface rises', then the conditions became wetter until the wetland covered the former Roman ground surface leading to the development of a marsh/fen silt peat forming the 'dark' horizon that dips in and out of the ditches (Figs. 3 and 5) before possibly becoming an area of open water. This horizon has almost certainly degraded, humified and shrunk since the medieval drainage and reclamation of the area. The 'dark' horizon is overlain by much paler sediments but these in ditch 18199 (Fig. 5) are still full of freshwater snails (Table 8) and it is probable that an organic component in these deposits has been completely lost as a result of them drying out leading initially to the thought that they were marine in origin. The marine sediments are probably represented by the unsampled deposits at the top of the sequence in Fig. 5 and the removed overburden that was above it.

We can put this picture into context by considering the location of the site. In Fig. 7, a lidar image of the area (see also Fig. 36 of the evaluation report), it can be seen that the site is located on the edge of an area of slightly higher ground (cyan and green in the figure) with the modern land surface falling to the west, the pale grey blue colour reflecting an altitude of 0m OD or less. The Lidar images in Fig. 7 and Fig. 36 of the evaluation report show Spalding sitting on an area of higher ground created by the deposition of marine sediments at a time of

relatively higher sea level. The ribbons of higher ground (cyan coloured) visible on Fig. 7 represent former tidal watercourses infilling with mineral sediments, particularly laminated sands and coarse silts, that ran through a landscape of peats and silty peats that have since largely been lost through dessication and degradation. A significant component of this degradation and shrinkage will have occurred in the Iron Age and Roman periods when there was a relative drop in sea level. The loss or reduction of these organic sediments has resulted in the ribbons of mineral sediments now standing proud of the surrounding areas and these ribbons of higher ground are termed roddons. The lack of marine indicators in the upper fill of ditch 18199, and presumably the other ditches on the site, can be attributed to the fact that the site lies in the southern (ie landward) complex of roddons (see Fig. 36 of the evaluation report) and was initially protected from the late and post-Roman rising sea-levels by a body of marine sediments laid down in tidal rivers and estuaries of the prehistoric period that raised the ground to the north protecting this area (Millfield Nursery) from marine inundation until this higher ground was overtopped or circumvented. It was exactly this higher ground that would have been the focus for late Iron Age and Roman settlement as relative sea level dropped in the 1st millennium BC. Millfield Nursery lies at the western edge of a roddon with probable wetland lying to the west contemporary with the Roman occupation. The main focus of settlement at this period would probably have been to the north beneath present day Spalding. Rising water levels in the adjacent wetland, as sea levels rose in the late/post-Roman period, will have begun to saturate the site causing the development of a fen environment and the formation of peats (the dark horizon), subsequently perhaps leading to open water meres as the water level continued to rise. The focus of activity in the 2nd-3rd century AD but an absence of ceramics of 4th century date (Rowlandson 2023) may suggest that by the later Roman period this area had already become too wet for normal agricultural activity and settlement, although this suggestion will have to wait for further sites before it can be confirmed.

Although the ditches appear to have been waterfilled from the time they were dug the archaeological debris in the samples clearly indicates the presence of settlement activity on the site. Fired earth, pottery, burnt stone, animal bone and a little edible marine shellfish all testify to domestic rubbish entering the deposits, with the ash and charcoal rich deposits (Tables 2 and 3) suggesting primary deposits. A scatter of hammer scale (Table 2) also suggests iron smithing on the site in the Roman period. While some of the animal bone may derive from the burial of fallen stock some is butchered or burnt and hence reflects domestic food waste. Whether the fish fall into this category or derive from natural deaths in the ditches is more problematic. Clearly the sticklebacks are likely to be part of the natural death assemblage, but this could be true for the eel and other small fish, none of which were indicative of any great size, although still potentially edible. Only one sample produced marine shellfish and this just a few very small fragments of mussel and cockle, which could possibly have derived from marine sediments on the site rather than be archaeological in origin. The charred plant remains indicate a scatter of debris across the site with sample 6 from evaluation trench 3 being relatively rich in charred cereals and sample 11 in excavation Area A having almost as many chaff fragments as grain. The identified cereals show the consumption of emmer, spelt and barley with just traces of oats and rye probably reflecting contaminants in the cereal crops. The emmer and spelt chaff in sample 11 might indicate cultivation locally, perhaps on the slightly higher drier ground on the roddon to the east or further north. Crop marks are clearly visible in the fields on the east side of the modern River Welland immediately east of the site (see Google Earth images) and at a slightly higher elevation in the centre of the roddon. The range and frequency of foodstuffs recovered is listed in Table 10.

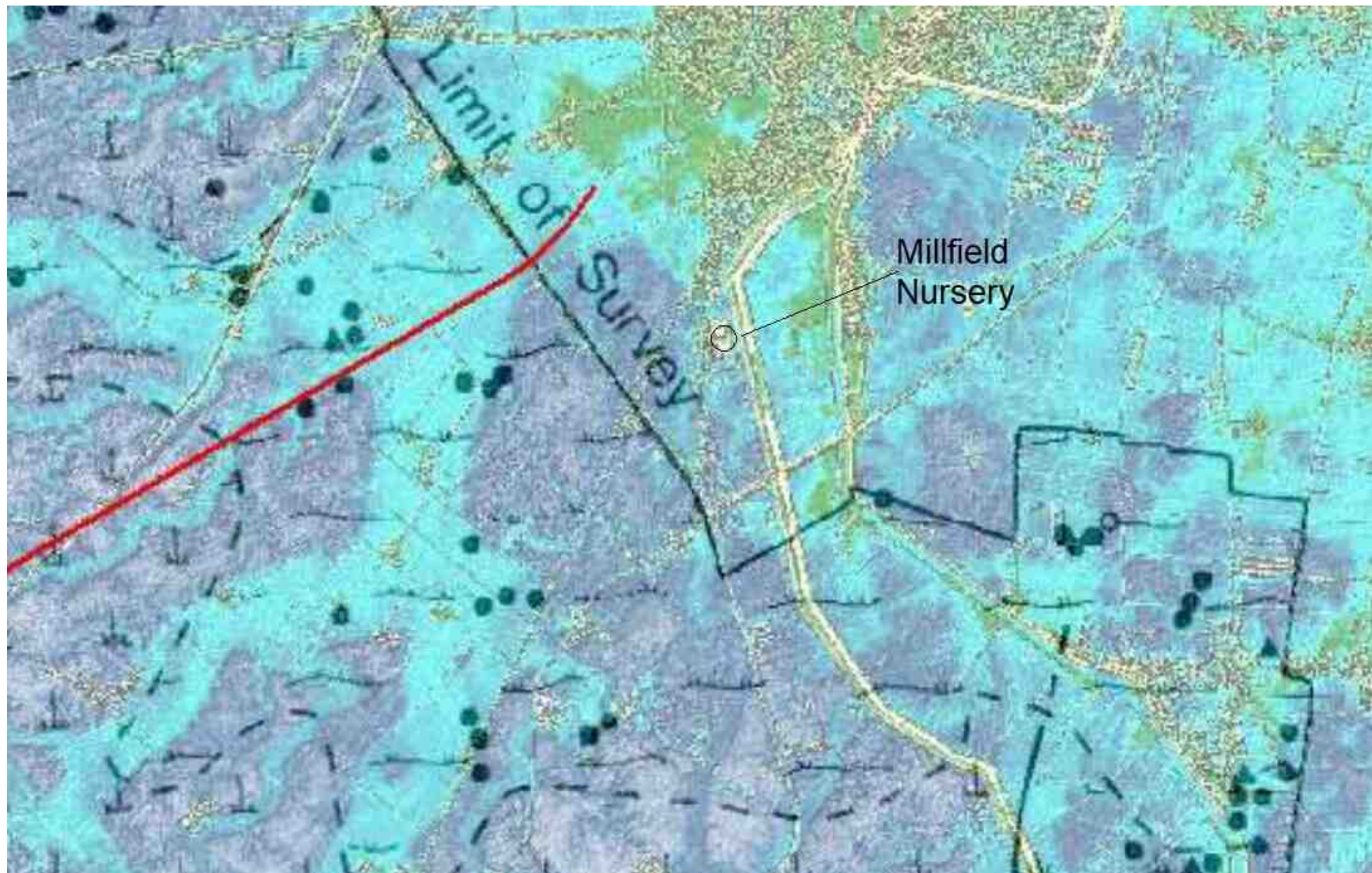


Fig. 7. Taken from Lincolnshire Fenland Lidar S J Malone, Fig. 16. Green and cyan show the higher ground, blue and pale blue/grey the lower ground. The site is marked and lies on the edge of an area of higher ground (cyan).

The dominant elements in the charred plant assemblages are however spike-rush, club rush and other sedges and grasses (Table 4) suggesting the cutting and collection of hay and wetland vegetation for fodder, building material (thatch or fibre for daub – a lack of stone in the local area would suggest mud/daub and stud buildings were more likely), bedding or floor cover. The rushes collected in summer or autumn could even have been used for rushlights. Given the fenland context for this site some of this material could derive from dried peats cut from local peat bogs and used as fuel for the domestic fires. Charcoal is certainly present in all but some of the column samples, but most woodland on the fen is likely to have been carr, a wet woodland of willow and alder, with limited dry woodland available as a resource for fuel. The single find of a charred hazel nutshell fragment in one sample might indicate local hazel, and some fields may have been accompanied by hedgerows affording some wood fuel, but local peat cuttings may have been a major source of domestic fuel particularly in the poorer households.

Table 10. Frequency of samples & hand collected contexts with each taxa/category identified of small terrestrial vertebrates, domestic & food species.

	No samples	No. hand collected contexts SCSP21	No. hand collected contexts SCSG23
total	19	57	21
Horse	2	11	1
Cattle	3	31	10
Cattle size	4	22	4
Sheep/goat	2	22	8
Sheep size	5	9	5
Pig	1	4	4
Dog		1	1
Chicken		1	
Duck		1	
Eggshell – cf chicken	2		
Mouse	1		
Field vole	2		
Water vole	4		
vole	1		
Newt	1		
Frog/toad	5		
Eel	5		
Small fish	4		
Stickleback	7		
Common mussel	1		
Cockle	1		
Free threshing grain	2		
Emmer/spelt grain	4		
Spelt? wheat grain	1		
Wheat grain	6		
Barley grain	5		
Oat grain	1		
Rye? grain	1		
wheat chaff	4		
Emmer chaff	1		
Spelt chaff	1		
Barley chaff	1		
Legume/ possibly <i>Pisum</i> , pea	1		
Hazel nutshell	1		

The animal bones and bird eggshell indicate that horses, cattle, sheep, pigs and chickens were probably kept at the site, and also dogs, with only limited evidence for local fishing and even less for the importation of marine foods such as shellfish and fish from coastal fisheries. Burials of fallen stock and possible disturbed burials make up a significant component of the small bone assemblage, and this area may have been primarily pastoral, perhaps seasonal pasture – which would fit with the limited terrestrial snail evidence, but the excavations within Area A show the site to be relatively ‘busy’ (Fig. 2) implying significant local activity. The relatively high proportion of young cattle and sheep, and a young horse might point towards a pastoral focus, with animal breeding on site, but the bone assemblage is perhaps a little too small to be confident, although lambs and calves do appear to have been born on site.

It appears the site may lie on the periphery of Roman settlement in the area south of present day Spalding, bordering an area of probable wetland fen to the west. The site was clearly wet and became wetter with time perhaps already untenable for occupation in the 4th century AD. The Roman ground surface finally became saturated with the formation of organic deposits and a sequence of sediments above this remained indicative of an open freshwater environment in the upper ditch fills and probably across the whole site. Prior to this deterioration in site conditions there was local occupation, with possible iron smithing, and perhaps a largely pastoral economy, although cereal crops were available to the site. There are traces suggesting that there may have been earlier Iron Age activity on the site, particularly two horn cores of small celtic shorthorn cattle type unlikely to be found on a 2nd-3rd century Roman site.

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© D.James Rackham¹ and John Giorgi²
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¹Environmental Archaeology Consultancy
25 Main Street
South Rauceby
Sleaford
Lincolnshire NG34 8QG

² 6 Puddavine Terrace,
Dartington,
Totnes,
Devon TQ9 6EU

APPENDIX - THE ENVIRONMENTAL ARCHAEOLOGY CONSULTANCY

Key to codes used in the cataloguing of animal bones and marine shells

SPECIES:

SPECIES CODE			SPECIES CODE	
MAN	human		DOVE	Dove species
EQU	Horse		FER	Feral dove
EQSZ	Horse size		PART	Partridge
BOS	Cattle		SWAN?	Swan?
BOSL	Cattle-large		WOOD	Woodcock
CSZ	cattle size		CURL	Curlew
SUS	Pig		WADE	wader
OVCA	sheep or goat		CROK	Crow or rook
OVI	Sheep		CORV	Crow or rook
CRA	Goat		JACK	Jackdaw
SSZ	sheep size		OWL	Owl indet.
FEL	Cat		BUZZ	Buzzard
CAN	Dog		GULL	Gull sp.
AUR	Aurochs			
AUR?	Aurochs?		TURD	Turdidae
CER	red deer		BIRD	Identifiable but not id'd
DAM	Fallow deer		PASS	Passerine
CLS	roe deer		LBIRD	Large bird
LEP	Hare		UNIB	Bird indet
ORC	Rabbit			
LAG	Lagomorph		FROG	Frog
CARN	Carnivore		FRTO	Frog or toad
FOX	Fox			
PINE	Pine marten			
POLE	Polecat/ferret			
WEA	weasel		GAD	Gadid, cod family
BADG	Badger		LING	Ling
SEAL	seal		HADD	Haddock
SQU?	Squirrel?		RAY	ray
BEAV	Beaver		FISH	Fish
ROD	Rodent		UNIF	Fish indet
RAT	Rat			
AGR	Field vole		OYS	oyster
ARV	Water vole		COK	Cockle
MUS	House mouse		MUSS	Common Mussel
SORA	Common shrew		WHELK	Common whelk
MOLE	Mole		HEL	Helix aspersa
SMA	Small mammal		HELIX	Helix sp.
UNI	Unknown		HELN	Helix nemoralis
			SNAIL	snail
CHIK	Chicken			
CHKZ	Chicken size		FOSS	Fossil bone
GOOS	Goose, dom			
GOOS?	Goose, dom.?			
GSSZ	Goose size			
GSSP	Goose species			
GOSZ	Goose, poss. Wild			
DUCK	Duck, domestic sp.			
DUCK?	Duck?			
DKSP	Duck species			
DSP	Duck species indet			
MALL	Duck, dom.			
TURK	Turkey			

BONE ELEMENT:

BONE CODE		BONE CODE	
SKEL	skeleton	SCP	scapula
SKL	skull	HUM	humerus
ANT	antler	RAD	radius
ANT?	antler?	ULN	ulna
ATT	antler tine	RUL	radius and ulna
HC	horn core	C/T	carpus/tarsus
TEMP	temporal	C23	carpus 2+3
FRNT	frontal	CAR	carpus
PET	petrous	CPA	accessory carpal
PAR	parietal	CPI	intermediate carpal
OCIP	occipital	CPR	radial carpal
ZYG	zygomatic	CPU	ulnal carpal
NAS	nasal	MTC	metacarpus
PMX	premaxilla	MC1-5	metacarpus 1-5
MAN	mandible	MTP	metapodial
MNT	mandibular tooth	MPL	lateral metapodial
DLI	deciduous lower incisor	INN	innominate
DLP1-4	deciduous lower premolar 1-4	ILM	ilium
LI	lower incisor (and 1-3)	PUB	pubis
LC	lower canine	ISH	ischium
LPM1-LPM4	lower premolar 1-4	FEM	femur
LM1-LM3	lower molar 1 - molar 3	PAT	patella
MAX	maxilla	TIB	tibia
DUI	deciduous upper incisor	FIB	fibula
UI	upper incisor (1-3)	LML	lateral malleolus
UC	upper canine	AST	astragalus
DUPM	deciduous upper premolar	CAL	calcaneum
DUPM1-4	deciduous upper premolar 1-4	CQ	centroquartal
UPM1-UPM4	upper premolar 1-4	TAR3	tarsus 3
UM1-UM3	upper molar 1 - molar 3	T4	tarsus 4
MXT	maxillary tooth	TAR	tarsus
TTH	indeterminate tooth	MTT	metatarsus
INC	incisor	MT1-5	metatarsus 1-5
HYD	hyoid	MTL	lateral metatarsus
ATL	atlas	SES	sesamoid
AXI	axis	PH1	1st phalanx
CEV	cervical vertebra (and 3-7)	PH2	2nd phalanx
TRV	thoracic vertebra (and 1-13)	PH3	3rd phalanx
LMV	lumbar vertebra	PHL	lateral phalanx
SAC	sacrum	LBF	long bone
CDV	caudal vertebra	UNI	unidentified
VER	vertebra		
STN	sternum	CLV	clavicle
CC	costal cartilage	COR	coracoid
RIB1	first rib (2 etc)	CMP	carpo-metacarpus
RIB	rib	CMC	carpo-metacarpus
		WPH1-3	wing phalanges 1-3
URO	urostyle	WPH	wing phalanx
		LSA	lumbosacrale
DENT	dentary		
CLEI	cleithrum		
RAY	fin ray		
SHELL	shell		
UV	upper valve		
VAL	valve		

NUMBER: number of fragments in the entry

SIDE: W - whole L - left side R - right side F - fragment

FUSION: records the fused/unfused condition of the epiphyses
P - proximal; D - distal; E - acetabulum; N - unfused; F - fused; C - cranial; A - posterior

ZONES: records the part of the bone present.
The key to each zone on each bone is on page 4

BUTCHERY: records whether a bone has been chopped (CH), cut (KN), worked (W), burnt (C)

GNAWING: records if a bone has been gnawed by dogs (DG), cats (FEL) or rodents (RG)

TOOTH WEAR - Codes are those used in Grant, A. 1982 The use of tooth wear as a guide to the age of domestic animals, in B.Wilson, C.Grigson and S.Payne (eds) *Ageing and sexing animal bones from Archaeological sites*, 91-108.

Teeth are labelled as follows in the tooth wear column:

Deciduous	Permanent
f ldp2/dup2	F lpm2/upm2
g ldp3/dup3	G lpm3/upm4
h ldp4/dup4	H lpm4/upm4
	I lm1/um1
	J lm2/um2
	K lm3/um3

MEASUREMENTS :Any measurements are those listed in A.Von den Driesch (1976) *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum Bulletin 1, Peabody Museum, Harvard, USA

Some measurements have been taken on juveniles. Measurements marked L1 are the greatest length of long bones lacking one unfused epiphysis – the measurement being taken from the epiphyseal junction. Measurements marked L2 are the greatest length of the long bones between epiphyseal junctions when both epiphyses are unfused.

PATHOLOGICAL: A 'P' indicates that the bone fragment carries a pathology

COMMENTS: This may include a short description of the fragments, any pathologies, butchery or gnawing evidence

PRESERVATION: records the condition of the bone in the following manner

- 1- enamel only surviving
- 2- bone very severely pitted and thinned, tending to break up; teeth with surface erosion and loss of cementum and dentine
- 3- surface pitting and erosion of bone, some loss of cementum and dentine on teeth
- 4- surface of bone intact, loss of organic component, material chalky, calcined or burnt
- 5- bone in good condition, probably with some organic component

ZONES - codes used to define the zones on each bone

SKULL	1. paraoccipital process	METACARPUS	1. medial facet of proximal articulation, MC3
	2. occipal condyle		2. lateral facet of proximal articulation, MC4
	3. intercornual protuberance		3. medial distal condyle, MC3
	4. external acoustic meatus		4. lateral distal condyle, MC4
	5. frontal sinus		5. anterior distal groove and foramen
	6. ectorbitale		6. medial or lateral distal condyle
	7. entorbitale		
	8. temporal articular facet	FIRST PHALANX	1. proximal epiphysis
	9. facial tuber		2. distal articular facet
	0. infraorbital foramen		
		INNOMINATE	1. tuber coxae
MANDIBLE	1. Symphyseal surface		2. tuber sacrale + scar
	2. diastema		3. body of illium with dorso-medial foramen
	3. lateral diastemal foramen		4. iliopubic eminence
	4. coronoid process		5. acetabular fossa
	5. condylar process		6. symphyseal branch of pubis
	6. angle		7. body of ischium
	7. anterior dorsal ascending ramus posterior M3		8. ischial tuberosity
	8. mandibular foramen		9. depression for medial tendon of rectus femoris
VERTEBRA	1. spine	FEMUR	1. head
	2. anterior central epiphysis		2. trochanter major
	3. posterior central epiphysis		3. trochanter minor
	4. centrum		4. supracondyloid fossa
	5. neural arch		5. distal medial condyle
			6. lateral distal condyle
SCAPULA	1. supraglenoid tubercle	TIBIA	7. distal trochlea
	2. glenoid cavity		8. trochanter tertius
	3. origin of the distal spine		
	4. tuber of spine		1. proximal medial condyle
	5. posterior of neck with foramen		2. proximal lateral condyle
	6. cranial angle of blade	CALCANEUM	3. intercondylar eminence
	7. caudal angle of blade		4. proximal posterior nutrient foramen
			5. medial malleolus
HUMERUS	1. head		6. lateral aspect of distal articulation
	2. greater tubercle		7. distal pre-epiphyseal portion of the diaphysis
	3. lesser tubercle		
	4. intertuberal groove	METATARSUS	1. calcaneal tuber
	5. deltoid tuberosity		2. sustentaculum tali
	6. dorsal angle of olecranon fossa		3. processus anterior
	7. capitulum	METATARSUS	1. medial facet of proximal articulation, MT3.
	8. trochlea		2. lateral facet of proximal articulation, MT4
	9. coronoid fossa		3. medial distal condyle, MT3
	0. teres tubercle		4. lateral distal condyle, MT4
RADIUS	1. medial half of proximal epiphysis		5. anterior distal groove and foramen
	2. lateral half of proximal epiphysis		6. medial or lateral distal condyle
	3. posterior proximal ulna scar and foramen		
	4. medial half of distal epiphysis		
	5. lateral half of distal epiphysis		
	6. distal shaft immediately above distal epiphysis		
ULNA	1. olecranon tuberosity		
	2. trochlear notch- semilunaris		
	3. lateral coronoid process		
	4. distal epiphysis		

Archive catalogue of animal bone from Spalding - SCSP21 and SCSG23

site	context	species	bone	no.	wt.g.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
SCSP21	02008	SSZ	LBF	1	2	F								MIDHSFAT FRAGMENT- 3 PIECES	4
SCSP21	03003	BOS	MAN	1	65	R		7			K3			POST DORSAL HORI RAMUS WITH UNERUPOTED M3- 2 PIECES	4
SCSP21	03003	CSZ	LBF	1	2	F								INDET SHAFT FRAGMENT	4
SCSP21	03004	BOS	MTC	1	13	L				DG				2 THIRDS SHAFDT-SMALL-POROUS-CALFPROX END CHEWED	4
SCSP21	03004	OVCA	SCP	1	5	R								DISTAL HALF BLADE- 2 PIECES-IMM?	4
SCSP21	03009	BOS	MAN	1	8	F								VENTRAL FRAG HORI RAMUS-SMALL-JUV/IMM	4
SCSP21	03009	BOS	MAN	1	187	L		47			h17 I14J11K3			HORI RAMUS WITH DP4-M3 TOOTH ROW AND PART ASC- 6 PIECES	4
SCSP21	03009	OVCA	MAN	1	6	L					I10J6			2 LOOSE TEETH-MANDIBLE LOST?-SK1?	4
SCSP21	03009	OVCA	MAN	1	5	R					I10J6			2 LOOSE TEETH-MANDIBLE LOST?-SK1?	4
SCSP21	03009	OVCA	SKL	1	8	F								LOOSE UM2-LEFT AND RIGHT SIDE-SKULLGONE?? SK1?	4
SCSP21	03009	OVCA	TIB	1	10	L		4						2 THIRD MIDSHAFT-GRACILE-SMALLNOT POROUS-PREHIST??	4
SCSP21	03009	OVCA	TIB	1	4	R								FRAG DISTAL SHAFT-SAME ANIMAL AS ABOVE TIB?	4
SCSP21	04006	BOS	DLP4	1	9	L					h14			COMPLETE-SAME JAW AS ABOVE?	4
SCSP21	04006	BOS	LM1	1	18	L					I9			COMPLETE	4
SCSP21	04006	CSZ	LBF	1	4	F								SHAFT FRAGMENT-POSS OFF EQU FEM	4
SCSP21	04006	CSZ	SKL	1	6	F								FRAGMENT	4
SCSP21	04006	EQU	FEM	1	31	F								DISTAL SHAFT FRAGMENT- 2 PIECES	4
SCSP21	04006	EQU	UT	1	26	L								COMPLETE-WELL WORN	4
SCSP21	04006	EQU	UT	1	27	R								COMPLETE-WELLWORN-SAME SKULL AS ABOVE?	4
SCSP21	04011	BOS	MTT	1	38	F	DN			DG				MID AND DISTAL SHAFT--FUSING DOWN MIDLINE-SMALL-POROUS-CALF- 2 PIECES	4
SCSP21	04011	BOS	RIB	1	49	R								DISTAL HALF SHAFT	4
SCSP21	04011	BOS	SCP	1	5	L								DISTAL BLADE-SMALL-POROUS-CALF	4
SCSP21	04011	CAN	INN	1	15	R	EF	345						ILIAL SHAFT AND PART ACETAB- 2 PIECES	4
SCSP21	04011	OVCA	LMV	1	4	F	CNAF	24						CENTRUM AND ANT ZYGA	4
SCSP21	04012	OVCA	TIB	1	20	R		4						MOST OF SHAFT-LONG GRACILE-PREHIST?	4

site	context	species	bone	no.	wt.g.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
SCSP21	04012	SSZ	LBF	1	6	F								MID/DISTAL SHAFT-ERODED-POSS MTT	3
SCSP21	04013	BOS	MAN	1	14	R		5						CONDYLE-SMALLISH	4
SCSP21	04013	CSZ	UNI	1	7	F								POSS SCAPULA BLADE FRAG	4
SCSP21	04013	EQU	SKL	1	13	F								SUPRAORBITAL FRAGMENT	4
SCSP21	04013	EQU	SKL	1	130	F				IJK				M1-3-MED WORN-LOOSE	4
SCSP21	04013	EQU	SKL	2	16	F								FRAGMENTS	4
SCSP21	04013	OVCA	MTC	1	14	L								MOST OF SHAFT AND BIT PROX END	4
SCSP21	04015	OVCA	LMV	1	6	F	CJAJ	2345						CENTRUM AND NEURAL ARCH	4
SCSP21	05010	CSZ	CEV	1	8	F								FRAGMENT	4
SCSP21	05014	CSZ	RIB	1	15	F								MIDHSFAT - 2 PIECES	4
SCSP21	06003	OVCA	HUM	1	22	R	DF	6789				SD-14.9 BT-28.8 HT5-19.2		DISTAL HALF	4
SCSP21	06005	CSZ	LBF	1	5	F			C					CALCINED SHAFT FRAGMENT	4
SCSP21	06005	CSZ	LBF	2	4	F			C					CALCINED SHAFT FRAGMENT	4
SCSP21	06005	CSZ	LBF	1	4	F			C					CALCINED SHAFT FRAGMENT	4
SCSP21	06005	CSZ	UNI	4	12	F			C					CALCINED FRAGMENTS BONE-PROX END?RAD?	4
SCSP21	06005	EQU	MTC	1	181	R	DF	123				GL-220 Bp-46.2 Dp-31 SD-31.5 Bd-47.3 Dd-35		COMPLETE	4
SCSP21	06005	OVCA	CQ	1	2	W			C					COMPLETE-CALCINED	4
SCSP21	06005	OVCA	MAN	1	4	R		5						CONDYLE AND PART VENTRAL ASC RAMUS	4
SCSP21	06005	OVCA	MTT	1	2	F								ANT MIDSHAFT FRAGMENT	4
SCSP21	06005	SUS	SCP	1	3	R								CAUDAL MARGTIN BLADE	4
SCSP21	06005	UNI	UNI	1	4	F								INDET FRAGMENT	4
SCSP21	06006	EQU	MTC	1	17	R								PROX MEDIAL SHAFT FRAGMENT	4
SCSP21	06006	EQU	MTCL	1	5	F								SHAFT LATERAL MTC-POSS FROM ABOVE	4
SCSP21	06006	OVCA	CEV	1	9	F	CFAF	234						CENTRUM AND ZYGA FOR RIGHT SIDE- 2 PIECES	4
SCSP21	06006	UNI	UNI	1	1	F								INDET-SES?	4
SCSP21	06007	CSZ	HUM	1	40	F	PF	1						PART OF FUSED HEAD	4
SCSP21	06007	CSZ	LBF	1	4	F								SHAFT FRAG-PROB FEMUR	4
SCSP21	06007	CSZ	SKL	1	11	F								FACIAL FRAGMENT	4
SCSP21	06007	EQU	MPL	1	7	F								TIP LOST	4
SCSP21	06007	OVCA	RAD	1	13	L		3	CH					MOST OF SHAFT- PROX AND MIDSHAFAT CHOPPED MEDIALY	4
SCSP21	06007	OVCA	TRV	1	2	F	CN	4						ANT CENTRUM	4

site	context	species	bone	no.	wt.g.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
SCSP21	06007	SUS	TIB	1	11	F			CH					PROX MIDSHAFT FRAGMENT-CHOPPED THRU SHAFT	4
SCSP21	06008	OVI	SKL	1	22	R		48HC						HORN CORE, PART FRNT, PAR AND TEMP-4 PIECES-EWE/CAST	4
SCSP21	06011	CSZ	LBF	1	12	F								SHAFT FRAGMENT	4
SCSP21	06012	CSZ	LBF	1	23	F								MIDSHAFT FRAGMENT	4
SCSP21	06012	CSZ	LBF	1	10	F								SHAFT FRAGMENT	4
SCSP21	06012	EQU	CAR	1	4	W		1						CARPAL - SK?	4
SCSP21	06012	EQU	INN	1	407	LR	EF	2233455677	48					BOTH Pelves- 7 PIECES-SAME ANIMAL - SK?	4
SCSP21	06012	EQU	MAN	2	853	RL		237						FRAGMENTED RAMI-BOTH L & r-SAME ANIMAL-38 PIECES-ADULT-TEETH-MED-WORN-SK?	4
SCSP21	06012	EQU	RIB	1	7	F								PROX SHAFT-ERODED- SK?	3
SCSP21	06012	EQU	SKL	1	8	F								ZYGOMATIC ARCH FRAG - SK?	4
SCSP21	06013	BOS	RAD	1	120	L	PNDN	36		DG		L2-215		MOST OF SHAFT-CALF-DISTAL CHEWED	4
SCSP21	06015	BOS	MAN	1	10	R		6						ANGLE OF JAW-SL POROUS-FAIRLY SMALL-IMM?	4
SCSP21	06015	BOS	MTC	1	135	L	DF	12345				GL-178 Bp-48.4 Dp-29 SD-28.2 Bd-50.5 Dd-28.3		COMPLETE-SMALL	4
SCSP21	06015	CSZ	CC	1	1	F								COSTAL CARTILAGE	4
SCSP21	06015	OVCA	HUM	1	11	L	DF	6789				BT-28.8 HT-18.6		DISTAL END	4
SCSP21	06018	SSZ	LBF	1	3	F			C					CALCINED SHAFT FRAGMENT- 2 PIECES	4
SCSP21	06018	SSZ	RIB	1	1	R								PROX SHAFT FRAGMENT	4
SCSP21	06025	BOS	TRV	1	13	F								BASE SPINE AND PART NEURAL ARCH	4
SCSP21	06025	CSZ	RIB	1	30	F								DISTAL SHAFT- 2 PIECES	4
SCSP21	06025	EQU	MAN	1	27	R			CH					POST EDGE ASC RAMUS	4
SCSP21	06025	SSZ	RIB	1	1	R			C					CHARRED PROX SHAFT	4
SCSP21	06026	BOS	LI	1	3	R								UNWORN	4
SCSP21	06026	BOS	LM	1	6	F								M1/2 ONE CUSP UNWORN	4
SCSP21	06026	BOS	MAN	1	30	L								VENTRAL FRAGMENT HORI RAMUS	4
SCSP21	06026	BOS	MAN	1	313	R		12345678		DG	fgh14 l12J7			COMPLETE - 3 PIECES-M3 LOST PROBABLY ERUPTING-ANGLE CHEWED	4
SCSP21	06026	OVCA	AST	1	4	R		1				L1-28.1 L2-27.3 Bp-20.2		COMPLETE-SOME PERIPHERAL DAMAGE	4
SCSP21	06026	OVCA	AST	1	4	R		1				L1-27.2 L2-25 BGp-19.3 Bd-17.9 Dd-13.1		COMPLETE	4
SCSP21	06026	OVCA	MTT	1	15	F				DG				2 THIRDS SHAFT- BOTH ENDS CHEWED	4

site	context	species	bone	no.	wt.g.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
SCSP21	06026	SSZ	TRV	1	1	F		1						PART OF SPINE	4
SCSP21	06026	SSZ	TRV	1	1	F								SMALL FRAGMENT	4
SCSP21	06029	OVCA	SCP	1	24	L		34						SPINE AND CAUDAL MARGIN- 3 PIECES	4
SCSP21	06029	SSZ	LBF	1	1	F								INDET SHAFT FRAGMENT	4
SCSP21	06029	UNI	RIB	1	1	F								INDET-POROUS	3
SCSP21	06032	OVCA	HUM	1	6	F								PROX SHAFT FRAGMENT	4
SCSP21	06048	OVCA	LI	1	1	R								MED WEAR	4
SCSP21	06057	SSZ	UNI	1	0.5	F								INDET FRAGMENT	4
SCSP21	06060	OVCA	RAD	1	4	R	PF	12						CALCINED PROX END	4
SCSP21	06061	CSZ	UNI	1	3	F								INDET FRAGMENT	4
SCSP21	06061	EQU	MAN	1	86	L		3						SYMPHYSEAL FRAGMENT WITH PARTS Z1 AND 3- 6 PIECES- 3 INCISORS	4
SCSP21	06062	CHIK	ULN	1	2	L						L-76		COMPLETE	4
SCSP21	06062	SUS	SKL	1	30	L			CH					POST DORSAL PAR AND OCCIP-POROUS-SMALL-JUV/IMM-CHOPPED DOWN R SIDE	4
SCSP21	06062	UNI	UNI	1	2	F								INDET	4
SCSP21	07003	BOS	MTT	1	41	F								SPLIT MIDSHAFT FRAGMENT	4
SCSP21	07005	BOS	MTC	1	120	L		125				Bp-50.6 Dp-30.7 SD-29		PROX END AND MOST OF SHAFT	4
SCSP21	07010	EQU	SCP	1	192	R	DF	12345				GLP-61.1 LG-55.7 SLC-53.9		GLENOID NECK AND DISTAL 2 THIRD BLADE-SURFACE ERODED	3
SCSP21	07027	BOS	MAN	1	20	R								LATERAL FRAG ANT HORI RAMUS-WITH PM ALVEOLI-POSS SAME AS ABOVE	4
SCSP21	07027	CSZ	MAN	1	5	F								LATERAL FRAG HORI RAMUS	4
SCSP21	07035	EQU	UM	1	25	W							P	BAD UNEVEN WEAR ON CUSP-POST PEAK!	4
SCSP21	07035	SUS	PH2	1	2	R	PN	2						LACKING PROX EPI	4
SCSP21	08005	BOS	SKL	1	19	R		2						OCCIPITAL CONDYLE	4
SCSP21	08009	DUCK	TIB	1	1	L								DISTAL HALF - 3 PIECES- SMALLER THAN MALLARD	4
SCSP21	08021	BOS	MAN	1	10	FL								MEDIAL FRAG HORI RAMUS WITH ALVEOLI	4
SCSP21	09002	BOS	MAN	1	3	F								FRAGMENT CORONOID PROCESS	4
SCSP21	09004	BOS	INN	1	14	F								ILIAL SHAFT FRAGMENT	4
SCSP21	09004	UNI	SCP	1	2	F								SMALL BLADE FRAGMENT	4
SCSP21	09009	BOS	RAD	1	107	R	PFDN	1236				L1-192 SD-30.1		PROX END AND SHAFT-DISTAL EPI LOST-JUV/IMM	4
SCSP21	09010	BOS	MAN	1	399	R		12345678			g12h15			COMPLETE - 4 PIECES-	4

site	context	species	bone	no.	wt.g.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
											G3I13J11K4				
SCSP21	09010	BOS	RIB	1	34	R								DISTAL MIDSHAFT- 2 PIECES	4
SCSP21	09010	BOS	SKL	1	44	R					g12h14			FRAGMENT MAXILLA - 7 PIECES-JUV/IMM	4
SCSP21	09010	CSZ	RIB	2	9	F								SPLIT SHAFT FRAGMENT	4
SCSP21	09012	BOS	MTT	1	158	L	DF	12345				GL-200 Bp-40.6 Dp-38.2 SD-24 Bd-47.6 Dd-27.5		COMPLETE-SMALLISH	4
SCSP21	09013	CSZ	LBF	1	12	F								SHAFT FRAGMENT	4
SCSP21	10011	BOS	FEM	1	75	L								2 THIRDS SHAFT- 2 PIECES-SOME SURFACE EROSION	4
SCSP21	10011	EQU	SKELa	1	665	P								POST SKUL-SYMPHYSES UNFUSED- ATL-TRV2-CNAN-10PIECES-COMplete	4
SCSP21	10011	EQU	SKELb	1	734	P								RIBS-ULN/PN-3TRV/CNAN-STN-PH1/PN- PH2/PN-CAR-MTL-HUMPN-RAD/DN-63 PIECES	4
SCSP21	10011	EQU	SKELc	1	1065	P								SCP/DN-HUM/DJ-RAD/PJDN-MTC/DC-5 BONES	4
SCSP21	10011	EQU	SKELd	1	1098	P								ALL TEETH-34-DEC UPM-UNWORN INCISORS-P2MED WEAR-M2UNWORN- M3PROB ERUPTING	4
SCSP21	10011	EQU	SKELe	1	602	L/R		1123677445	58					MANDIBLES- 15 PIECES-BOTH JAWS- INCISORS ERUPTING	4
SCSP21	10011	EQU	SKELf	1	857	P								94 FRAGMENTS SKULL-	4
SCSP21	10011	EQU	SKELg	1	60	P								56 SMALL SKULL FRAGMENTS	4
SCSP21	11013	BOS	HUM	1	77	L		69		DG				SPLIT DISTAL SHAFT-DISTAL END CHEWED	4
SCSP21	11013	BOS	MAN	1	10	F								ANT VENTRAL FRAG HORI RAMUS	4
SCSP21	11013	BOS	MTT	1	8	F				DG				PROX ANT SHAFT FRAGMENT-PROX END CHEWED	4
SCSP21	11013	BOS	SKL	1	324	F		99			fg14h15 I14J9K4			MAXILLA AND ZYGOMATIC ARCH- FRAGMENTED - 56 PIECES-JUV/IMM	4
SCSP21	11013	CSZ	RIB	1	6	F								SHAFT FRAGMENT	4
SCSP21	11013	CSZ	RIB	1	5	F								SHAFT FRAGMENT	4
SCSP21	11013	CSZ	RIB	1	7	F								SHAFT FRAGMENT	4
SCSP21	11013	CSZ	UNI	1	3	F								INDET FRAG-LONG BONE SHAFT?	4
SCSP21	11017	BOS	RIB	1	16	L								MIDSHAFT- 2 PIECES	4
SCSP21	11017	CSZ	RIB	1	2	F								SPLIT PROX RIB FRAGMENT	4
SCSP21	11017	CSZ	SKL	1	3	F								CRANIAL FRAGMENT-2 PIECES	4
SCSP21	11017	OVCA	RAD	1	10	L	PF	123				SD-12.2		PROX END AND MOST OF SHAFT-SMALL- DISTAL PROBABLY UNFUSED-DISTAL	4

site	context	species	bone	no.	wt.g.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
														ERODED	
SCSP21	11020	BOS	AXI	1	31	F		24						ANT CENTRUM AND ODONTOID PEG	4
SCSP21	11020	BOS	FEM	1	30	L		4						SHAFT FRAGMENT WITH PROX PART FOSSA	4
SCSP21	11020	BOS	MAN	1	44	R								VENTRAL PART HORI RAMUS	4
SCSP21	11020	BOS	SKL	1	109	F		4822						10 FRAGMENTS-OCCIP-TEMP-FRNT-ALL SAME SKULL?	4
SCSP21	11028	BOS	LM	1	16	R					I11			PROBABLY M1?	4
SCSP21	11028	BOS	SKL	1	13	F								CRANIAL FRAG- 2 PIECES	4
SCSP21	11028	BOS	SKL	1	7	F								CRANIAL FARGS-PART OF ABOVE?	4
SCSP21	11028	BOS	SKL	1	5	F								BASIOCCIPITAL-PART OF ABOVE?	4
SCSP21	11028	BOS	SKL	1	16	F								BASE OF HORN CORE- 3 PIECES-PART OF ABOVE?	4
SCSP21	11028	BOS	TIB	1	20	L	DN	7				SD-17.8		DISTAL HALF SHAFT-SMALL-CALF	4
SCSP21	11028	BOS	UM3	1	35	R					K15			ROOT BROKEN	4
SCSP21	11028	CSZ	UNI	1	1	F			C					INDET CALCINED FRAGMENT	4
SCSP21	11029	BOS	FEM	1	80	L	DN	48				SD-21.7		MOST OF SHAFT- 2 PIECES-SMALL-JUV	4
SCSP21	11029	CSZ	SKL	1	6	F								CRANIAL FRAGMENT	4
SCSP21	11029	OVCA	TRV	1	4	F	CNAN	45						POST THORACIC VERT	4
SCSP21	12006	BOS	SKL	1	102	F		9			H12I15K15			MAXILLA FRAGS WITH LEFT AND RIGHT TEETH- 6 PIECES	4
SCSP21	12006	BOS	SKL	1	30	F								FRAGMENT WITH PETROUS-POSS SAME SKULL AS ABOVE	4
SCSP21	12006	OVCA	UM1	1	3	R					I14			COMPLETE	4
SCSP21	12006	OVCA	UM3	1	6	L					K12			COMPLETE-STAGE 12 JUST REACHED	4
SCSP21	12007	BOS	CPI	1	7	W		1						COMPLETE	4
SCSP21	12007	BOS	CQ	1	20	W		1						COMPLETE	4
SCSP21	12007	BOS	HC	1	23	L		1						VERY SMALL 'CELTIC' SHORT HORN-6CM LONG EXTERNAL	4
SCSP21	12007	BOS	HC	1	48	L		1						SMALL CELTIC SHORT HORN-- 9.5 EXTERNAL LENGTH-OVAL	4
SCSP21	12007	BOS	MAN	1	338	R		1234578			FGH7I14J12K9			COMPLETE EXCEPT FOR ANGLE	4
SCSP21	12007	BOS	PH1	1	14	R	PF	12						COMPLETE- 2 PIECES-SL PROOUS-IMM?	4
SCSP21	12007	BOS	PH2	1	6	L	PF	1						PROX END-DISTAL BROKEN OFF	4
SCSP21	12007	BOS	PH2	1	8	R	PF	12	?					PROX END DAMAGED POSS CHOPPED	4
SCSP21	12007	BOS	TIB	1	19	L						SD-19.8		MIDSHAFT-SMALL-POROUS-0JUV/IMM	4
SCSP21	12007	CSZ	SKL	3	4	F								CRANIAL FRAGS	4
SCSP21	14005	BOS	RUL	1	218	R	PFDf	123456/3		DG		GL-238 Bp-68.4 Dp-33.6		RADIUS COMPLETE-SOME SL DAMAGE-	4

site	context	species	bone	no.	wt.g.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
												SD-33.5 Dd-36.7		ULNA MPROX SHAFT AND DISTAL SEMILUNARIS- 2 PIECES	
SCSP21	14006	BOS	MAN	1	27	R		13						SYMPHYSIS	4
SCSP21	14006	OVCA	MAN	1	1	F			C					CALCINED LATERAL FRAG HORTI NRAMUS	4
SCSP21	14006	OVCA	MAN	1	1	R		7	C					CALCINED ZONE 7	4
SCSP21	14006	OVCA	SCP	1	1	R	DF	2	C					CALCINED GLENOID FRAG	4
SCSP21	14006	OVCA	TIB	1	6	F			C					DISTAL SHAFT-CALCINED- 4 PIECES	4
SCSP21	14006	SSZ	HUM	1	1	F			C					CALCINE SHAFT5 FRAGMENT	4
SCSP21	14006	SSZ	RIB	1	1	F			C					CALCINED SHAFT FRAG	4
SCSP21	14006	SSZ	TRV	1	1	F	CNAN	4						CENTRUM ONLY'FLAT BOTTOMED"?	4
SCSP21	14007	BOS	LMV	4	119	F	CNAN	44445531						FOUR LUMBAR VERT-SAME ANIMAL?- 9 PIECES	4
SCSP21	14010	BOS	RAD	1	121	L	PF	123				Bp-68.5 Dp-35.9 SD-34.2		PROX THIRD	4
SCSP21	14010	BOS	TIB	1	232	L	PF	1234				SD-30.8		PROX END AND MOST OF SHAFT- 2 PIECES	4
SCSP21	14010	OVCA	TIB	1	8	L								DISTAL SHAFT	4
SCSP21	14010	SSZ	LBF	1	1	F								INDET SHAFT FRAGMENT	4
SCSP21	14010	SSZ	RIB	1	1	F								DISTAL SHAFT FRAGMENT	4
SCSP21	14010	SSZ	RIB	1	1	R								PROX SHAFT	4
SCSP21	14010	UNI	UNI	1	1	F								INDET	4
SCSP21	15004	CSZ	RIB	1	11	F								MIDSHAFT FRAGMENT- 2 PIECES	4
SCSP21	15004	CSZ	RIB	1	4	F								SHAFT FRAGMENT	4
SCSP21	15004	CSZ	VER	2	14	F								INDET FRAGMENTS	4
SCSP21	17008	EQU	RAD	1	163	R	PF	123				Bp-71 Dp-39		PROX END AND SPLIT HALF SHAFT- 2 PIECES-ADULT-DIST ULN SHAFT FUSED ON	4

site	context	species	bone	no.	wt g.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
SCSG23	18009	CAN	SKEL	1	139	P	CFAF	FEM-TIB/PF				ULN-GL-156	P	16 PIECES-LMV-RAD-HUM-TIB-ULN-FEM-INN-MTP-BADLY BROKEN BUT HEALED PROX FEM-LAME	4
SCSG23	18022	BOS	MAN	1	34	L		23						SYMPHYSIS AND DIASTEMA FRAGMENT	4
SCSG23	18022	BOS	PH1	1	15	R	PF	1						PROX 2 THIRDS	4
SCSG23	18022	BOS	PH3	1	16	R		1						COMPLETE	4
SCSG23	18022	BOS	SKL	1	12	L								ZYGOMATIC ARCH	4
SCSG23	18022	EQU	FEM	1	187	R		48		DG		SD-30.6		MOST OF SHAFT-DISTRAL END CHEWED	4
SCSG23	18022	SNAIL	SHELL	2	2	W								PLANORBIS CORNEUS	4
SCSG23	18022	SSZ	RIB	1	5	F								PROX MIDSHAFT-PIG SIZE?	4
SCSG23	18022	SUS	TIB	1	14	R	PN							PROX SHAFT FRAGMENT	4
SCSG23	18029	OVCA	RAD	1	10	L	PF	123						PROX END-2 THIRDS SHAFT-SMALL-GRACILE-SURFACE EROSION	3
SCSG23	18029	UNI	INN	1	5	F								LATERAL FRAGMENT ILIAL SHAFT-PIG OR BIGGER	4
SCSG23	18031	BOS	MAN	1	271	R		12345678			fgh14 I12J7K1			COMPLETE- 6 PIECES-INCISORS UNERUPTED-OLD CALF?	4
SCSG23	18035	BOS	CEV	1	78	W	CNAN	145						LACKING EPIPHYSES	4
SCSG23	18036	OVCA	RAD	1	17	R	PF	1		DG				2 THIRDS SPLIT SHAFT-DISTAL END CHEWED-GRACILE	4
SCSG23	18036	SSZ	UNI	1	1	F								INDET FRAG-SKL/VERT?	4
SCSG23	18038	BOS	SCP	1	179	L	DF	1235				GLP-58 LG-47.6 SLC-40.4		GLENOID-NECK AND HALF SPINE AND BLADE	4
SCSG23	18057	BOS	CPI	1	8	W		1						COMPLETE	4
SCSG23	18057	BOS	MAN	1	16	R		7						ANT FRAG ASC RAMUS- 3 PIECES	4
SCSG23	18068	CSZ	RIB	1	24	L								MIDSHAFT	4
SCSG23	18077	BOS	MTT	1	14	F	PN	12						PROX END AND 2 THIRDS SHAFT-PROX UNFORMED-SMALL-POROUS-CALF	4
SCSG23	18077	OVCA	HUM	1	12	L	PNDC	567890				L1-100.3 SD-9.5 BT-24.7 HT-15.7		DISTAKL END AND SHAFT-EPI LOST-SMALL GRACILE-OLD LAMB	4
SCSG23	18115	OVCA	MAN	1	3	R					fgh12			ANT RAMUS WITH NP2-P4-LAMB-SMALL	4
SCSG23	18115	OVCA	RAD	1	5	L								SPLIT PROX MEDIAL SHAFT FRAGMENT	4
SCSG23	18115	SSZ	LBF	1	2	F								INDET SHAFT FRAGMENT	4
SCSG23	18115	SSZ	RIB	1	1	R								PROX MIDSHAFT FRAGMENT-SMALL	4
SCSG23	18115	SUS	MAN	1	12	L		6						VENTRAL ANGLE FRAGMENT-POROUS-SMALL-JUV	4
SCSG23	18115	SUS	SKL	1	35	L		9			I9J6K2			MAXILLA FRAG WITH M1/M2 MR UNERUPTED	4

site	context	species	bone	no.	wt g.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment	preservation
SCSG23	18117	BOS	FEM	1	7	F								ANT DISTAL SHAFT FRAGMENT- 2 PIECES-SMALL-POROUS-CALF	4
SCSG23	18117	BOS	MAN	1	12	L		4		DG				PART CORONOID-TOOTH MARKS-VERY SMALL-CALF- 2 PIECES	4
SCSG23	18117	CSZ	LBF	1	9	F								PROX SHAFT FRAGMENT	4
SCSG23	18121	OVCA	LM1/2	1	3	R					I/J6			ROOT BROKEN	4
SCSG23	18126	OVCA	PH2	1	1	R	PF	12	C					COMPLETE-CALCINED-SMALL	4
SCSG23	18127	BOS	HUM	1	36	F			DG					PROX SHAFT FRAGMENT-TOOTH MARKS	4
SCSG23	18127	BOS	SKL	1	41	L		0			J5/6			FRAGMENT MAXILLA - 5 PIECES WITH M2 JUST ERUPTED	4
SCSG23	18161	BOS	RUL	1	125	L	PF	13/3	CH					FUSED PROX RAD & ULN-CHOPPED THRU Z2	4
SCSG23	18189	OVCA	CQ	1	1	F			C					CALCINED- 2 PIECES-SMALL	4
SCSG23	18189	SSZ	LBF	1	2	F			C					CALCINED SHAFT FRAG- 4 PIECES	4
SCSG23	18189	UNI	SKL	1	0.5	F								POROUS-INDET	4
SCSG23	18194	CSZ	RIB	1	3	F								MID-DISTAL SHAFT FRAGMENT-SMALL	4
SCSG23	18194	SUS	SKL	1	55	F	SN	55						FRNT-PAR-TEMP-SUTURES OPEN/UNFUSED-11 PIECES	4
SCSG23	18196	BOS	AST	1	7	L			C					CHARRED PROX FRAG ASTRAGLUS	4
SCSG23	18196	SSZ	LBF	2	2	F								INDET SHAFT FRAGMENTS-SMALL-?HUM SG	4
SCSG23	18197	CSZ	LBF	1	5	F								SPLIT MIDSHAFT FRAGMENT	4
SCSG23	18197	SUS	RIB	1	3	R		1						PROX SHAFT-SL POROUS-JUV/IMM	4
SCSG23	18205	OVCA	CEV	1	18	W	CJAN	1245						COMPLETE EXCEPT FOR POST EPI	4

APPENDIX H
OASIS SUMMARY FORM

OASIS Summary for withamar1-520155

OASIS ID (UID)	withamar1-520155
Project Name	Trial Trench at Millfield Nursery, Spalding Common
Sitename	Millfield Nursery, Spalding Common
Sitecode	SCSP21
Project Identifier(s)	Millfield Nursery, Spalding Common, Archaeological Trial Trench Evaluation
Activity type	Trial Trench
Planning Id	H16-0668-16
Reason For Investigation	Planning: Post determination
Organisation Responsible for work	Witham Archaeology
Project Dates	09-May-2022 - 20-Jun-2022
Location	Millfield Nursery, Spalding Common NGR : TF 23440 20040 LL : 52.76386492093955, -0.172018073137938 12 Fig : 523440,320040
Administrative Areas	Country : England County/Local Authority : Lincolnshire Local Authority District : South Holland Parish : South Holland, unparished area
Project Methodology	The 17 trenches, all 30m long and 1.8m wide, were located in accordance with the directions laid out in the Written Scheme of Investigation (WSI) and approved by the curatorial archaeologist. Minor modifications to the positions of Trenches 10, 11, and 12 were necessitated by the presence of live buried services and by immovable obstructions presented by the circumstances on site. The most recent deposits were removed mechanically, using a tracked excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under archaeological supervision. Mechanical excavation was discontinued when archaeological deposits were exposed, or when undisturbed natural deposits were revealed. Exposed surfaces, both vertical and horizontal, were then cleaned by hand to define the archaeological remains. Potential archaeological features were further investigated by manual excavation in line with the sampling guidelines outlined in the WSI. A record of the investigations was compiled through: •Notes detailing the progress of archaeological fieldwork. •Individual written descriptions of archaeological contexts made on pro-forma recording sheets and indexed appropriately. •Measured section drawings showing specific archaeological contexts as well as general stratigraphic sequences, produced at scales 1:10 or 1:20 as appropriate. •Measured plans of archaeological contexts (individual and/or multiple) at scale 1:20 •Sequences of colour digital photographs showing individual archaeological features and overall site circumstances. The trenches, the features and the sample hand-excavated slots were located using survey grade GPS equipment, referenced to the Ordnance Survey National Grid.

Project Results	The trial trench evaluation at Millfield Nursery has revealed an additional location to add to the distribution of Romano-British settlement sites in the area around Spalding. The Site appears to have evolved in a manner similar to certain other sites in the vicinity, whereby saltmaking operations were succeeded by a phase of settlement sustained by more conventional agrarian activities. At this Site, the saltmaking is only indirectly recorded through fired clay waste material (briquetage) recovered as residual finds in later features. The form of the briquetage, however, indicates that the activity may have commenced in the 1st century BC, in the pre-Roman Iron Age. Romano-British settlement occurred within a landscape of ditched boundaries and drains, the principal axis of which was probably laid out in the later 1st century AD. Occupation concentrated in the central-west part of the site, around Trench 6, and appears to have been most intensive around the 2nd to 3rd centuries AD, with very little indication of significant continuation into the 4th century. Although the settlement appears to have re-located, it is possible that the divided landscape continued to be exploited for some time. Eventual abandonment of the Romano-British landscape, however, is perhaps indicated by fills of alluvial character within some features, presumably accumulated in part through episodes of estuarine flooding. Partially filled features at various locations across the site show evidence for formation of a darker organic deposit, probably representing onset of wetland conditions over the Site area, succeeded by further alluvial accumulations. Tentative comparisons may be suggested with scientific dating of deposits examined within 2.5km north of the Site. Radiocarbon dating suggests that peat formation at Holland Park, possibly associated with the darker organic deposits observed at Millfield, may be of 6th to 7th century date, whereas overlying estuarine silts at Wygate Park, just to the north, have generated a 7th to 10th century OSL date. The precise sequence of environmental changes at Millfield will have been directed by its immediate topography, but the general trends accord with those of peer sites in the vicinity. Through the medieval period the land was valuable as common pasture but remained relatively marginal and vulnerable to occasional freshwater inundation. Improvements to local drainage, beginning with major campaigns in the 17th century, led to enclosure in the early 19th century and to increasingly intensive exploitation for agriculture and horticulture. In the later 20th century this culminated in construction of the nursery complex demolished immediately before the investigations described in this report.
Keywords	Ditch - ROMAN - FISH Thesaurus of Monument Types Ditch - POST MEDIEVAL - FISH Thesaurus of Monument Types Post Hole - ROMAN - FISH Thesaurus of Monument Types Briquetage - LATE IRON AGE - FISH Archaeological Objects Thesaurus Pot - ROMAN - FISH Archaeological Objects Thesaurus Pot - MEDIEVAL - FISH Archaeological Objects Thesaurus Pot - POST MEDIEVAL - FISH Archaeological Objects Thesaurus Point - ROMAN - FISH Archaeological Objects Thesaurus Quern - ROMAN - FISH Archaeological Objects Thesaurus Animal Remains - ROMAN - FISH Archaeological Objects Thesaurus
Funder	Private or public corporation Seagate Homes
HER	Lincolnshire HER - unRev - STANDARD
Person Responsible for work	Russell Trimble
HER Identifiers	
Archives	Physical Archive, Documentary Archive, Digital Archive - to be deposited with The Collection: Art and Archaeology in Lincolnshire;

Witham Archaeology

2 High Street, Ruskington, Sleaford, Lincolnshire
NG34 9DT

Tel/Fax: (01529) 300890

Email: info@withamarchaeology.co.uk

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