



YORK ARCHAEOLOGICAL TRUST



**HALL FARM, MIDDLEGATE LANE,
BONBY, NORTH LINCOLNSHIRE**

EVALUATION REPORT

by David Evans

REPORT NUMBER 2012/12



YORK ARCHAEOLOGICAL TRUST

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CONTENTS

	Page
NON-TECHNICAL SUMMARY	1
1. INTRODUCTION.....	1
2. METHODOLOGY	3
3. LOCATION, GEOLOGY AND TOPOGRAPHY	5
4. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	5
5. RESULTS.....	5
6. THE FINDS	28
7. THE ENVIRONMENTAL EVIDENCE	34
8. DISCUSSION AND CONCLUSIONS	47
9. ACKNOWLEDGEMENTS	49
10. BIBLIOGRAPHY	49
APPENDIX 1: THE WRITTEN SCHEME OF INVESTIGATION	51
APPENDIX 2: OASIS FORM	57
APPENDIX 3: ARCHIVE DEPOSITION	59

Figures

1. Location of Bonby	2
2. Location of site in relation to Bonby. Area of proposed development in red.....	3
3. Location of evaluation trenches and features / structures derived from maps, geophysical survey and aerial photographic interpretation	4
4. Typical section along Trench 1	6
5. Typical section along Trench 2	7
6. Typical section along Trench 3	8
7. Plan of Trench 4 showing excavated features.....	10
8. Section across ditch 4012.....	11
9. Section across ditch 4007.....	12

10.	Section across ditch 5006.....	14
11.	Plan of Trench 5 showing excavated features.....	15
12.	Section across ditch 5012.....	17
13.	Plan of Trench 6 showing excavated features.....	19
14.	Section across ditch 6015.....	20
15.	Section across ditch 6008.....	21
16.	Typical section along Trench 7.....	23
17.	Plan of Trench 8 showing recorded features.....	25
18.	Typical section along Trench 8.....	26
19.	Typical section along Trench 9.....	27

Plates

Cover: Ditch 4012 as excavated

1.	General view of Trench 1, looking north.....	6
2.	General view of Trench 2, looking north-east.....	7
3.	General view of Trench 3, looking north-east.....	8
4.	Trench 4 prior to excavation of ditches, looking south-east.....	9
5.	Section across ditch 4012, looking south-west.....	11
6.	Section across ditch 4007, looking south-west.....	13
7.	Trench 5 prior to excavation of ditches, looking south.....	13
8.	Section across ditch 5006, looking south-west.....	16
9.	Section across ditch 5012, looking west.....	17
10.	Trench 6 prior to excavation of ditches, looking south-west.....	18
11.	Section across ditch 6015, looking north-west.....	20
12.	Section across ditch 6008, looking south-east.....	22
13.	Gully 6009, looking west.....	22
14.	General view of Trench 7, looking north-west.....	23
15.	General view of Trench 8, looking south-east.....	24
16.	Section through chalk feature 8003, looking north-east.....	26

17.	General view of Trench 9, looking south-east	27
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Tables

1.	Pottery by Context.....	29
2.	Pottery Fabrics and Forms.....	30
3.	Pottery Fabric Descriptions	32
4.	Pottery Archive	33
5.	Flotation Records	44
6.	Assessment of BS Flots and CV.....	46
7.	Animal Bone Results.....	46
8.	GBA Samples.....	47

Abbreviations

YAT York Archaeological Trust

AOD Above Ordnance Datum

NON-TECHNICAL SUMMARY

Three small parts of each of the two ditches identified from aerial photographs and a geophysical survey were excavated and recorded. A moderate quantity of pottery from these ditches indicated that they probably originally excavated in the middle Iron Age. There is less certainty about when they became disused and completely backfilled although the pottery evidence suggests the 1st century AD.

Apart from these ditches very few archaeological remains were found in any of the other trenches, which mainly contained natural deposits and agricultural topsoil, although a worn chalk surface, possibly a path, was located in Trench 8, but remains undated. This trench also produced evidence for a posthole and backfilled circular pit, both believed to be relatively modern.

1. INTRODUCTION

Between 14th and 23rd March 2012 a team from York Archaeological Trust carried out an archaeological evaluation of an area of land at Hall Farm, Middlegate Lane, Bonby, North Lincolnshire (NGR TA 0161 1693, Figure 1). The evaluation consisted of the excavation of nine trenches spread across a block of land earmarked for a proposed dairy cow unit, planning application PA/2010/1447 (withdrawn). The evaluation was commissioned by Gary Hoerty Associates, on behalf of their client Wilsons Farms. This evaluation follows on from a desk-based assessment (Evans, 2011) of the proposed development area and its surroundings and from a geophysical survey (GSB, 2011) of the specific proposed development area. Both of these clearly identified features of archaeological significance within the area of proposed development. Prior to the commencement of the evaluation a site code, BYAN, was obtained from North Lincolnshire Museum.

The primary objective of the evaluation was to establish the size and date of the ditches seen on aerial photos and the geophysical survey. Other objectives were to ascertain whether any of the farm structures known, primarily from map evidence, to have occupied the site lie to below the present topsoil and if so what their condition is and of what date they were and to investigate a number of possible features / structures tentatively identified from aerial photographs and the geophysical survey.

Prior to the geophysical survey the evaluation area had been occupied by a crop of Miscanthus (commonly referred to as Elephant Grass). After the above ground harvesting had taken place the below ground roots were removed and an additional aim of this particular evaluation was to assess the potential or actual damage to any of the surviving

archaeology since the effects on archaeology of planting and harvesting this type of crop are, as yet, not well understood or documented.

At the time of the preparation of this report all material for archiving including original site drawings, context cards, digital photographs, report figures, finds and environmental samples were with York Archaeological Trust. All records for this site will be deposited with the North Lincolnshire Museum Archive in accordance with the Archive Deposition Form reproduced as Appendix 3.



Figure 1 Location of Bonby



Figure 2 Location of site in relation to Bonby
Area of proposed development in red

2. METHODOLOGY

The evaluation followed a Written Scheme of Investigation formulated by York Archaeological Trust based on guidelines supplied by North Lincolnshire Historic Environment Record. The works comprised six trenches, numbered 1-3 and 7-9, each nominally 15m x 2m wide and three trenches, numbered 4-6 each nominally 25m x 3m. Trenches 1-3 and 7-9 were intended to investigate possible geological anomalies and to assess the survival of any of the structures forming Hall Farm, plus possible features tentatively identified from aerial photographs. Trenches 4-6 were placed so as to investigate in detail a sinuous double-ditched feature crossing the central part of the proposed development area and clearly identified and located from aerial photographs and the geophysical survey. All trenches were mechanically excavated under archaeological supervision by a machine equipped with a toothless digging bucket, down to the top of significant archaeological deposits or undisturbed natural subsoil deposits. Thereafter the trenches were cleaned and any features hand excavated. All recording was carried out in

accordance with York Archaeological Trust fieldwork standards (YAT 2009). Deposits and features were individually recorded on pro-forma record cards and planned at a scale of 1:20. Representative sections of each trench were drawn at a scale of 1:10 as were the sections through the ditches. Throughout the evaluation a series of digital record photographs were taken in each trench. Some of these were detailed views of the features encountered but a large number of general views were taken. Also a number of detailed photographs were taken in order to show the relationship of topsoil, natural subsoil and any features and also to record the effect of planting and harvesting the crop of Miscanthus previously occupying this part of the field.



Figure 3 Location of evaluation trenches and features / structures derived from maps, geophysical survey and aerial photographic interpretation

3. LOCATION, GEOLOGY AND TOPOGRAPHY

The village of Bonby lies c.9.5km north of Brigg and some 2km north of the actual village of Bonby between Middlegate Lane and the B1218 / A15. In the area of the site there is a thin chalky topsoil overlying white chalk of the upper cretaceous era, part of the Lincolnshire Wolds. The area of development, as currently proposed, is roughly rectangular and measures approximately 400m north-west to south-east and 150m south-west to north-east (Figure 3). The site lies in open agricultural land and is bisected by a rough unpaved farm track. The site is roughly level south-west to north-east but slopes gently upward from c.70m AOD at the south-east end of the site to c.76m AOD at the north-west limit of the site.

4. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The archaeological and historical background to the site and surrounding area has been presented and discussed in the previous desk-based assessment (Evans, 2010). This indicated that the site lies within a rich archaeological and historical landscape potentially spanning some 10,000 years of human activity. The report and subsequent geophysical survey also identified archaeological features within the proposed development area.

5. RESULTS

5.1 TRENCH 1

The earliest contexts in this trench were both thought to be of natural origin. One consisted of medium (0.05 – 0.15m) blocks of chalk in mid orange silt (1002) and the other was a clean, mid to dark orange silt (1003). Investigation of these indicated that they were interleaved. Overlying these was a c.0.25m deep deposit of dark brown silt with occasional flecks of chalk (1001). The uppermost layer was a dark brown silt with frequent roots and occasional small, 0.01m, fragments of chalk (1000) which formed the current topsoil.

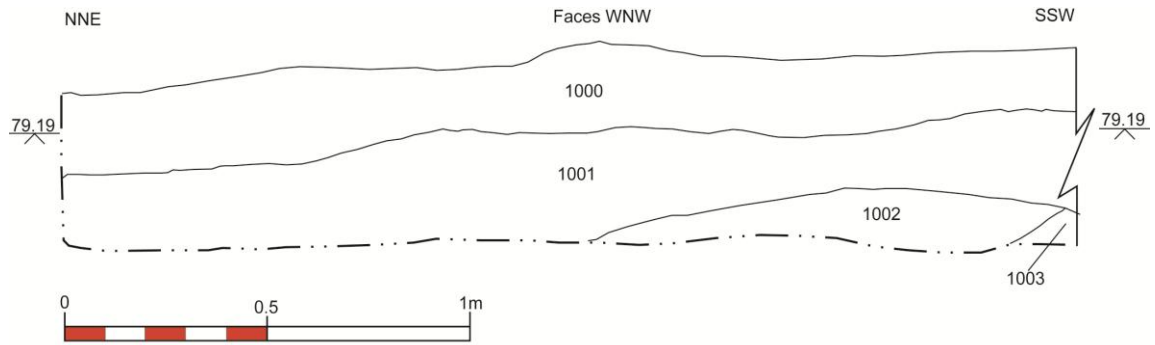


Figure 4 Typical section along Trench 1



Plate 1 General view of Trench 1, looking north

5.2 TRENCH 2

This trench was almost identical to Trench 1. Again two deposits, both thought to be of natural origin, were believed to be the earliest deposits recorded. One of these was a loose mass of medium (0.05 – 0.15m) chalk blocks (2002) and the other was a mid orange very slightly sandy, very slightly clayey silt (2001). Overlying these two interleaved layers was a 0.35m deep deposit of dark brown silt with frequent roots and moderate small (c.0.01m) fragments of chalk (2000) forming the modern topsoil.

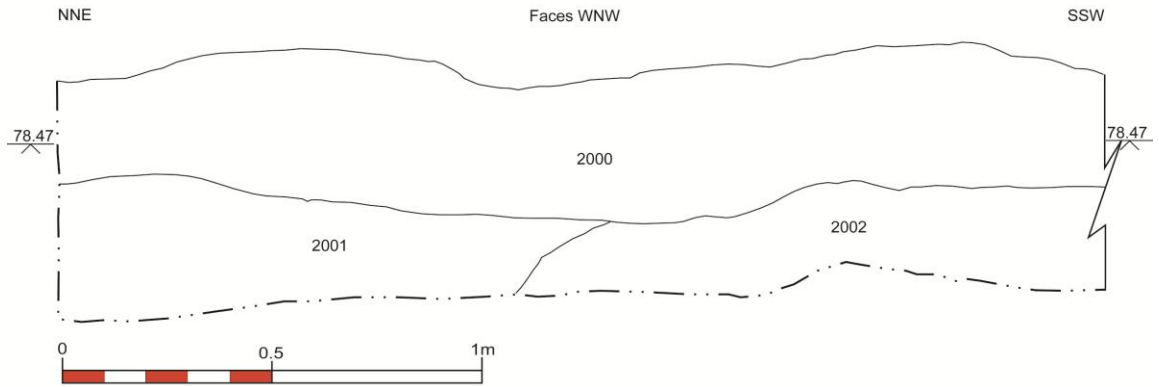


Figure 5 Typical section along Trench 2



Plate 2 General view of Trench 2, looking north-east

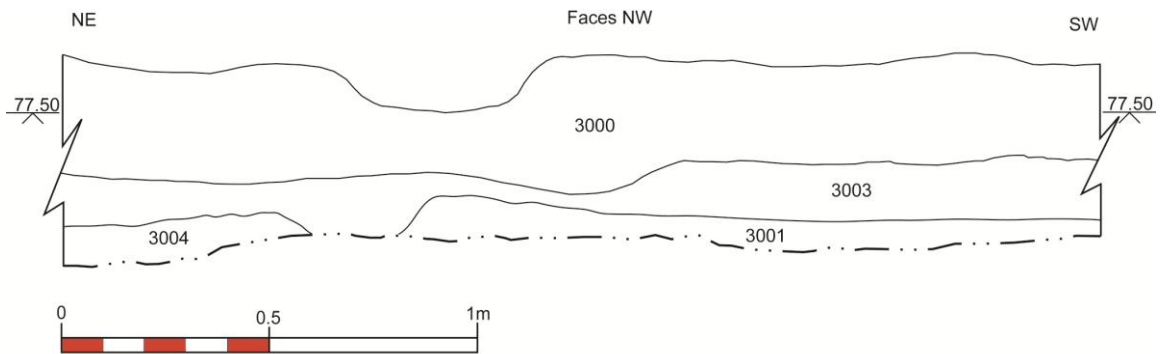


Figure 6 Typical section along Trench 3



Plate 3 General view of Trench 3, looking north-east

5.3 TRENCH 3

This trench was very similar to Trenches 1 and 2 although three interleaved deposits were identified as being the earliest recorded. They were; a layer of loose, medium sized chalk blocks (3004), a linear stripe mid orange very slightly clayey silt (3001) situated towards the north-east end of the trench and aligned roughly south-east / north-west and another linear stripe of mid orange very slightly clayey silt (3002) situated close to the south-west end of the trench and also aligned approximately south-east / north-west. Sealing these was a 0.3m deep layer of dark brown silt with frequent roots (3000) which formed the current topsoil.



Plate 4 Trench 4 prior to excavation of ditches, looking south-east

5.4 TRENCH 4

The earliest deposit noted in this trench, believed to be natural, was a mixture of medium chalk fragments (70%) and mid orange sandy silt (4013). Two large ditches were found cut into this. The first of these (4012), with a centre situated c.9m from the south-east end of the trench, was up to 3.2m wide and at least 1.25m deep from the base of the trench and it was aligned approximately south-west / north-east. At the top there was a quite sharp break of slope leading to quite steeply sloping sides. Lower down there was a moderate to gentle break of slope leading to a gently concave base. A total of five deposits were recorded within this feature. The lowest, probably a primary silting was a loose, light brown sandy silt with frequent small fragments of chalk (4011). Above this was a mixture of 90% small to medium fragments of chalk / flint and 10% mid brown fine sand (4010). It was sealed by a mixture of 70% mid brown fine sand and 30% small to medium fragments of chalk / flint (4009) and overlying this there was a deposit of firm, mid brown sandy silt with occasional chalk fragments (4008). The uppermost identified fill was a firm, mid reddish-brown sandy silt with occasional small chalk fragments (4002).

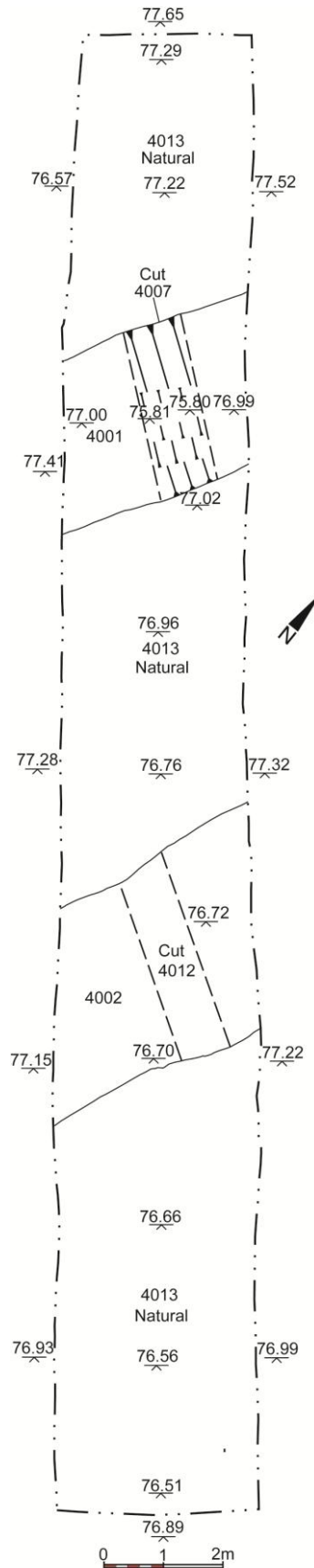


Figure 7 Plan of Trench 4 showing excavated features

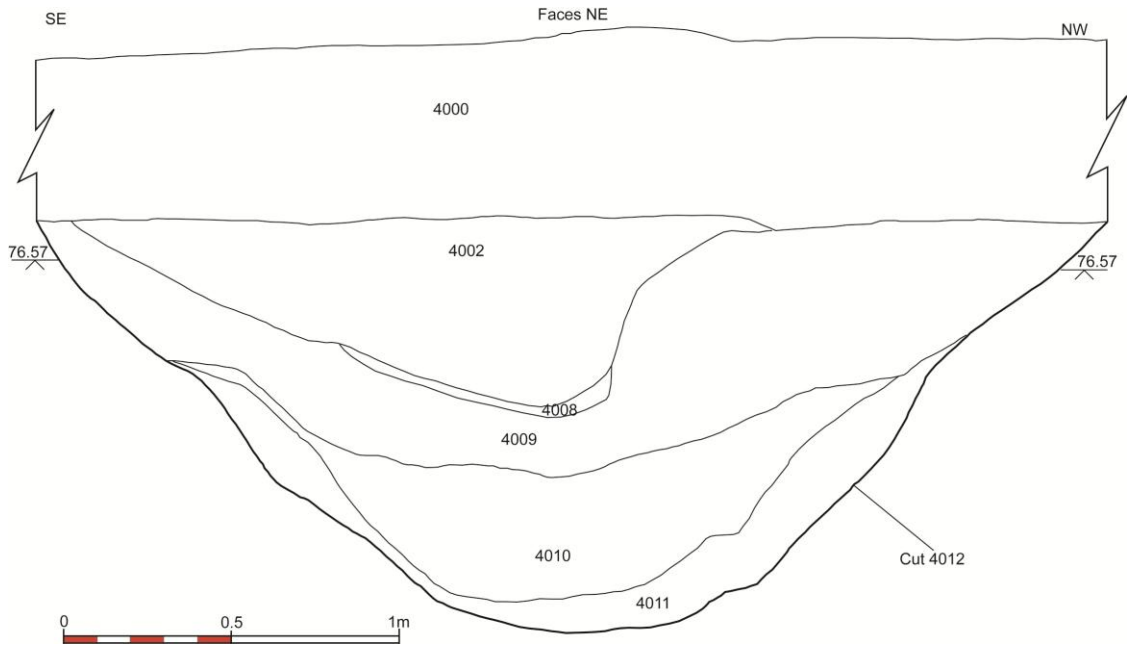


Figure 8 Section across ditch 4012



Plate 5 Section across ditch 4012, looking south-west

The second ditch (4007) lay c.9.5m, centre to centre, of the first ditch and ran parallel to it. It was c.2.9m wide and at least 1.15m deep from the base of the trench. At the top there was a moderate to sharp break of slope leading to moderately sloping sides becoming steep at c.0.8m below the top of the ditch. Lower down there was an irregular but quite sharp break of slope leading to a slightly irregular but flattish base. The lowest fill, probably a primary silting, was a firm, light greyish-brown slightly clayey sandy silt with frequent chalk fragments and occasional flint and charcoal (4006). Sealing this there was a mixture of 40% mid greyish-brown clayey silt and 60% small to medium angular and sub-angular chalk fragments with occasional flint and charcoal flecks (4005). Above this was a layer of firm, mid reddish-brown clayey sandy silt with frequent small sub-angular chalk fragments and occasional pieces of flint and flecks of charcoal (4004). This was overlain by a friable, loose mixture of 60% chalk gravel and 40% light greyish-brown clayey silt with occasional pieces of flint. The uppermost fill in this ditch was a firm, mid reddish-brown and very dark grey very ashy sandy silt with frequent small fragments of angular and sub-angular chalk and moderate charcoal flecks and angular flint (4001). This backfill produced a moderately sized assemblage of pottery which could be dated to the middle to late Iron Age. The uppermost deposit in this trench, forming the existing topsoil, was a c.0.5m deep layer of friable but firm very dark greyish-brown clayey sandy silt with frequent small fragments of chalk and occasional charcoal, brick / tile and flint (4000).

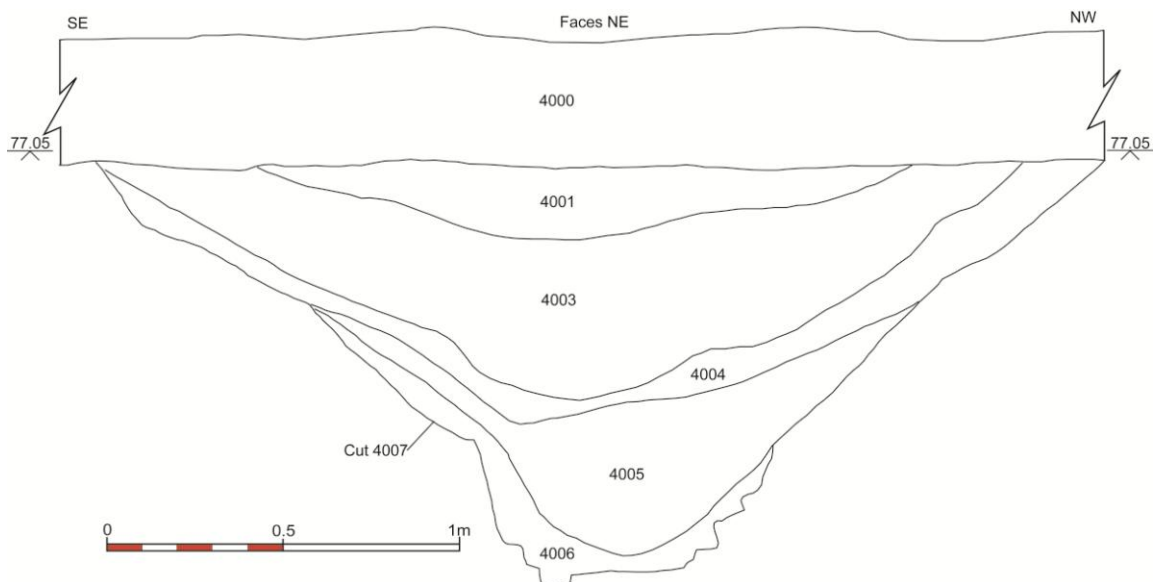


Figure 9 Section across ditch 4007



Plate 6 Section across ditch 4007, looking south-west



Plate 7 Trench 5 prior to excavation of ditches, looking south

5.5 TRENCH 5

In this trench the earliest deposit noted, natural, was a mixture of 60% medium chalk fragments and 40% mid orange-brown sandy silt (5013). Within this trench two ditches cut into the natural were excavated. The first (5006) was situated some 12.5m from the southern end of the trench and aligned approximately east-west. It was c.3.5m wide at the top and 1.55m deep from the base of the trench. There was a moderate break of slope at the top leading to moderate / steeply sloping sides. Lower down there was a moderate to sharp break of slope leading to a flattish base. Five fills were identified within this ditch and they were: a friable, mid brownish-grey sandy silt with occasional small fragments of chalk (5005), probably a primary silting. Above this was a mixture of small to medium sized chalk fragments and friable, mid greyish-brown sandy silt (5004) which was overlain by a layer of friable, mid greyish-brown sandy silt with frequent small and medium fragments of chalk and occasional large (0.15m+) fragments of chalk (5003). Sealing this was the uppermost fill which was a friable, mid reddish-brown sandy silt with moderate small fragments of chalk (5002).

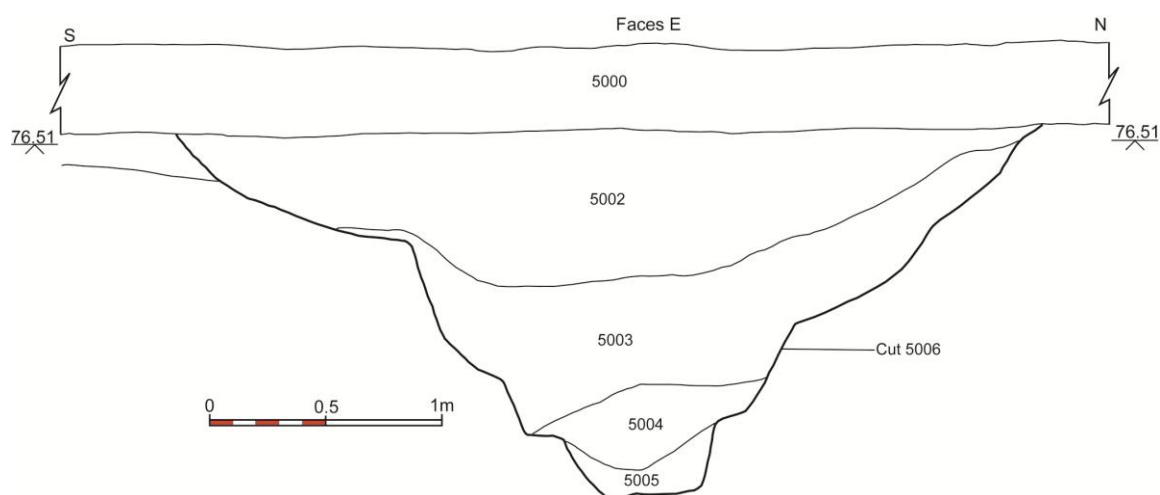


Figure 10 Section across ditch 5006

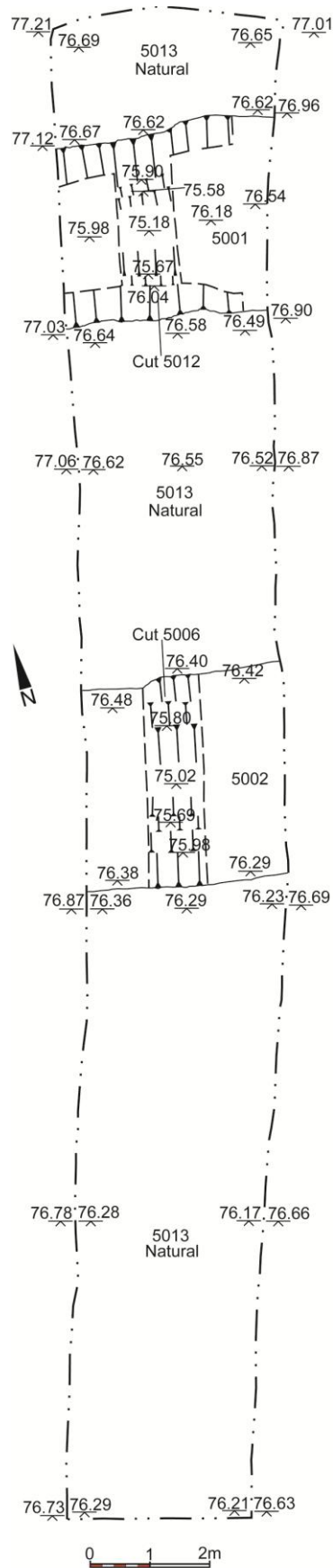


Figure 11 Plan of Trench 5 showing excavated features



Plate 8 Section across ditch 5006, looking south-west

The second ditch (5012) lay c.9.5 to the north, centre to centre. It was also aligned roughly east-west and it was c.3.25m and at least 1.6m deep from the base of the trench. At the top there was a moderate break of slope leading to moderately to steeply sloping sides. Lower down there was a quite sharp break of slope leading to a flat base. The fills were firstly a loose, light brown sandy silt with frequent chalk flecks and moderate small and medium chalk fragments (5011), thought to be primary silting. This was overlain by a layer of 70% loosely packed medium chalk fragments, 20% loose, mid brown silty sand and 10% flint and this was sealed by a mixture of 80% medium chalk fragments, 10% flint fragments and 10% loose, light brown fine sand (5009). Overlying this was a loose, mid reddish-brown sand with frequent chalk flecks and small chalk fragments and moderate medium chalk fragments (5008). Sealing this was a loose, mid brown sandy silt with frequent small and medium chalk fragments (5007). Above this was the uppermost fill, a firm, mid reddish-brown fine clayey sand with moderate small and medium chalk fragments (5001). This deposit produced a single sherd of Iron Age pottery. Sealing the ditches, and forming the current topsoil, was a 0.3m deep deposit of friable, dark brown clayey sand with frequent small and medium chalk fragments (5000).

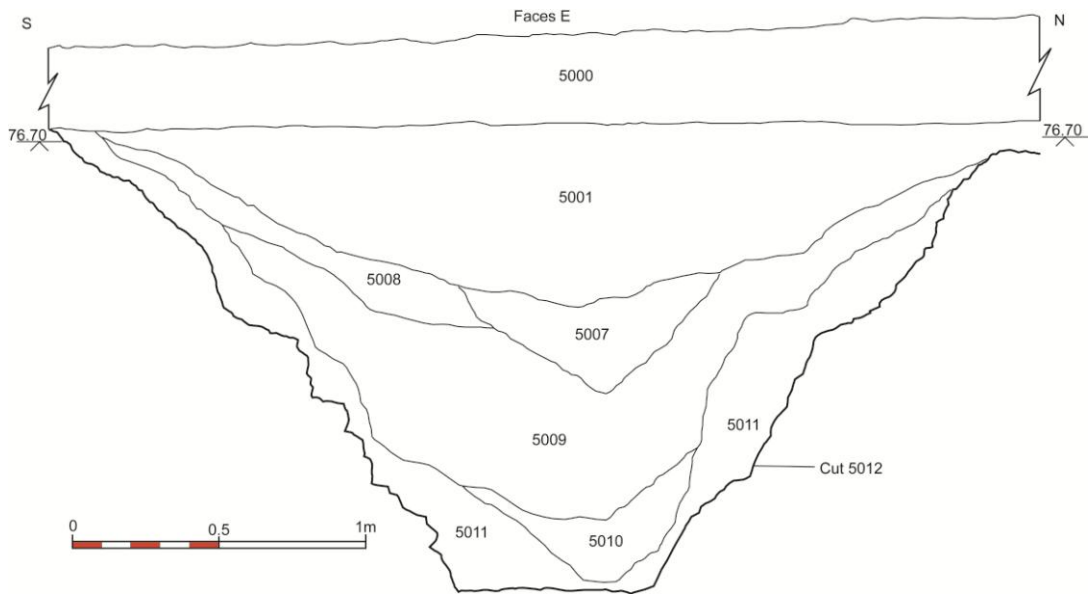


Figure 12 Section across ditch 5012



Plate 9 Section across ditch 5012, looking west



Plate 10 Trench 6 prior to excavation of ditches, looking south-west

5.6 TRENCH 6

The earliest deposit in this trench, believed to be natural, was a layer of light cream-brown degraded chalk blocks with seams of mid orange-brown clayey sand (6016). Two large ditches were identified cutting this deposit. The first (6015) lay c.9.5m from the south-west end of the trench and was aligned approximately north-west / south-east. It was c.3.3m wide at the top and at least 1.3m deep. There was a moderate to sharp break of slope at the top leading to moderately to steeply sloping sides. Further down there was a moderate break of slope leading to an irregular flattish base. Six fills were recorded and they were a light brown clayey silt with frequent medium fragments of chalk (6014). This was partly overlain by a quite compact, mid brown clayey silt with very frequent medium chalk fragments (6013) and above this was a quite compact, light brown clayey silt with occasional medium fragments of chalk (6012). Sealing this, and part of Context 6014, was a compact, mid brown clayey silt with very frequent small to large pieces of chalk (6011) and above this was a quite compact, dark orangey-brown clayey silt with moderate small to medium pieces of chalk (6010). Overlying this was the uppermost identified fill, a very friable, mid orangey-brown clayey silt with frequent small pieces of chalk and very occasional small rounded pebble (6002).

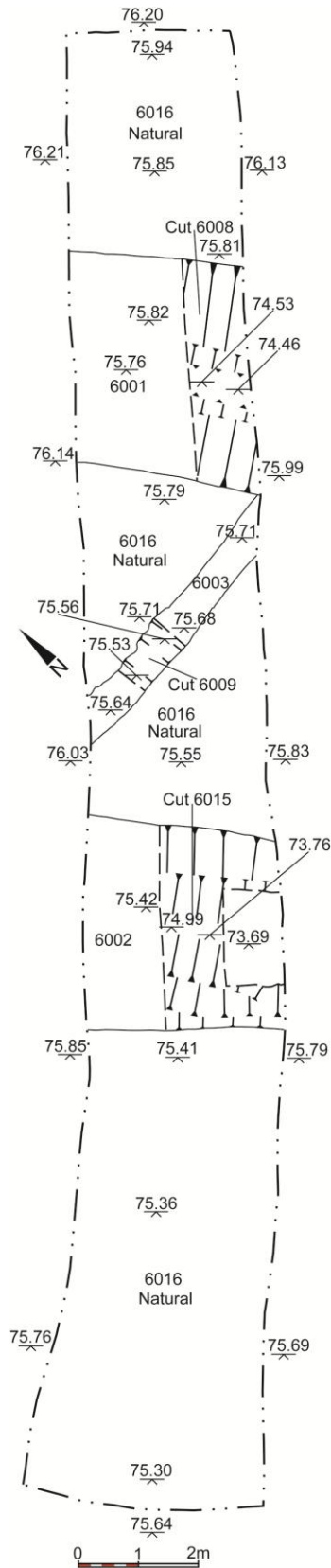


Figure 13 Plan of Trench 6 showing excavated features

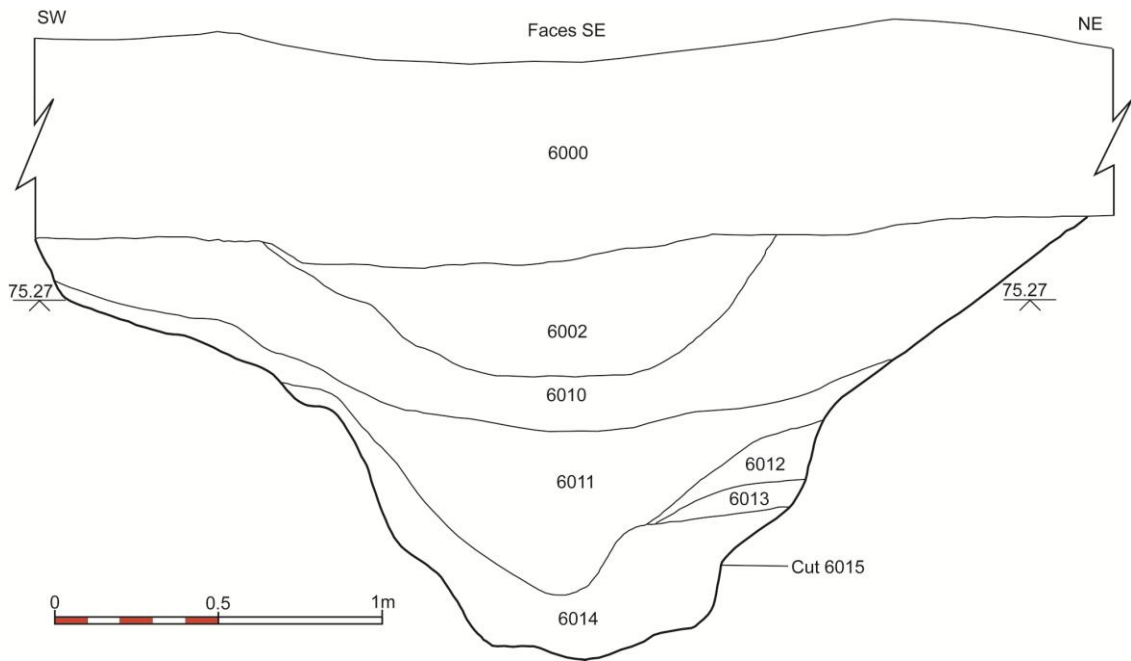


Figure 14 Section across ditch 6015



Plate 11 Section across ditch 6015, looking north-west

The second ditch (6008) ran parallel to Ditch 6015 and lay c.9m to the north-east. It was c.3.7m wide at the top and at least 1.3m deep from the base of the trench. At the top there a sharp break of slope leading to moderately to steeply sloping sides. Lower down there was a sharp break of slope leading to a flattish base. Five fills were identified and they were firstly a firm mixture of 60% mid reddish-brown clayey sandy silt and 40% chalk gravel (6007), probably a primary silting. Overlying this was a loose mixture of 80% small and medium angular chalk gravel and 20% dark greyish-brown clayey sandy silt with occasional small angular pieces of flint (6006) and this was sealed by a firm, dark greyish-brown clayey sandy silt with frequent small angular and sub-angular chalk pieces and occasional small angular flint fragments and occasional charcoal flecks (6005). This was overlain by a firm, dark brown sandy silt with frequent flecks and small pieces of angular and sub-angular chalk, moderate small angular pieces of flint and occasional flecks of charcoal (6004). The uppermost fill recorded was a firm mixture of 60% mid brown sandy silt and 40% small and medium, angular and sub-angular chalk pieces with frequent small to medium angular flint fragments (6001). From this deposit came three sherds of pottery two of which were late Iron Age and the other late Iron Age or early (1st century AD) Roman.

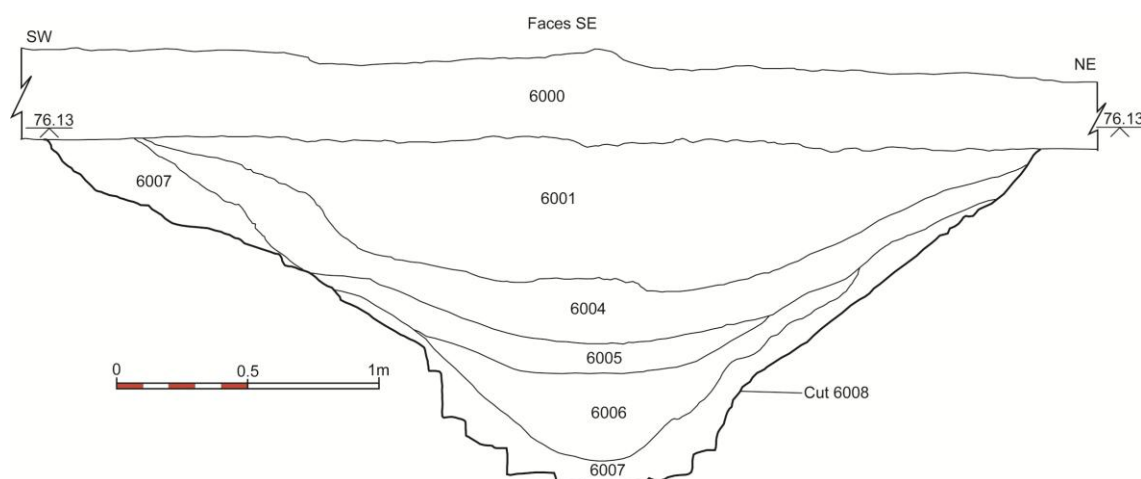


Figure 15 Section across ditch 6008

At the same stratigraphic horizon as these ditches, but thought to be much later in date, was a linear feature (6009). It was seen between the ditches, was aligned roughly south-west / north-east and had probably been cut by Ditch 6008. It was c.0.55–0.65m wide and penetrated a maximum of 0.13m into the natural. There was a moderate break of slope at the top leading to moderately sloping sides which lead into a gently concave base. The single backfill was a firm, mid greyish-brown clayey sandy silt with frequent small, medium and large angular and sub-angular chalk fragments, occasional charcoal flecks and occasional small angular pieces of flint (6003). All of the recorded features lay below a 0.35m

deep layer of friable, very dark greyish-brown clayey sandy silt with frequent flecks and small pieces of chalk, occasional small pieces of flint and occasional charcoal flecks forming the modern topsoil.



Plate 12 Section across ditch 6008, looking south-east



Plate 13 Gully 6009, looking west

5.7 TRENCH 7

In this trench the earliest deposit recorded was a mixture of medium chalk fragments and mid orange silt (7001), believed to be natural. This was overlain by a c.0.3m layer of dark greyish-brown silt with frequent stubble and occasional flecks of chalk (7000) which was the existing topsoil.

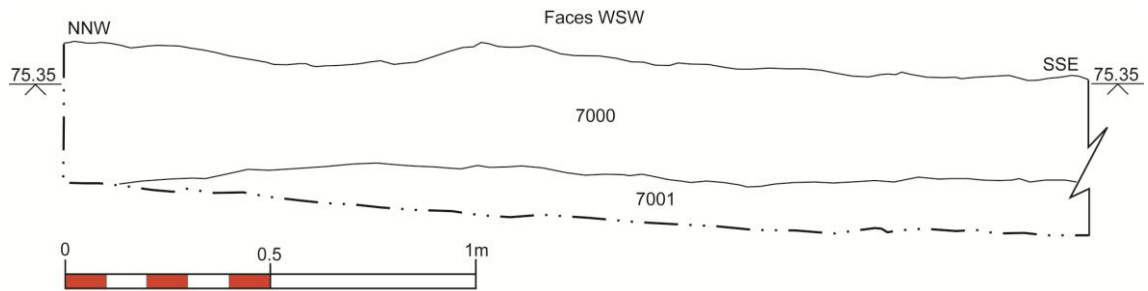


Figure 16 Typical section along Trench 7



Plate 14 General view of Trench 7, looking north-west



Plate 15 General view of Trench 8, looking south-east

5.8 TRENCH 8

The lowest deposit in this trench was a mixture of chalk fragments and mid orange silt (8006). Above this was a firm, mod orange silt with frequent flecks of chalk (8002). Overlying it was a layer of medium crushed chalk fragments with occasional mid orange silt (8001). All of these may have been natural. A small number of features were noted cut into these deposits. Possibly the earliest was a linear cut (8008) aligned approximately south-west / north-east. It was up to 1.2m wide and 0.2m deep. At the top of the north-west edge there was a moderate break of slope leading to moderately sloping side. Lower down this merged gently into a roughly flat base. Within the cut was a mass of rammed chalk blocks (8003) many of which exhibited clear signs of wear on their upper surface. Within this fill there was no trace at all of any of the mid orange silt elsewhere closely associated with the natural chalk. At a similar stratigraphic horizon, but thought to be considerably later, was a roughly circular area of mid brown silt with frequent brick / tile, some of which (air bricks) was clearly of the 20th century. This area was c.1.3m across but it was not further investigated although it seems possible that it was a backfilled well. Lying some 0.7m north of this was a circular feature (8004) which was c.0.65m across and at least 0.28m deep although this feature was also not further investigated. No details of the fill were recorded although during machine excavation of the trench it was noted that the stump of a telegraph pole, c.0.2m in diameter,

was pulled from this feature. Probably later than these features and occupying the south-western 2m of the trench was a 0.12m deep concrete slab (8007). No attempt was made to remove this. The uppermost context in this trench was a thin, c.0.1m deep, deposit of dark brown silt with occasional small fragments of chalk (8000).

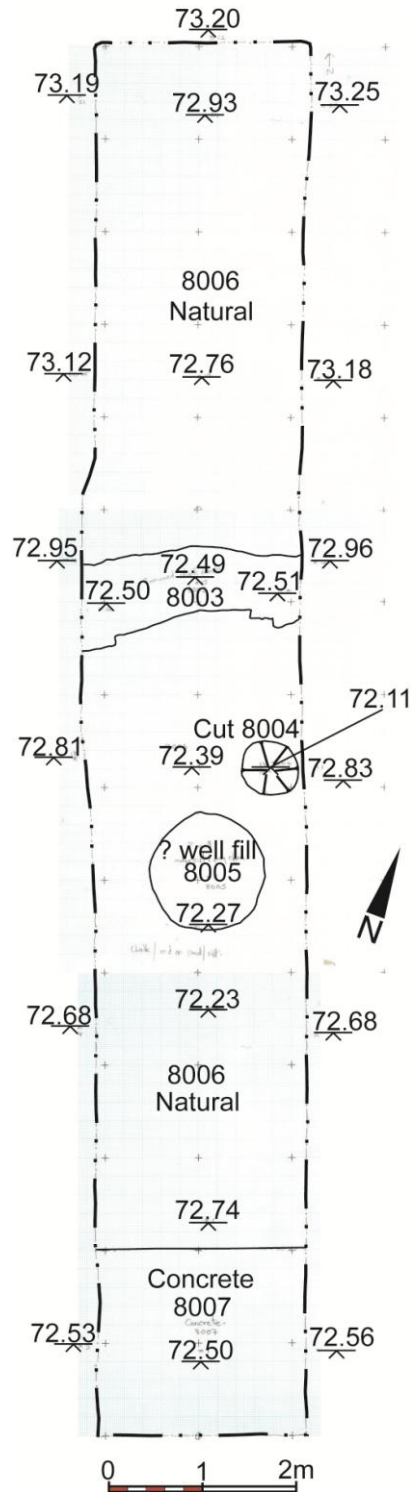


Figure 17 Plan of Trench 8 showing recorded features

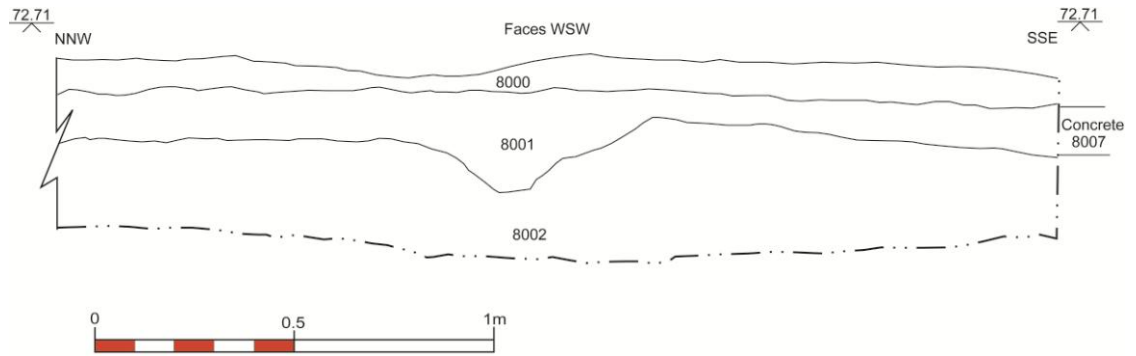


Figure 18 Typical section along Trench 8



Plate 16 Section through chalk feature 8003, looking north-east

5.9 TRENCH 9

Within this trench two interleaved deposits were thought to be the earliest and natural. The first of these was a layer of medium chalk blocks, c.0.05 – 0.15m across, (9002). The second was a mid orange very slightly clayey sand (9001). Overlying these was a 0.3m deep deposit of very dark brown silt with frequent small, less than 0.02m, fragments of chalk and frequent roots (9000) forming the modern topsoil.

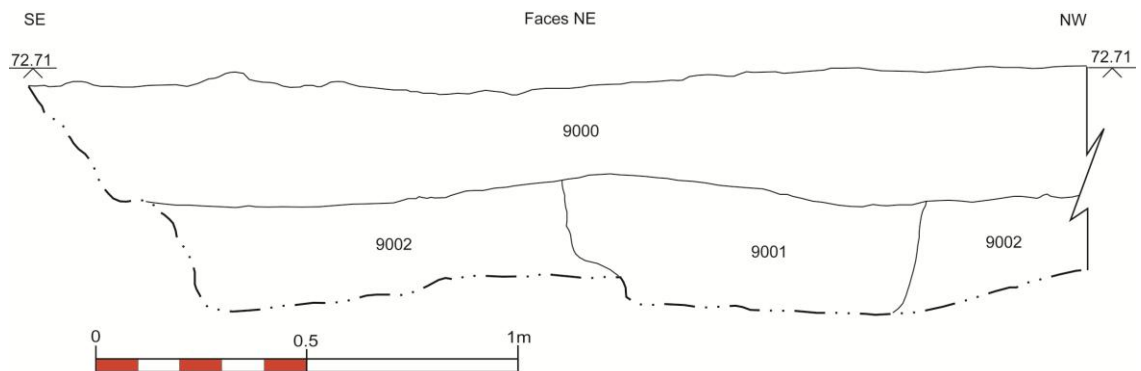


Figure 19 Typical section along Trench 9



Plate 17 General view of Trench 9, looking south-east

6. THE FINDS

6.1 THE SMALL FINDS

Two small finds were viewed by the author for assessment. SF2 C.6010 is a copper alloy object of unknown function and date. SF3 C.6003 is a large iron headless spike or nail; the substantial amount of metal which has survived suggests that this object might be of recent date.

SF1 C.6001 has been identified by B. Antoni as debitage

Small Find List

Find	Context	Material	Keywords
SF1	6001	Flint	Debitage
SF2	6010	Copper alloy	Object
SF3	6003	Iron	Spike

6.2 THE POTTERY

6.2.1 INTRODUCTION

The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by *The Study Group for Roman Pottery* (Darling 2004) using the codes developed by the City of Lincoln Archaeological Unit- CLAU (see Darling and Precious *forthcoming*) and the fabric series under development for North Lincolnshire Museum (Rowlandson *forthcoming*). Rim equivalents (RE) have been recorded and an attempt at a 'maximum' vessel estimate has been made following Orton (1975, 31). The pottery has been bagged by fabric and vessels selected as suitable for illustration have been bagged separately for ease of future reference. The archive record (tabulated below) is an integral part of this report and will be curated in an Access database, available from the author in a digital format.

6.2.2 CONDITION

The ceramics presented for assessment totalled 51 sherds, weighing 0.399kg 0.03RE, from 3 contexts from a scheme of archaeological evaluation. Two of the fragments are fired clay. The condition of the sherds is mostly fresh with few sherds showing signs of abrasion. The group probably represents a maximum total of 38 vessels and one fired clay lump although the fragmentary nature of the sherds makes this uncertain and the sherds may be from a smaller vessel population. No cross context joins were evident during recording. Internal carbonised deposits were noted on a single vessel from context 4001.

6.2.3 DATING

The majority of the pottery dates to the mid to late Iron Age. Fragments from a single fine ware beaker, context 6001, should be dated to the 1st century AD and may also be of pre-Conquest date.

Dating summary					
Context	Spot date	Comments	Sherd	Weight (g)	Total RE %
4001	MLA	A medium sized group predominantly made up of handmade shell gritted sherds including a rim fragment with a triangular profile and flattered top. A similar vessel with finger tipped decoration is known from Sheepdyke Lane Bonby (Beasley and Rowlandson in prep.). Also present in this assemblage is a sherd with sparry mineral calcite and a fragment of fired clay.	47	382	3
5001	IA	A single handmade shell gritted sherd,	1	14	0
6001	LIA-EROM?	A small group including sherds from a fine oxidised vessel, probably a late Iron Age to Early Roman type beaker and a single undiagnostic handmade rock tempered fragment.	3	3	0

Table 1 Pottery by context

6.2.4 OVERVIEW OF FABRICS AND FORMS

QRY- Fabric percent 3							
Fabric	Fabric group	Fabric details	Sherd	Sherd %	Weight %	Weight %	Total RE
OXF	Oxid	Fine oxidised (ferrous clay)	2	3.92%	2	0.50%	0
IACAL CS	Calcareous	Iron Age- Sparry Mineral Calcite	2	3.92%	15	3.76%	0
IASH1	Calcareous	Iron Age Shell Gritted: Site Fabric 1	13	25.49%	112	28.07%	0
IASH2	Calcareous	Iron Age Shell Gritted: Site Fabric 2	22	43.14%	119	29.82%	0
IASH3	Calcareous	Iron Age Shell Gritted; Site Fabric 3	1	1.96%	28	7.02%	0
IASH4	Calcareous	Iron Age Shell Gritted; Site Fabric 4	8	15.69%	110	27.57%	3
ETW	Rock temper	Erratic pebbles broken up as temper	1	1.96%	1	0.25%	0
FCLAY	Fired Clay	Fired Clay	2	3.92%	12	3.01%	0

Table 2 Pottery fabrics and forms

This small group of pottery is an interesting addition to the small but growing number of assemblages of Iron Age and Roman date from this area of the North Lincolnshire Wolds. The majority of the pottery is shell-gritted and would suggest production to the west of the site by potters utilising Jurassic deposits. The shell gritted pottery includes a single rim fragment from a 'flat-topped' handmade jar (see Knight 1998, Rim code TRIF). This vessel is similar to a large jar found in the village of Bonby (Beasley and Rowlandson in prep.) and should be considered to date to the mid to late Iron Age. Although broadly similar flat topped vessels can be dated to the later Iron Age in East Yorkshire it should be noted that this form is not a common occurrence amongst the late Iron Age pottery from Dragonby (Elsdon 1996b). The 'flat-top' rim from the BYAN site is more similar to forms found at Weelsby Avenue, Grimsby (Elsdon 1996a).

The presence of a sherd containing sparry mineral calcite suggests trade or exchange with East Yorkshire or a previously unknown source of this material in Northern Lincolnshire. The veins of mineral calcite are usually encountered in the Vale of Pickering although they may also exist in the northern Lincolnshire Wolds. Whichever source this vessel originates from it is an unusual occurrence amongst pottery from Northern Lincolnshire. A quick search made by the author has failed to isolate examples of with crystalline mineral calcite amongst assemblages in this area; however, the unspecific recording of calcareous inclusions by most researchers prevents this from being a definitive statement. A single fragment of rock gritted pottery including granodiorite suggests that the site also received pottery from the Boulder Clay either from a north eastern Lincolnshire or East Yorkshire source.

The small fragments from a fine ware beaker, context 6001, may also be of pre-Conquest date. A production source for these sherds cannot be attributed with any certainty due to the very fine fabric.

6.2.5 RECOMMENDATIONS

Any further investigations in this area might encounter further Iron Age pottery. All of the pottery from this evaluation should be retained and deposited in the relevant museum to enable future scrutiny. The sherds of the IACALCS fabric should be included in the North Lincolnshire Museum Fabric Type Series held at North Lincolnshire Museum.

Fabric descriptions					
Fabric	Fabric group	Fabric details	Earliest date	Latest date	Description
OXF	Oxid	Fine oxidised (ferrous clay)	50?	100	In this instance the sherds have a fine silty matrix and probably represent a conquest period butt-beaker. Fine silty quartz matrix, rare quartz 0.3mm, rare Fe 0.1-0.3mm.
IACALCS	Calcareous	Iron Age- Sparry Mineral Calcite	-700	100	Reduced sherds from a single vessel common to abundant sparry mineral calcite between 0.8mm-3mm. Most probably from an East Yorkshire source, commonly produced in the Vale of Pickering.
IASH1	Calcareous	Iron Age Shell Gritted: Site Fabric 1	-700	100	Common coarse fossil shell. Similar to fabric of vessel from Sheepdyke, Bonby (Beasley and Rowlandson forthcoming).
IASH2	Calcareous	Iron Age Shell Gritted: Site Fabric 2	-700	100	Common medium fossil shell.
IASH3	Calcareous	Iron Age Shell Gritted; Site Fabric 3	-700	100	Sparse medium shell, Sparse quartz up to 0.6mm including glassy grains with low sphericity, moderate fine silver mica. This fabric appears similar to the shell and grog gritted sherds made in South Ferriby at the foot of the Wold scarp. This fabric is probably local.
IASH4	Calcareous	Iron Age Shell Gritted; Site Fabric 4	-700	100	Sparse to Medium moderate to coarse shell and common grog/?clay pellets 2-8mm.
ETW	Rock temper	Erratic pebbles broken up as temper	-1000	1000	Erratic rock tempered. This sherd has sparse to medium angular erratic rock temper including granodiorite. Small ?clay pellets may be present. Difficult to assess abundance and sorting due to small fragment.
FCLAY	Fired Clay	Fired Clay	0	0	Two oxidised fragments with poorly sorted chalk 0.3- 5mm

Table 3 Pottery fabric descriptions

Pottery archive											
Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Sherd	Weight	Rim diam	Rim eve
4001	FCLAY	-		1			FORMLESS; POORLY SORTED CHALK; OXIDISED	2	12	0	0
4001	IACALCS	JB	HM	1		FTS	BS; REDUCED; COMMON COARSE SPARRY MINERAL CALCITE	2	15	0	0
4001	IASH1	-	HM	1			BS; IRF	2	7	0	0
4001	IASH1	-	HM	1	ABR		BASE	1	17	0	0
4001	IASH1	-	HM	1			BS; OX/R/OX	2	46	0	0
4001	IASH1	-	HM	7			BS; IRF; UNCERTAIN NUMBER OF VESSELS	7	28	0	0
4001	IASH2	-	HM	1			BS; OX/R	1	6	0	0
4001	IASH2	-	HM	1			BS; OX/R/OX	2	6	0	0
4001	IASH2	-	HM	16			BS; IRF; UNCERTAIN NUMBER OF VESSELS	16	57	0	0
4001	IASH2	JB	HM	1			BS; IRF; SOME RARE COARSER SHELL	3	50	0	0
4001	IASH3	-	HM	1			BS; IRF; SPARSE MEDIUM SHELL; SPARSE QUARTZ UP TO 0.6MM INCLUDING GLASSY GRAINS WITH LOW SPHEROCITY	1	28	0	0
4001	IASH4	JB	HM	1			BS; IRF; NEAR NECK OF LARGE JAR OR BOWL	1	6	0	0
4001	IASH4	JFT	HM	1			RIM; OX/R/OX; RIM AS KNIGHT 1998 CODE= TRIF; SPARSE MEDIUM SHELL AND COMMON GROG/CLAY PELLETS 2-8MM	1	12	26	3
4001	IASH4	-	HM	1	SOOT INT		BS; OX/R; INTERNAL SOOT	6	92	0	0
5001	IASH1	JB	HM	1			BS; OX/R	1	14	0	0
6001	ETW	-	HM	1			BS; SPARSE MEDIUM ERRATIC ROCKS- INCLUDING GRANODIORITE; RARE CLAY PELLETS/GROG/OORLY MIXED CLAY	1	1	0	0
6001	OXF	BK	WM	1			BS; LIGH ORANGE OXIDISED FABRIC ?BUTT BEAKER TYPE; FINE SILTY QUARTZ WITH RARE QUARTZ .0.3MM; RARE FE 0.1-0.3MM	2	2	0	0

Table 4 Pottery archive

7. THE ENVIRONMENTAL EVIDENCE

7.1 SUMMARY

A desk-based assessment by York Archaeological Trust of the site of the former Hall Farm, Bonby in North Lincolnshire revealed a doubled-ditched feature, possibly a trackway, undated but possibly dating to the Iron Age or Roman Period (Evans 2011). The current evaluation excavation recovered bulk samples and a small, poorly preserved bone assemblage from the three trenches opened across this feature to try and determine the chronology and possible function. Samples were submitted to Northlight Heritage for assessment and evaluation of their bio-archaeological potential.

Only one of the samples examined contained a good carbonised botanical assemblage. Context 4001 contained cereals and good identifiable charcoal indicative of cereal processing waste and suggesting domestic midden deposits. Burnt and chopped bone and burnt pot in this sample concur with the suggested provenance of this context which is thought by cereal typology to be of relatively early date, potentially Anglo-Scandinavian or older.

The small bone collection was dominated by domestic mammals and is in keeping with anticipated occupation debitage. The poor preservation reflects the highly calcareous, dry environment. Land mollusc typology indicates the predominance of dry grassland in and around the ditches, although incidences of taxa from wetter places and woodland suggest the base of the ditches may have been naturally damp through shading or that there was open woodland nearby.

This is a small environmental assemblage with little potential for adding significantly to a greater understanding of the wider environmental conditions, other than has been interpreted within this report. However, it is difficult in such a site to determine the period into which the events reported here might fall. A good AMS dating programme linked to the environmental evidence determined to date would help assign a chronology to the events reported here and should be considered to obtain a better understanding of the original function and purpose of the double ditched feature.

7.2 INTRODUCTION

Five bulk samples (BS) were processed for the assessment of their bio-archaeological and artefactual potential between 4th and 12th April 2012. A small bone assemblage was recovered during sorting in addition to hand collected material. A small charred botanical assemblage was also recovered, primarily from context 4001 [003], with small amounts of

pottery also recovered as a result of flotation of this sample. All samples examined contained lithic material and large numbers of terrestrial molluscs, in keeping with the calcareous chalky bedrock.

A total of four additional bulk samples were selected from specific contexts from ditch fills for general biological analysis (GBA) in the laboratory. This part of the interim investigation was undertaken to determine the potential for bio-archaeological preservation within the ditch fills and investigate the depositional processes and habitats related to the preserved remains.

7.3 METHODOLOGY

BULK SAMPLE PROCESSING (TABLE 5)

Bulk samples for flotation were sealed within 10 litre plastic tubs to exclude light and air. Samples were floted for the recovery of environmental evidence and artefacts using standard methods and a *Siraf* flotation system including a pumped recycled water system with four settling tanks to agitate samples over a 500µm mesh supported within a flotation drum. Primarily organic, wash over (flots) were retained on 300 µm and 1mm *Endicot* sieves whilst other materials larger than 500µm that did not float remained on the mesh as the retent. Flots were wrapped in blue acid-free paper, tagged and recorded before being air dried on trays in a warm drying room. Retents were decanted onto plastic trays and examined visually before being tagged and dried in the same fashion as the flots. Once dried, the retents were sorted 100% using 4mm and 2mm *Endicot* sieves and *Schott KL-1500 LCD* cold light source for all artefacts and ecofacts. A magnet was employed to locate magnetized stone and metals. Sorted materials were bagged, weighed using an *Ohaus CS200* digital scale calibrated to 0.01g and labelled for submission to specialists. Sorted residues were also weighed on a digital scale, bagged and stored pending decision regarding disposal.

GENERAL BIOLOGICAL SAMPLE PROCESSING (TABLE 8)

Samples examined were sealed within 10litre plastic tubs. In accordance with standard procedures, a 1litre subsample of soil from each was described, recorded and wet sieved through a set of brass sieves at 2mm, 1mm and 500µm fractions. The sieve retent was sorted in water and environmental materials and artefacts removed for further description and quantification. None of the samples had remained waterlogged since deposition and so plant remains within them will not be contemporary with the age of the deposit. Sorting was undertaken using a Zeiss binocular microscope and independent Scott variable cold light source at variable magnification of between x4 and x45. The >1mm fraction was sorted 100% for environmental materials and artefacts whilst the >500µm fraction contained negligible environmental evidence and so was only 25% sorted.

FAUNAL MATERIAL (TABLE 7)

The small faunal assemblage was recovered by hand-collection and flotation of soil samples. Faunal remains were recorded following the "Protocol for recording vertebrate assemblages" outlined by the Environmental Archaeology Unit, University of York (Dobney, Jacques and Johnstone 1999).

Semi-subjective, non-quantitative data were recorded for the material from each context regarding the state of preservation, colour, and the appearance of broken surfaces ('angularity'). Additionally, semi-quantitative information was recorded for each context concerning fragment size, dog gnawing, burning, butchery and fresh breaks.

Bone fragments were identified using a modern reference collection available at the Northlight Heritage Dickson Laboratory and at the Hunterian Museum in Glasgow University. Bones were also examined using published material such as Schmid (1972) and Hillson (2005).

Specimens that could not be identified to species or family group were assigned to the following categories: large mammal (horse/cow/large cervid size), medium-sized mammal 1 (sheep/goat/pig/small cervid size), medium-sized mammal 2 (dog/cat/hare size) and small mammal (voles, mice, shrews, rats, etc).

No attempts were made to identify ribs or vertebrae to species and these elements were assigned to the size groups described above. Unidentifiable mammal bone fragments from soil samples, most of which were smaller than 10mm, were weighed but not counted.

All recorded data was entered into a MySQL database and Table 4 summarises The Number of Identified Specimens (NISP) by context.

BOTANICAL MATERIAL (TABLE 6)

Botanical material from each sorted flotation retent was added to the corresponding flot for assessment analysis then sorted through a 500µm, 2mm and 4mm sieve. A representative volume of charcoal >4mm, up to 100% was identified in each case in order to characterise the assemblage present. Uncarbonised botanical material within the general biological analysis samples was examined in water for identification then stored in a mixture of 10% glycerine, ethanol and formalin whilst carbonised materials were dried prior to examination and storage. Charcoal identification in all cases was undertaken using the reflected light of a Zenith metallurgical microscope at x63 magnification and with reference to Schweingruber (1990). The >2mm and >500 µm fractions were 100% sorted and identified for carbonised cereals and seeds and 50% sub-sorted for uncarbonised seeds and invertebrates. Molluscs

were tallied and estimated abundances recorded. Cereal identification was achieved with reference to Jacomet (1987). Seed identification was undertaken with reference to Beijerinck (1947), Cappers (2006) and the Dickson botanical reference collection. For the purposes of this report all propagules are referred to as 'seeds' for simplicity. Plant nomenclature follows Stace (1997) except cereals, which conform to Zohary & Hopf (2000).

MOLLUSCS (TABLES 6 & 8)

Molluscs were sorted initially by shape before specific identification and habitat criteria were achieved using Cameron & Kerney 1979, Evans 1972 and Claassen 1998 and modern reference materials.

7.4 RESULTS

Bulk sample sorting results are given in Table 1, with analysis of flots including carbonised materials in Table 2. Animal bone results are presented in Table 3 and the results of analysis of the GBA samples are contained within Table 4.

The animal bone assemblage was recovered from 8 contexts and weighed 496g in total. Bone preservation was poor and the surface of bone fragments had completely been eroded with little organic content remaining and a highly brittle or leached appearance. This is consistent with that expected from a well-drained chalk substrate. In addition, the assemblage was heavily fragmented with more than half of the fragments being less than 50 mm in length. Most fragment edges were noted as spiky and fresh breakage was observed on more than 50% of fragments. Some specimens showed signs of longitudinal cracking suggestive of exposure to the elements before being buried. Bone preservation was homogenous throughout all contexts.

The majority of the identified fragments to species were isolated teeth, especially pig and ovicaprids, which is a common feature of poorly preserved bone assemblages.

The botanical assemblage from every context other than 4001 was minimal, adding little to the interpretation of the site. However, context 4001 was notable both in terms of charcoal and cereal assemblages, indicating domestic practices suggestive of possible cereal parching or other processing. The number of indeterminate cereal grains recorded in that context contrasts with the generally good preservation of charcoal to suggest a series of depositional events or repeated burning of hearth ashes rather than a single episode.

The mollusc assemblage was significant in every sample examined, indicating a predominantly, dry calcareous environment. This concurs with the generally low organic

content recorded, with only a few modern intrusive roots found in every sample other than context 4001 [003]. The presence of nitrogen fixing root nodules observed in GBA samples also reflects this impoverished soil status.

The pottery assemblage was confined to rough fabric materials in context 4001, but flint nodules and flakes were recovered in most samples. It is likely that much of the flint is of natural origin although confirmation of this would require specialist analysis. Large pieces of chalk were recorded in all samples floted, which concurs with the abundance of terrestrial molluscs observed.

CONTEXT 4001 [003] UPPER FILL OF DITCH. BULK SAMPLE

Sample 003 from context 4001 was interpreted during excavation as containing domestic debris and the botanical and pottery assemblages would concur with this hypothesis. Charcoal was generally in good condition (Table 2) and included apple/rowan type (Maloideae), plum/cherry type (Prunoideae) and especially oak (*Quercus*). This is a somewhat unusual collection of wood types and may suggest intentional species selection from open scrub woodland, although such a suggestion can only be tentative when relating to a single sample. The cereal assemblage (Table 2) included 68 grains, of which hulled barley, rye and emmer wheat were identifiable with confidence, although some grains were also likely to be spelt wheat and many were poorly preserved and indeterminate. This combination of cereal types would be suggestive of an early occupation date for this phase of activity with the potential for several periods of occupation. This might explain the contrast between the poor cereal preservation and good condition of charcoal and so an AMS dating programme is recommended.

The pottery assemblage appears to be red and grey gritty ware of rustic composition with large sandy, shingle inclusions and apparent burnt interior. Sherds are 5–40mm, mainly 7mm in thickness apart from occasional light orange brown sherds of 3mm thickness with the same general composition. The total weight of the pottery assemblage was 108.85g.

The lithic assemblage included flint fragments or chips ranging from 10–60mm and are tentatively labelled as such although few if any show evidence of having been worked. The total weight was 315.37g. A small amount of fragmented terrestrial mollusc shell was also recovered from this sample (0.78g).

The total animal bone assemblage from context 4001 weighed 165g, including sixteen hand-collected fragments weighing in total 136g. Cattle (2 fragments), ovicaprids (3 fragments) and pig (5 fragments) were all represented and the only species identified. Pig and

ovicaprids were only represented by isolated teeth, including young individuals, and cattle body parts included a metatarsal and a lower molar.

Vertebrate remains were also recovered by flotation and were limited to unidentified mammal bone fragments (29g), most of them charred or calcined and of small size.

The mollusc assemblage was generally more indicative of open, dry chalky grassland than the scrub woodland suggested by woody taxa. They would concur with the dumping of domestic hearth and/or cereal processing deposits into the ditch post abandonment as a means of refuse disposal. This supposition would be further supported by the broken, used pottery and worked animal bone remains recovered.

CONTEXT 4004 [004] POSSIBLE TURF LINE WITHIN DITCH 4007. GBA SAMPLE

The soil was described as a medium orange brown silty loam with an approximately even distribution of calcareous stone and soil. Some modern roots were also visible. The sieve retent was composed of stone and silt with some visible shell.

The sample produced one uncarbonised seed of fat hen (*Chenopodium album*) that is probably modern. This sample produced a relatively diverse range of biological elements, with an increase in tiny charcoal abundance and a fragment of charred hazel (*Corylus*) nutshell. Notable in this sample was the presence of nitrogen-fixing root nodules. These nodules are a symbiotic relationship between the host plant and a species of cyanobacteria. The function of them is to fix atmospheric nitrogen from the air into a form that the plant can utilise. They are found in plants that grow in poor soil conditions containing few available nutrients and are common in leguminous plants and alder trees (*Alnus* sp), although the nodules recovered are not considered to be further identifiable.

Molluscs in this sample were dominated by excentric vallonina (*Vallonia excentrica*), although the range of taxa recorded indicates a dry calcareous grassland environment with poor soils, possibly in a disturbed habitat. The fat hen seed recorded is undoubtedly modern but concurs with the nutrient poor status of this soil. The species has a widespread distribution on arable / ruderal environments.

CONTEXT 5003. HAND COLLECTED

Twelve hand-collected fragments of animal bone were recovered from this context weighing in total 60g. None of the fragments could be identified to species and were therefore recorded as unidentifiable mammal. The only information these can give to the site is to record the continuation of human activities.

CONTEXT 5004 [007] DITCH BACKFILL. BULK SAMPLE

This bulk sample was rich dark brown loam with a medium viscosity and an abundance of chalk fragments of between 2mm-120mm in size. This bulk sample was entirely free of artefacts or carbonised material and only a single isolated cattle tooth fragment was recovered weighing 2g. The residue contained only clean fragments of chalk but the fairly extensive assemblage of tiny molluscs including primarily milky crystal snail (*Vitrea contracta*) but also eight other species including least slippery snail (*Cochlicopa lubricella*) would imply both vegetated dry grassland and damp woodland. This conflict in habitat preferences would concur with the interpretation of backfill within this area of the ditch.

CONTEXT 5005 [008] PRIMARY DITCH FILL. BULK SAMPLE

This sample consisted predominantly of chalk and flint debris ranging from 30–120mm in size. This bulk sample had a loose viscous, clay texture but with high chalk and flint component. As before, flint flakes again seemed to be from natural processes rather than worked pieces. One nodule of black flint was also recorded, again apparently un-worked. The total weight of the flint assemblage was 149.0g.

The charcoal assemblage from sample 008 was minimal and residual and unremarkable in character and no animal bone was recorded. The mollusc assemblage, including equal proportions of milky crystal snail and slender herald snail (*Carychium tridentatum*), would be consistent with both dry rocky grassland and damp vegetation. As such it would suggest that a degree of natural slippage of materials into the damp, vegetated base of the ditch is feasible.

CONTEXT 5007 [005] POSSIBLE TURF LINE WITHIN DITCH. BULK SAMPLE

This sample of possible turf within the ditch was a rich loamy dark brown colour with chalky inclusions. A minimal, unidentifiable tiny charcoal assemblage was recovered plus one uncarbonised seed of fat hen that is probably a modern contaminant. A small flint flake assemblage was recovered that appeared to be naturally fractured.

No hand-collected vertebrate remains were recovered from this context but the few remains (5g) recovered during soil flotation included 1 amphibian bone and small fragments recorded as unidentified mammal.

Mollusc remains were primarily recovered from the flot but 2.45g of broken larger but indeterminate snail fragments were recovered from the retent. The identifiable molluscs were indicative of a variety of habitats, from dry calcareous grassland to damp vegetated rocky places and woodland. The brown disc snail (*Discus ruderatus*) recovered is suggestive of

damp undersides of logs, whilst the bulin snail (*Ena montana*) and plaited door snail (*Cochlodina laminata*) are found in leaf litter and under rocks. This combination of taxa would be consistent with a vegetated post abandonment ditch including possible intentional dumping of materials for disposal.

CONTEXT 5009. HAND COLLECTED

Ten hand-collected animal bone fragments were recovered from this context weighing in total 110g. Only 2 cattle bone fragments of metatarsal and pelvis could be identified to species, the remainder being assigned to medium-sized mammal 1 and unidentified mammal remains. The condition of these remains is in keeping with all bone on this site and reflects the extremely dry, calcareous soil matrix.

CONTEXT 5011 [006] PRIMARY FILL OF DITCH. BULK SAMPLE

This primary deposit within the ditch consisted of dark brown loam that was slightly viscous with chalk inclusions. This bulk sample contained no artefactual material other than lumps of chalk and an assemblage of flint flakes and nodules that display characteristics consistent with natural fractures. No animal bone was recovered and charcoal was tiny and of minimal volume. The moderate mollusc assemblage was dominated by milky crystal snail and is consistent with dry, calcareous rock places. Slender herald snail was also frequently observed, indicating vegetated grassland was also present at time of deposition.

CONTEXT 6003. HAND COLLECTED

Two hand collected shaft fragments of a medium-sized mammal 1 (probably ovicaprid) long bone weighing 5g were recovered from this context and are consistent with the rest of the site in terms of speciation and preservation.

CONTEXT 6005 [002] TURF LINE IN DITCH 6008. GBA SAMPLE

This soil was described as a medium orange brown silty loam with large sub angular calcareous stone inclusions with some flint and modern roots visible. Items recovered and retained from this sample included molluscs, spherical metallic objects, bone fragments and a small number of tiny, indeterminate charcoal fragments. Seven species of mollusc were recorded, identified as slender herald snail, milky crystal snail, moss chrysalis snail, excentric vallonina, blind snail (*Cecilioides acicula*), waxy glass-snail (*Aegopinella nitidula*) and garlic snail (*Oxychilus alliarius*).

The range of molluscs are indicative of a calcareous short grassland habitat ranging from dry to damp with poor soil conditions. They can also indicate a rocky and exposed environment,

and waxy glass-snail specifically is often found in habitats displaying anthropogenic disturbance.

CONTEXT 6007 [001] PRIMARY FILL OF DITCH CUT 6008. GBA SAMPLE

The soil was described as a light yellow brown silty clay loam with an abundance of large, sub angular calcareous stone inclusions. This sample had very low organic content, consisting mainly of calcareous stone with very little silt. The main items recovered were molluscs, some tiny indeterminate charcoal fragments and a number of spherical metallic objects, frequently less than 1mm diameter and requiring specialist input to identify provenance. The molluscs were identified primarily as slender herald snail.

The identification of the molluscs indicates a damp grassland environment on calcareous soils and rock. The calcareous nature of the soil is reflected in the retent residue.

CONTEXT 6014 [009] PRIMARY FILL OF DITCH CUT 6015. GBA SAMPLE

This soil was described as a light yellow-orange brown sandy silt loam with calcareous sub angular stone inclusions and no other visible inclusions. The material retained on the sieve was predominantly stone with some silt and visible roots and indeterminate tiny charcoal.

The abundance of biological materials in this sample is greatly reduced, but the number of the unidentified metallic objects is significantly higher. Occasional molluscs were present including five individuals of milky crystal snail and one slender herald snail, in keeping with elsewhere on the site. One nitrogen-fixing root nodule was also retrieved, indicative of nutrient poor soil. The more abundant mollusc in this sample is more commonly found among rocks and favours dry and calcareous habitats, whilst the other taxon prefers damp grassland and well vegetated places. The combination of them together would suggest slippage into the damp primary ditch of materials from the drier ditch sides.

7.5 CONCLUSIONS

The results of the analysis indicates that the bulk samples extracted from each context of ditch fills were of a highly calcareous poor soils with little potential for good organic preservation or uncarbonised plant materials. Bone preservation was poor and the assemblage is of low interpretative value considering the paucity of identifiable elements and the very small size of many fragments. Some elements also show longitudinal cracking suggesting they may have been exposed to the elements before being covered in the ditches. It is worth noting that the main domesticates (cattle, pig and ovicaprids) dominate the assemblage, with body part representation biased as a result of poor preservation, with pigs and ovicaprids solely represented by isolated teeth. However, cattle remains being larger seem to have had a better survival rate and include lower meat bearing elements.

Only one upper ditch fill (4001) contained a significant botanical assemblage and so interpretation of results must be undertaken with caution. Nevertheless, the varied cereal assemblage is suggestive of fairly early, perhaps Anglo-Scandinavian or earlier period domestic cereal processing and a series of deposition events is considered likely given the variation in taxa and states of preservation. The charcoal assemblage would suggest selection from local scrub woodland resources including fruit wood. As fruitwoods are valued for their food resource status, this may be collection of dead wood or otherwise specifically selected materials. The presence of rough pot sherds and butchered animal bone within this same fill would concur with this context as a midden deposit.

Soil conditions recorded are ideal for mollusc preservation, and indicate a predominantly dry calcareous environment throughout the period of sediment accumulation within the ditches, although with naturally damp conditions in the primary ditch. The samples themselves had very little organic content, with only a few modern roots found and the presence of nitrogen fixing root nodules in GBA samples reflects the lack of soil nutrients.

The unidentified metallic objects extracted from every GBA sample are mainly spherical in character and some have a rust red/ brown patina. The objects were tested with a magnet and did not react so are not ferrous, but they also do not appear to be organic in origin. The flint flakes and fractured nodules also found in each sample could be a result of natural processes such as frost fracturing of naturally occurring flint material but have been retained pending decisions regarding further examination.

7.6 RECOMMENDATIONS

The animal bone assemblage should be retained in the case further excavations are to be undertaken at the site. Further charcoal identification work on context 4001 may recover additional taxa but this is not deemed to be of significant importance. Nevertheless, AMS dating of two or more botanical materials from this deposit will assign a chronological age and may help confirm whether or not this sample is one discrete dumped deposit or a series of depositional events. Further work on the mollusc assemblage in association with dated materials may provide absolute confirmation of environmental conditions across the history of this site.

7.7 ACKNOWLEDGEMENTS

Northlight Heritage would like to thank the Department of Archaeology (University of Glasgow) for the use of the department's reference collection on permanent loan at the Dickson Laboratory.

Context Information					
Context number	4001	5007	5011	5004	5005
Period					
Phase					
Dates					
Sample Information					
Sample number	3	5	6	7	8
Volume pre flotation (L)	50.00	50.00	30.00	30.00	10.00
Weight pre flotation (Kg)	61.40	36.10	36.90	10.80	10.70
Volume post flotation (L)	23.00	15.30	13.10	4.00	6.00
Weight post flotation (Kg)	20.20	25.60	24.60	7.80	5.00
Percentage sorted	100.00	100.00	100.00	100.00	100.00
Artefact Record (weight in grams)					
C.V.	12.26	0.08			
Seed					
Nutshell					
Human Bone					
Teeth	6.24				
Animal Bone	165.00	5.00		2.00	
Fish Bone					
Shell	0.78	2.45			
Pottery	108.85				
Lithic	315.37	175.44	468.43		149.00
Unknown					0.10

Table 5 Flotation records

	Context	4001	5004	5005	5007	5011
Assessment of BS Flots & CV	Sample	003	007	008	005	006
	Flot / Retent	F+R	F	F	F	F
Modern roots		+++++	+	++	++	++
molluscs		>500	>150	>200	>250	>100
Invertebrates		++	-	+	-	+
uncarb seeds		++	-	+	-	-
carb seeds		-	-	-	-	-
cereals		67	-	-	1	-
Total CV> 4mm		45ml	-	-	-	-
Total CV>2mm		45ml	-	-	<<2.5ml	-
Total CV<2mm		40ml	-	<<2.5ml	<<2.5ml	<<2.5ml
AMS option Y / N		Y (Maloideae)	N	N	N	N
Charcoal	Common Name					
Maloideae	apple / rowan type	9 (2.50g)	-	-	-	-
Prunoideae	plum/cherry type	3 (0.27g)	-	-	-	-
<i>Quercus sp</i>	oak	18 (1.95g)	-	-	-	-
Cereals						
<i>Hordeum vulgare var vulgare</i>	hulled 6-row barley	1	-	-	-	-
<i>Hordeum vulgare sl</i>	6-row barley	4	-	-	-	-
<i>cf Hordeum sp</i>	cf barley	3	-	-	-	-
<i>Secale cereale</i>	rye	1	-	-	-	-
<i>cf Secale cereale</i>	cf rye	1	-	-	-	-
<i>Triticum dicoccum</i>	emmer wheat	2	-	-	-	-
<i>Triticum cf spelta</i>	cf spelt wheat	2	-	-	-	-
<i>Triticum speltal/dicoccum</i>	spelt/emmer wheat	1	-	-	-	-
<i>Triticum sp</i>	wheat	6	-	-	-	-
<i>cf Triticum sp</i>	cf wheat	5	-	-	-	-
indet cereal	indet	42	-	-	1	-
(nc) plant macros (50% sub)						
<i>Aethusa cynapium</i>	fool's parsley	1	-	-	-	-
<i>Chenopodium album</i>	fat hen	32	-	1	-	-
<i>Cirsium sp</i>	thistle	4	-	-	-	-
<i>Fumaria sp</i>	fumitory	2	-	-	-	-
Invertebrates (50% sub)						
beetle larvae		15	-	-	-	-
beetle carapace fgmt		1	-	-	-	-
egg fragments		+	-	-	-	-
millipede		1	-	-	-	-
slug		1	-	-	-	-

Terrestrial molluscs						
Vitrea contracta	milky crystal snail	-	++	+++	++++	++++
Carychium tridentatum	slender herald snail	-	++	+++	++	+++
Vallonia excentrica	excentric vallonia	++	+	+	++	+
Pupilla muscorum	moss chrysalis snail	+	-	++	+	-
Ena montana (juvenile)	bulin snail	-	-	+	-	-
Discus ruderratus	brown disc snail	-	-	+	++	-
Oxychilus alliarius	garlic snail	++	+	+	++	-
Cecilioides acicula	blind snail	+++	+	-	++	-
Cochlodina laminata	plaited door snail	-	-	-	+	-
Cochlicopa lubricella	least slippery snail	-	+	-	+	-

Table 6 Assessment of BS Flots and CV

Species / Context	4001	5003	5004	5007	5009	6003	6005	Total
Cattle (<i>Bos taurus</i>)	2		1		2		1	6
Pig (<i>Sus domesticus</i>)	5							5
Sheep/goat	3							3
Large mammal	2							2
Medium mammal 1	2				1	2		5
Mammal unidentified	2	12			7			21
Unidentifiable amphibian				1				1
Total	16	12	1	1	10	2	1	43

Table 7 Animal bone results

	Context	4004	6005	6007	6014
	Sample	004	002	001	009
Initial vol sieved		1000ml	1000ml	1000ml	1000ml
Vol after sieving >1mm		110ml	350ml	400ml	500ml
Vol after sieving >500µ		25ml	20ml	20ml	40ml
% part sorted vol >500µ		25%	25%	25%	25%
Seeds (nc)					
<i>Chenopodium album</i>	fat hen	1	-	-	-
Molluscs					
<i>Carychium tridentatum</i>	slender herald snail	-	7	2	1
<i>Vitrea contracta</i>	milky crystal snail	-	2	12	5
<i>Pupilla muscorum</i>	moss chrysalis snail	-	1	-	-
<i>Vallonia excentrica</i>	excentric vallonia	16	9	3	-
<i>Cecilioides acicula</i>	blind snail	-	4	-	-
<i>Aegopinella nitidula</i>	waxy glass-snail	1	1	-	-
<i>Oxychilus alliarius</i>	garlic snail	2	2	-	-
Other					
Flint flakes/microliths		42	10	8	20
Nitrogen fixing root nodules		7	-	-	1
charcoal fgmts NFI <2mm		14	2	5	2
<i>Corylus</i> nutshell	hazelnut shell	1	-	-	-
bone fgmts		-	4	-	-
unident. metallic object		13	40	10	71

Table 8 GBA Samples

8. DISCUSSION AND CONCLUSIONS

Although many of the trenches produced little of archaeological significance, the parallel ditches excavated in Trenches 4, 5 and 6 were of considerable significance. The size of these ditches, 2.9 – 3.7m wide and 1.15 – 1.6m deep make them rather large for trackside ditches especially considering the very good natural drainage of the underlying chalk. There was no clear evidence of associated banks but it is considered possible that the layer of mainly small chalk blocks seen above what appeared to primary silting in each ditch section had been washed into the ditch from a bank external to the possible trackway. They are perhaps best interpreted as land boundaries adjacent to an access trackway. The width of the trackway is uncertain but if the possible banks were external then it could have been as

wide as c.5.5m. The dating evidence from the pottery may indicate that the ditches were cut during the middle of the Iron Age with initial silting and backfilling occurring during the late Iron Age although there is some evidence, from Context 6001, that the ditches may have only completely disappeared as landscape features during the 1st century AD.

A very similar double ditched feature has recently (2010) been investigated close by at the site of the proposed Saxby Wolds Wind Farm. Here one of the ditches was 5m wide and 1.7m deep and the other c.3.7m wide and 1.6m deep. The fills were broadly similar but contained mainly Romano-British pottery with a smaller amount of possible Iron Age pottery. Given the close similarities of the Bonby and Saxby ditches it would appear that they are components of a much more widespread landscape but the slightly different dates suggest that this landscape was changing and evolving over time. This is backed up to some extent by the environmental evidence which suggests there was an earlier phase of dry grassland and damp ditches possibly followed by a phase in which cereal processing made an appearance, apparently during or by the 1st century AD. It is thus considered important to regard the present site as one of at least regional importance within the North Lincolnshire Downs since it seems to belong to a system of land use and division from the Iron Age into at least the earlier Roman period although further investigation of similar sites around Bonby would be required to get a clearer picture of this landscape evolution.

During the compilation of the earlier desk-based assessment it was noted that part of the field to the south-west of the current site, leading down to Middlegate Lane, had been occupied by potatoes which had been harvested. The soil was relatively fresh and was seen to contain on the surface small fragments of chalk. These were also visible in the area of investigation after the harvesting of the Miscanthus and the removal of the roots. This, and the observation that in many places homogenous topsoil lay immediately above the natural chalk fragments, suggested that previous ploughing of the site had already penetrated to the natural chalk prior to the planting of the Miscanthus. It is therefore not possible to assess with any confidence the effect of planting and harvesting the Miscanthus on the current site. A more detailed report on this is due to be prepared and submitted, initially, to NLSMR.

Examination of the proposed works strongly suggest that if the buildings are to be cut into the sloping ground in order to achieve a level structure then that work and the below building slurry tanks are likely to remove all traces of the ditches within the proposed development area. No mitigation strategies have been advanced by the author of this report but it is believed that discussions between the applicant and the NLSMR have taken place although it is not known at present the results of these discussions.

9. ACKNOWLEDGEMENTS

Evaluation field team	Hannah Baxter, David Evans, Tom Linington, Ben Savine, Duncan Stirk
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APPENDIX 1 WRITTEN SCHEME OF INVESTIGATION

Prepared for Wilsons Farms by © York Archaeological Trust

Site Name: Hall Farm, Middlegate Lane, Bonby, North Lincolnshire

Proposal: Outline planning permission to erect a 500 cow dairy unit to include the erection of four cattle buildings, a dairy/parlour building, welfare/office building, two detached dwellings, a concrete yard for silage storage and straw storage, slurry/dirty water store, with access and landscaping reserved for subsequent approval.

NGR: TA 0161 1693

Planning Reference: PA/2010/1447

Date of Issue: 1st March 2012, v.3

1. INTRODUCTION

1.1 Appraisal of information contained within the North Lincolnshire Sites and Monuments Record (NLSMR) has identified that the proposal for development at the above site may have an impact on archaeological remains. The NLSMR does not, at present, hold sufficient detail of the archaeological potential of the area proposed for development, and further assessment has been recommended.

1.2 It is proposed that a trenching evaluation is undertaken on anomalies revealed during an earlier geophysical magnetometer survey of the development site. The results of this evaluation along with the results from the earlier desk based assessment and geophysical survey, will enable decisions to be made on the planning application for any appropriate mitigation strategies that may be required.

1.3 The evaluation shall be undertaken in a manner consistent with the Institute of Field Archaeologists 1994 (revised 2001 & 2008) *Standard and Guidance for archaeological field evaluations*, <http://www.archaeologists.net/modules/icontent/inPages/docs/codes/fldeval2.pdf> and the English Heritage 1991 (2nd Edition) *Management of Archaeological Projects* (hereafter MAP2). All English Heritage guidelines on archaeological practice must also be followed (<http://www.helm.org.uk/server/show/nav.19702>)

2. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The proposed development site lies within an area of archaeological interest and coincides with a known heritage asset of archaeological significance. Aerial photographs have revealed the cropmark of an extensive double-ditched trackway or linear earthwork stretching for over a kilometre across the Wold top snaking to the north around Hall Farm. The trackway or earthwork may have linked Middlegate, a prehistoric routeway, and the Roman road known as High Street running along the Wolds to the east.

Archaeological trial trenches at the site of one of the recently proposed Saxby Wold wind turbines (PA/2009/0657) to the northwest of Hall Farm revealed two deep concentric ditches defining the double ditched cropmark. The fills of the ditches produced large quantities of pottery of Romano-British date as well as animal bone indicating an occupation site in the immediate vicinity. The remains of two human skeletons were excavated within one of the ditches.

The trackway can be seen to dog-leg where it passes just to the north of Hall Farm adjacent to what appears to be a rectangular enclosure appended to the north side; this enclosure may contain further settlement evidence. The proposed development overlies these features. The proposed development involves extensive ground disturbance to create a level site on the hill slope for the cattle sheds, each of which will also have below-ground slurry tanks, and to create terraces for yard surfaces and a large slurry tank to the south of Hall Farm. It is likely therefore that there will be a permanent destructive impact on remains of archaeological significance relating to settlement and land boundaries of prehistoric and Roman date. There is also the potential for further human remains to be disturbed by construction.

3. EVALUATION OBJECTIVES

3.1 In the area of proposed development, any below-ground construction work will entail damage to, or destruction of, any archaeological deposits which survive within or below the topsoil cover.

3.2 The purpose of this archaeological evaluation is to gather sufficient information to establish the presence/absence, nature, date, depth, quality of survival and importance of any archaeological deposits to enable an assessment of the potential and significance of the archaeology of the site to be made, and the impact which development will have upon them. When the evaluation is completed, an informed decision can then be taken regarding the future treatment of the remains and any mitigatory measures appropriate either in advance of and/or during development.

3.3 The preferred option is the preservation of significant archaeological remains *in situ*. The possibilities of reconciling the needs of preservation with those of the development should be fully explored, for example through sympathetic foundation design. However, where *in situ* preservation proves impracticable, preservation by record is considered to be the second-best option, through detailed excavation in advance of development, to include post-excavation analysis and publication of results.

4. PROPOSED METHODOLOGY

4.1 The evaluation strategy has been devised to assess the impact of the whole development on this site, and comprises the excavation of nine trenches; six of which being 15m x 2m, with three trenches over the double ditched feature, identified from the geophysical survey, being 25m x 3m.

4.2 The trenches should be opened in a controlled manner, using an appropriate mechanical excavator equipped with a wide, toothless digging bucket. Excavation must be under direct archaeological supervision, and undertaken in a series of shallow horizontal spits, down to the first significant archaeological horizon or natural geology. The identification of geophysical anomalies from the earlier survey, indicate that archaeological features will principally survive at the topsoil/subsoil interface.

4.3 The trench locations should be accurately plotted by electronic means to local permanent features shown on published Ordnance Survey maps. This is to ensure that the trenches can be independently relocated in the event of future work.

4.4 A sufficient sample of any archaeological features and deposits revealed will be excavated in an archaeologically controlled and stratigraphic manner in order to establish the aims of the evaluation. The complete excavation of features is not regarded as necessary; a sufficient sample shall be investigated to understand the full stratigraphic sequence in each trench, down to naturally occurring deposits.

4.5 A full written, drawn and photographic record will be made of all material revealed during the course of the evaluation. Plans shall be completed at a scale of 1:50 or 1:20 (as appropriate) whilst section drawings should be at a scale of 1:10.

4.6 A finds recovery, recording and conservation strategy must be agreed with the NLSMR in consultation with the recipient museum in advance of the project commencing (see Society of Museum Archaeologists 1993 *Selection, Retention and Dispersal of Archaeological Collections, Guidelines for use in England, Northern Ireland, Scotland and Wales*). All finds (artefacts and ecofacts) visible during the excavation must be collected and processed unless variations to this principle are agreed. In some cases sampling may be most appropriate, where this is the case the sampling strategy must be agreed with the relevant specialist.

4.7 It is anticipated that the following categories of artefacts will be encountered during the evaluation: flint and/or worked stone, bone, pottery and ceramic building material, and ferrous and non-ferrous metalwork, glass and stone. Contingency provision should be made for visits by the relevant specialists in the event of exceptional or large quantities of artefacts or ecofacts, where advice on in situ excavation techniques, recovery, conservation, and sampling strategies etc may be necessary, and to aid the understanding of the burial environment of the material. Allowance must also be made for the preliminary conservation and stabilisation of all objects.

4.8 Finds must be appropriately packaged and stored under optimum conditions, in accordance with the published guidelines Watkinson and Neal, 1998 *First Aid for Finds*. Any recording, marking and storage materials shall be of archive quality and recording systems must be compatible with the recipient museum. Contractors must make an adequate allowance in calculating estimates for the museum's storage grant in consultation with the museum curator.

4.9 The terms of the Treasure Act 1996 must be followed with regard to any finds which might fall within its scope. Any finds must be removed to a safe place and reported to the local coroner as required by the procedures laid down in the "Code of Practice". Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft. The find should also be reported to the Portable Antiquities Scheme Finds Liaison Officer at North Lincolnshire Museum.

4.10 Where human skeletal remains are encountered they must initially be left in situ, covered and protected. Lifting should be kept to the minimum which is compatible with the aims of the evaluation. Where removal is deemed necessary, the archaeological contractor, must apply to the Ministry of Justice (<http://www.justice.gov.uk/whatwedo/burials.htm>) for a licence authorising the removal of all burials likely to be disturbed by development; in accordance with the Burial Act of 1857.

Where a licence is issued, all human skeletal remains must be properly removed in accordance with the terms of that licence (Please note that North Lincolnshire Environmental Protection Team must be contacted in accordance with licence conditions; Martin Allcock, Environmental Health Manager, Tel: 01724 297604, fax: 01724 297898).

4.11 All securely stratified contexts would be sampled, as appropriate, for assessment of the preservation conditions and potential for analysis of biological remains, which would include carbonised plant remains, charcoal and molluscs as being especially important. This should be undertaken in accordance with the guidelines in English Heritage 2002 *Environmental Archaeology A guide to the theory and practice of methods, from sampling and recovery to post-excavation*. <http://www.helm.org.uk/upload/pdf/Environmental-Archaeology.pdf>. Samples for general biological analysis (GBA) would be of 10L size, whilst those for bulk sieving (BS) would be of 30L size.

4.12 Samples must be taken as appropriate, for scientific dating, e.g. radiocarbon dating and archaeo-magnetic dating. This is especially important where dating by artefacts is insecure and where dating is necessary for the development of subsequent mitigation strategies.

4.13 Where there is evidence for industrial activity, large technological residues will be collected, with smaller separate samples collected for micro-slugs (hammer-scale and spherical droplets). Reference should be made to the document English Heritage/Historical Metallurgy Society 2001 *Archaeometallurgy in archaeological projects* http://www.helm.org.uk/upload/pdf/Archaeometallurgy.Centre%20for%20Archaeology%20Guidelines_2001.pdf.

4.14 The work will be monitored under the auspices of the NLSMR which will be given as much notice as possible (at least a week) of work commencing on site. The NLSMR will be afforded the opportunity to make monitoring visits to the site, during and prior to completion of the site works, and will be notified of any discoveries of archaeological significance. The EH RSA, will also monitor the archaeological science component of the evaluation, with the NLSMR.

4.15 Health and safety will take priority over archaeological matters. All archaeologists undertaking fieldwork must do so under a defined Health and Safety Policy which complies with all Health and Safety Legislation.

5. POST EXCAVATION ASSESSMENT

5.1 On completion of on-site works, a site archive shall be prepared in accordance with the specification outlined in English Heritage 1991 *Management of Archaeological Projects* (MAP2, 5.4; Appendix 3).

5.2 The stratigraphic information, artefacts, soil samples and any technological residues shall be assessed as to their potential and significance for further analysis and study. All finds must be cleaned, marked and labelled as appropriate, prior to assessment. For ceramic assemblages, the recognised local pottery reference collections and relevant codes must be used; the medieval pottery reference collection for Northern Lincolnshire is held at North Lincolnshire Museum, and is accessible to contractors and their specialists by appointment (contact Rose Nicholson 01724 843533). The established fabric codes for the City of Lincoln Roman pottery database and Lincolnshire sites must be used, or a concordance list provided (contact M Darling & B Precious, 01522 544554).

5.3 The specialist conservators and finds researchers should collaborate and undertake a rapid scan of all excavated material. Material considered vulnerable should be selected for stabilisation after specialist recording. Where intervention is necessary, consideration must be given to possible investigative procedures (e.g. glass composition studies, residues on or in pottery, and mineral-preserved organic material). Allowance must be made for preliminary conservation and stabilisation of all objects and a written assessment of long-term conservation and storage needs must be produced. Once assessed, all material will be packed and stored in optimum conditions, in accordance with Watkinson and Neal, 1998 *First Aid for Finds*.

5.4 All iron objects, a selection of non-ferrous artefacts (including all coins) and a sample of any industrial debris relating to metallurgy must be X-radiographed before assessment. Assessment must include inspection of all X-radiographs in accordance with English Heritage 2006 *Guidelines on the X-radiography of Archaeological Metalwork*.

5.5 Waterlogged organic materials should be dealt with in accordance with English Heritage 1995 *Guidelines for the care of waterlogged archaeological leather* and English Heritage 1995 *Guidelines on the recording, sampling, conservation and curation of waterlogged wood*.

5.6 Processing of samples collected for biological assessment, or sub-samples of them, must be completed. The preservation state, density and significance of material retrieved must be assessed. Unprocessed sub-samples must be stored in conditions specified by appropriate specialists.

5.7 Samples for dating must be submitted to laboratories promptly, so as to ensure that results are available to aid development of Briefs for subsequent stages of archaeological fieldwork and/or mitigation strategies.

6. REPORT PREPARATION, CONTENTS AND DISTRIBUTION

6.1 On completion of the post-excavation assessment, a site assessment report shall be prepared to include the following:

- A non-technical summary of the results of the work, introduction and aims and objectives,
- An introduction which will include
 - a) North Lincolnshire Museum site code, or accession number from another registered museum accepting the archive
 - b) planning application reference number
 - c) dates when fieldwork took place, personnel involved and who commissioned it
 - d) National Grid Reference (centre of site)
- An account of the methods and results of the evaluation, describing both structural data and associated finds and/or environmental data recovered,
- Interpretation, including phasing of the site sequence and spot-dating of ceramics. This shall be supported by the use of photographs and drawings, to include an overall plan of the evaluation site at an appropriate scale; a plan or plans at an appropriate standard scale (1:2500 minimum scale) locating all excavated trenches relative to current Ordnance Survey data and accurately geo-referenced to the National Grid; individual trench plans as excavated indicating the location of archaeological features, with at least one section detailing the stratigraphic sequence of deposits within each trench and including heights relative to Ordnance Datum.
- Specialist assessments of the artefacts recovered, and environmental samples taken, with a view to their potential for further study, and long-term conservation and storage needs. The results from investigations in Archaeological Sciences must be presented in the evaluation report and must include sufficient detail to permit assessment of potential for analysis.
- An assessment of the archaeological significance of the deposits identified, in relation to other sites in the region,
- A conclusion with an assessment of the impact of the proposed development on the known and/or potential archaeological resource. If the precise impact cannot be assessed at this stage, this should be stated.
- Details of archive location and destination including timetable for deposition
- Appendices and figures, as appropriate, including copies of the curatorial Brief (where issued), and WSI.
- References and bibliography of all sources used/consulted.
- Copy of OASIS recording form

6.2 Where an archaeological contractor/consultant includes in the site assessment report proposals for any mitigation strategies to preserve the archaeological resource, or for further evaluation and/or post excavation work, it must be explicitly stated whether or not such proposals have been discussed and agreed with the NLSMR and EH RSA. A draft assessment report may be submitted to the NLSMR and EH RSA to aid this discussion.

6.3 Bound hard copies of the assessment report, along with a PDF file, should be submitted to the commissioning body, the Local Planning Authority and the NLSMR, within an agreed timetable and subject to any contractual requirements on confidentiality. A PDF electronic copy of the assessment report must also be sent to the EH RSA (Dr Andy Hammon, English Heritage, 37 Tanner Row, York YO1 6WP. Email andy.hammon@english-heritage.org.uk. Telephone 01904 601983).

7. COPYRIGHT, CONFIDENTIALITY AND PUBLICITY

7.1 Unless the individual/organisation commissioning the project wishes to state otherwise, the copyright of any written, electronic, graphic or photographic records and reports rests with the originating body (the archaeological organisation undertaking the fieldwork and analysis). Agreements on copyright shall be agreed with the commissioning body at the outset of the project.

7.2 Copyright owners must, by prior agreement, licence the NLSMR to use the material for reference purposes, on the understanding that such licence does not cover commercial use of the material by the NLSMR or any third party. In all cases the contractor and the commissioning body will retain the right to be identified as the originator of the work.

7.3 The circumstances under which other parties can use the report or records must be identified at the commencement of the project, as should the proposals for distribution of the report (see 8 above). All archaeologists undertaking work must respect the commissioning body's requirements over confidentiality, but the archaeologist must endeavour to emphasise their professional obligation to make the results of archaeological work available to the wider archaeological community within a reasonable time (normally 6 months).

7.4 The archaeologist undertaking the evaluation has a duty of confidence to the client commissioning the work. All aspects of publicity must be agreed at the outset of the project between the commissioning body and the archaeological organisation or individual undertaking the project. If the project is to be publicised in any way (including media releases, publications etc.), then the NLSMR should be given the opportunity to consider whether its curatorial role should be acknowledged.

8. POST EXCAVATION ANALYSIS & PUBLICATION

8.1 The information contained in the assessment report will enable decisions to be taken regarding the future treatment of the archaeology of the development site and any material recovered during the evaluation.

8.2 In the event that no further fieldwork takes place on the site, a full programme of post excavation analysis and publication of artefactual and scientific material from the evaluation must be completed, as appropriate. Due attention must be paid to artefact retrieval and conservation, illustration of ceramics and artefacts, ancient technology, dating of deposits, and scientific analysis of soils, sediments, biological remains, ceramics and stone. Where appropriate, this work will be a requirement of a mitigation strategy for the site and does not form part of the tender for the evaluation work.

8.3 If the result of the evaluation is a decision not to initiate any further fieldwork or analysis, it must be appreciated that the evaluation may produce results of sufficient significance to merit publication in their own right. Allowance must be made for the preparation and publication in a local and/or national journal of a short summary on the results of the evaluation and of the location and material held within the site archive. The summary must be submitted to the editors of the journals at the required time appropriate time; allowance must be made for any associated costs.

8.4 The archaeological contractor must also prepare a short note on the evaluation for inclusion in the annual reports of the Society for Lincolnshire History and Archaeology, the Medieval Settlement Research Group and Medieval Archaeology, as appropriate. The summary must be submitted to the journal/s at the appropriate time. An OASIS reporting form must also be completed and submitted.

8.5 Should further archaeological excavation be undertaken, a synopsis of the results of the evaluation shall be prepared for publication with the final results of any further fieldwork.

9. ARCHIVE PREPARATION & DEPOSITION

9.1 Preparation of the site archive will be in accordance with guidelines in Society of Museum Archaeologists 1995 *Towards an Accessible Archaeological Archive, the Transfer of Archaeological Archives to Museums: Guidelines for use in England, Northern Ireland, Scotland and Wales*, and Brown, D. 2007 *Archaeological Archives A guide to best practice in creation, compilation, transfer and curation* Archaeological Archives Forum. The results from investigations in Archaeological Sciences must be included in the site archive.

9.2 The site archive, including finds, subject to the permission of the relevant landowners, should be labelled, conserved and stored according to the United Kingdom Institute for Conservation (UKIC)'s *Guidelines for the Preparation of Excavation Archives for Long-term Storage* (Walker 1990) and the Museums and Galleries Commission's *Standards in the Museum Care of Archaeological Collections*, 1992.

9.3 Consideration should also be given to the deposition of the electronic element of the evaluation archive with a recognised repository, such as the Archaeology Data Service, to ensure this data remains accessible.

9.4 Should no further archaeological work be initiated, the archive shall be deposited with a suitable repository which meets the criteria for the storage of archaeological material; in this instance the North Lincolnshire Museums Service

(MLA Registration and Accreditation, 2007) is recommended and has been contacted. A NLM archaeology site code **BYAN** has been obtained. All archive material would be marked with the museum accession number, and an agreed allowance would be made for the curation and storage of archive material. (Should additional archaeological work be undertaken, the evaluation archive should be prepared accordingly for incorporation into the final archive.)

9.5 Archive deposition must be arranged in consultation with the recipient museum and must take account of the requirements of the repositories and the relevant guidelines relating to the preparation and transfer of archives (eg. North Lincolnshire Museum March 2010 *Guidelines for deposition of Archaeological Archives with North Lincolnshire Museum*). Deposition must include transfer of title in accordance with legal requirements.

9.6 Written confirmation of the date and place of deposition must be sent to the NLSMR, together with an index to the contents of the archive.

10. STAFFING & TIMETABLE

Staff and external specialists available for this work are as follows:

- Site Manager – David Evans (YAT Field Officer, mobile: 07908 210030)
- x4 Excavation Assistants – Tba (YAT)
- Head of Artefact Research - Dr Ailsa Mainman (YAT)
- Human Remains - Malin Holst (York Osteoarchaeology Ltd)
- Palaeoenvironmental remains – Dr Jennifer Miller (YAT)
- Head of Curatorial Services - Christine McDonnell (YAT)
- Finds Researcher - Nicky Rogers (YAT)
- Flint – Peter Makey (External Specialist)
- Pottery Researcher - Anne Jenner (YAT)
- Prehistoric pottery – Peter Didsbury (External Specialist)
- Finds Officers - Geoffrey Krause & Rachel Cubitt (YAT)
- Archaeometallurgy & Industrial Residues – Dr Rod Mackenzie
- Conservation – Ian Panter (YAT)

It is expected that the site evaluation will proceed on 12th March 2012 and last for approx. two weeks. This would be followed by six weeks of Assessment and a further five weeks of Analysis (if required) leading to the archive preparation and dissemination of the final report in a further three weeks. This timetable will be dependent on the availability of certain external specialists.

11. REFERENCES

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Institute for Archaeologists. 2007. *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* by D.H. Brown.

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Neal, V., and D. Watkinson (eds). 1998. *First Aid for Finds: practical guide for archaeologists*. United Kingdom Institute for Conservation of Historic & Artistic Works, Archaeology Section; 3rd Revised Edition.

See also the **HELM** website for a full list of English Heritage Guidance documents.
<http://www.helm.org.uk/server/show/nav.19701>

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APPENDIX 2 OASIS FORM

OASIS FORM - Print view

<http://www.oasis.ac.uk/form/print.cfm>

OASIS DATA COLLECTION FORM: England

[List of Projects](#) | [Manage Projects](#) | [Search Projects](#) | [New project](#) | [Change your details](#) | [HER coverage](#) | [Change country](#) | [Log out](#)

[Printable version](#)

OASIS ID: **yorkarch1-124505**

Project details

Project name	Hall Farm, Middlegate Lane, Bonby, North Lincolnshire
Short description of the project	This was an evaluation excavation with nine trenches excavated across the area of proposed development.
Project dates	Start: 14-03-2012 End: 23-03-2012
Previous/future work	Yes / Not known
Any associated project reference codes	5552 - Contracting Unit No.
Any associated project reference codes	BYAN - Museum accession ID
Type of project	Field evaluation
Monument type	DITCH Iron Age
Significant Finds	POTTERY Iron Age
Significant Finds	ANIMAL BONE Iron Age
Methods & techniques	'Environmental Sampling', 'Sample Trenches', 'Targeted Trenches'
Development type	Farm infrastructure (e.g. barns, grain stores, equipment stores, etc.)
Prompt	Direction from Local Planning Authority - PPS
Position in the planning process	Not known / Not recorded

Project location

Country	England
Site location	NORTH LINCOLNSHIRE NORTH LINCOLNSHIRE BONBY Hall Farm, Bonby
Postcode	DN20 0PJ
Study area	405.00 Square metres
Site coordinates	TA 0161 1693 53.6387675661 -0.462945767854 53 38 19 N 000 27 46 W Point
Height OD / Depth	Min: 0.20m Max: 0.50m

1 of 2

30/04/2012 09:11

Project creators

Name of Organisation	York Archaeological Trust
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Martin Stockwell, YAT
Project director/manager	Martin Stockwell
Project supervisor	Dave Evans
Type of sponsor/funding body	Landowner

Project archives

Physical Archive recipient	currently with YAT
Physical Contents	'Animal Bones','Ceramics','Metal'
Digital Archive recipient	currently with YAT
Digital Contents	'other'
Digital Media available	'Database','GIS','Geophysics','Images raster / digital photography','Survey','Text'
Paper Archive recipient	currently with YAT
Paper Contents	'other'
Paper Media available	'Context sheet','Drawing','Miscellaneous Material'
Entered by	David Evans (devans@yorkat.co.uk)
Entered on	30 April 2012

OASIS:

Please e-mail English Heritage for OASIS help and advice
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cite only: <http://www.oasis.ac.uk/form/print.cfm> for this page

APPENDIX 3 ARCHIVE DEPOSITION

At the time of the preparation of this report all material for archiving including original site drawings, context cards, digital photographs, report figures, finds and environmental samples were with York Archaeological Trust. All records for this site will be deposited with the North Lincolnshire Museum Archive in accordance with the Archive Deposition Form reproduced as Appendix 3.

North Lincolnshire Museum Deposition of archive request form



Contractor Details	
Contractor :York Archaeological Trust Address :47 Aldwark, York, YO1 7BX	
Telephone :01904 663011 Fax :01904 663024 Email :devans@yorkat.co.uk	
Project Manager :Dave Evans	Contractors site code :5552
Fieldwork start date :27/02/12	Expected duration :2 weeks
Site Details	
Site Name :Hall Farm Address :Middlegate Lane, Bonby, North Lincs	
NGR :TA 0161 1693	
Size of area to be investigated :405sq metres (9 trenches)	Planning reference :n/a
Land Owner :Wilson's Farms	Developer :Wilson's Farms
Brief description of expected archaeology :Double ditched trackway ?prehistoric	
Archive	
Proposed structure of archive (MAP2/Other) :MAP2	Anticipated number of standard boxes, including documentary archive :Unknown at this stage
Electronic archive to be deposited with ADS or similar organisation (yes) :OASIS	Estimated deposition date at NLM: Possibly June 2012

NLM archaeology site code : BYAN

(To be assigned upon receipt of this form)

Fax : (01724) 270474

Email : Rose.Nicholson@northlincs.gov.uk

Entry Form No: 3894