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Client: Aggregate Industries



ARCHAEOLOGICAL MONITORING OF AN EXTENSION TO HULANDS QUARRY, COUNTY DURHAM

MAP2 Assessment

Alistair Robertson
MA(Hons)

PROJECT SUMMARY SHEET

<i>Client</i>	AGGREGATE INDUSTRIES
<i>National Grid Reference</i>	CENTRED ON NY 0190 1400
<i>Address</i>	HULANDS QUARRY, NEAR BOWES, COUNTY DURHAM
<i>Parish</i>	BOWES
<i>Council</i>	DURHAM COUNTY
<i>Planning Ref No</i>	6/2008/0003/CM
<i>Oasis No</i>	HEADLAND1-79187
<i>SMR No</i>	NMR 957849
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<i>Schedule</i>	
<i>Fieldwork</i>	SEPTEMBER 2009–JUNE 2010
<i>Report</i>	JUNE 2010

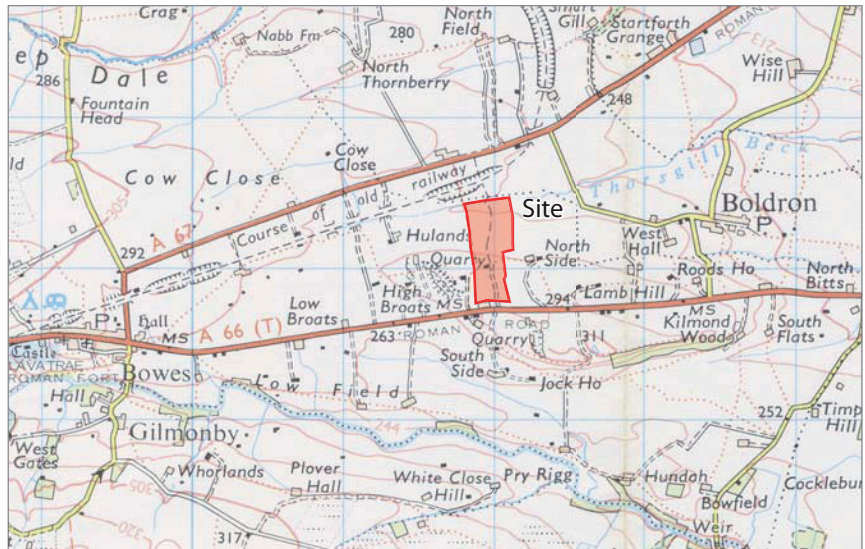
Signed off by:

Edward Bailey BA(Hons) BCom AIfA, Project Manager

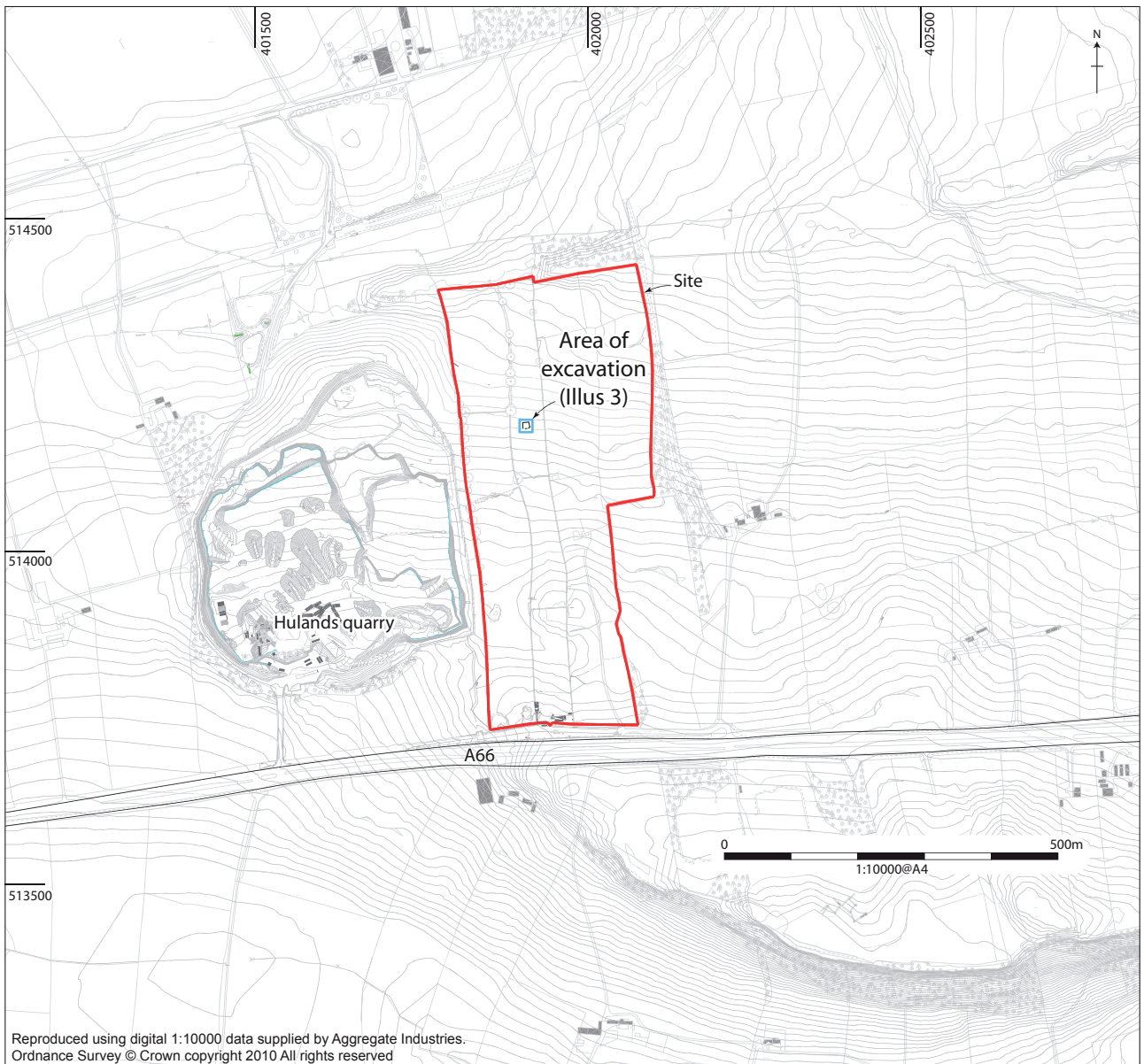
Date:.....

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Illus 1
 Site location

ARCHAEOLOGICAL MONITORING OF AN EXTENSION TO HULANDS QUARRY, COUNTY DURHAM

MAP2 Assessment

by Alistair Robertson

Headland Archaeology (UK) Ltd. undertook an archaeological watching brief in advance of the phase one works of an eastern extension to Aggregate Industries' Hulands Quarry, County Durham. The work was undertaken periodically between September 2009 and June 2010 as part of planning condition (Planning application no. 6/2008/0003/CM). The bulk of archaeological features encountered were the remains of furrows and field drains relating to post medieval agricultural activity in the area. Only one significant archaeological feature was recorded, which comprised a square enclosure of probable post medieval date.

1. INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned to carry out an archaeological watching brief during topsoil stripping in advance of the phase one eastern extension to mineral extraction operations at Hulands Quarry near Bowes, County Durham. The work was carried out in order to satisfy a condition of planning consent. A method statement for the watching brief was agreed with the Durham County Council Archaeologist following an assessment of cultural heritage issues made by Headland Archaeology Ltd in 2006. This report describes the results from the watching brief on topsoil stripping carried out intermittently from September 2009 to June 2010.

2. SITE LOCATION & DESCRIPTION

The site of the extension lies to the immediate east of the current quarry, between the villages of Bowes and Boldron. The A67 lies to the north of the area while it is bounded by the A66 to the south; both of which follow the courses of known Roman roads. Topographically, the site is located on the dip slope of an eastward trending limestone escarpment known as Kilmond Scars that undulates between 260m and 290mOD. The underlying solid geology comprises Great Limestone overlain by fine loams. Prior to work commencing, the extension area was given over to pasture enclosed with dry-stone walls and hedgerows. The site falls within the parish of Bowes and formed part of Bowes Manor. This area was part of the North Riding of Yorkshire until 1894, when it was

formed into the Startforth Rural District. In 1974 it was transferred to County Durham, and incorporated into the Teesdale District. (Illus 1)

3. ARCHAEOLOGICAL BACKGROUND

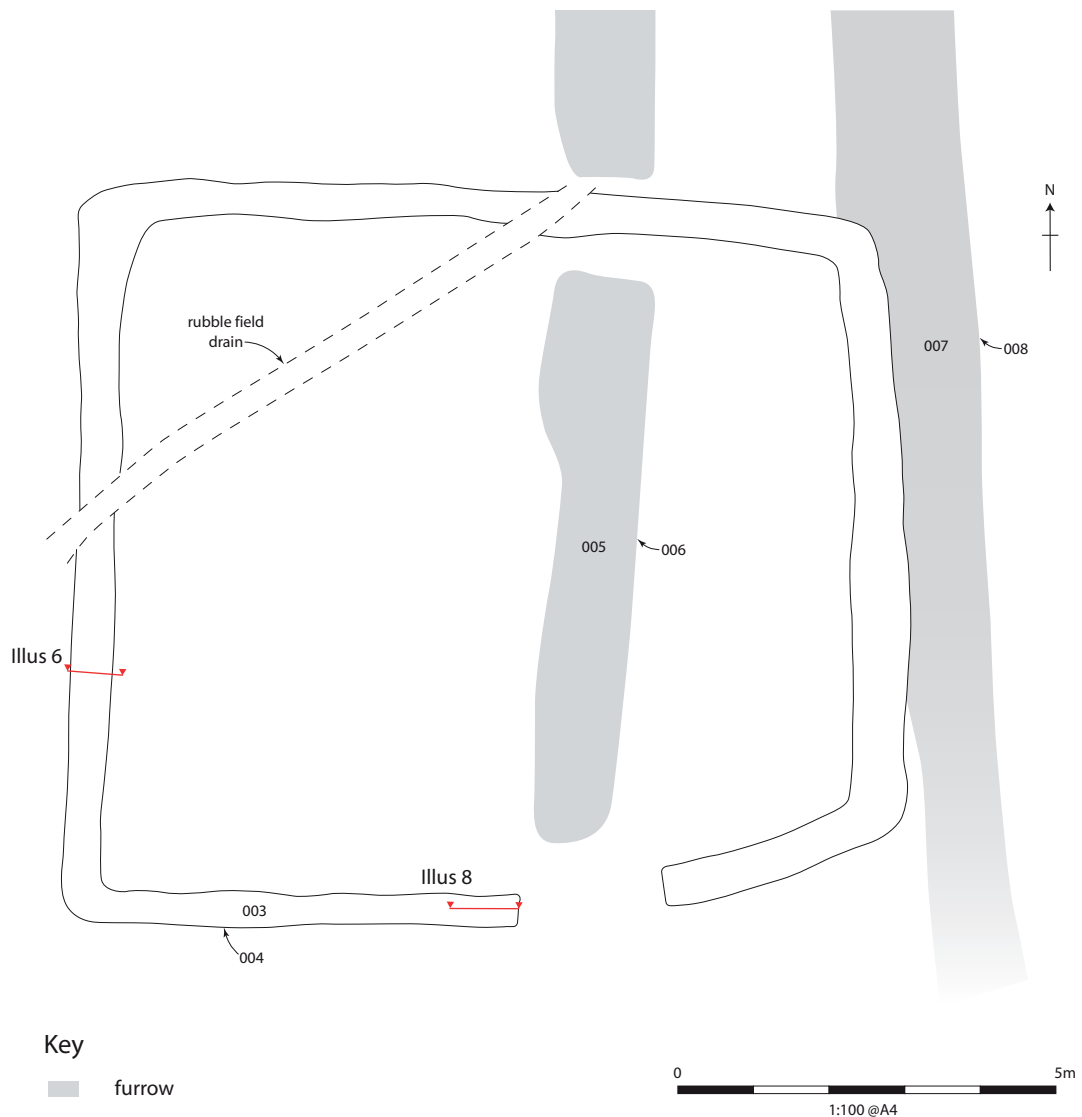
A cultural heritage assessment undertaken in 2006 identified three small limestone quarries along the southern edges of the area, but no other known cultural heritage sites within it (Kimber 2006). Further known cultural heritage sites are located in the environs of the extension area, within a 1km radius.

The site lies between two Roman roads, which follow the lines of the A67 and A66 respectively. Part of the Bowes to Bishop Auckland Roman road is also visible to the south of the existing A67. Some distance to the south of the quarry, near to Jocks House, earthworks seen on an aerial photograph have been interpreted as a possible Romano-British settlement. To the North of the site a Roman camp has been on aerial photographs at Cows Close. An earthwork of a possible medieval or post-medieval stack stand (platform for storing winter fodder) to the north of the A67 is visible on aerial photographs. In addition, medieval finds were retrieved by metal detecting to the west of High Broats, including a silver half groat of Henry IV and a lead spindle whorl.

There are seven post-medieval sites in the vicinity of the extension area. These are Hulands farm, a now-demolished farmhouse and associated outbuildings, and High Broats farmstead. Metal detecting west of High Broats discovered Georgian and Victorian coins, while an earthwork visible



Illus 2
SE facing shot of enclosure [004]



Illus 3
Plan of enclosure [004]



Illus 4

S facing shot showing curvature at SE corner of [004]

on aerial photographs may be a post-medieval farm building.

Comparison of the first edition Ordnance Survey map of the area (1857) with modern versions shows that there has been little change to the field boundaries within the extension area since the mid 19th century. Limestone quarrying within the existing quarry seems to have been more or less continuous from the mid 19th Century to the present day, with the quarry gradually expanding to

the north, east and west from an east-west running face at the southern edge of the existing quarry.

The cultural heritage assessment identified a low potential for the presence of unknown archaeological remains within the extension area related to prehistoric settlement, the adjacent Roman road, medieval/post-medieval agriculture or lime extraction.

A geophysical survey of the extension area was undertaken in 2007 by WYAS and identified linear anomalies consistent with the remains of furrows caused by medieval/post medieval ploughing.

4. METHODOLOGY

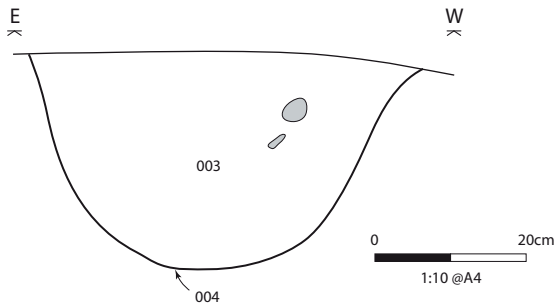
All topsoil stripping was carried out under the direct supervision of a monitoring archaeologist. A flat-edged bucket fitted to a tracked D6 excavator was used to remove deposits of topsoil and subsoil; continuing down to either the first archaeological horizon or undisturbed geological deposits. The exposed surface of geological deposits was sufficiently cleaned to inspect for potential archaeological features.

Any archaeologically significant deposits and features encountered were recorded by standard archaeological methods. All contexts and environmental samples were given unique numbers and bulk finds were collected by



Illus 5

S facing shot of section through enclosure [004]



Illus 6
N facing section through enclosure [004]

context. Photographs were taken using colour transparency and print film, as well digital. The location of the enclosure ditch was recorded by the client's surveyor by means of digital survey related to the National Grid. Sections and elevations were hand drawn at 1:10, with plans of individual features drawn at 1:20 or 1:50 as appropriate. A site diary was also kept to record attendance, progress and other logistical matters.

5. RESULTS

The general stratigraphic sequence of the area comprised natural geological deposits of yellow brown mottled clays with frequent inclusions of stone, sealed by light brown clayey silt subsoil approximately 0.1m deep. This was overlain by dark brown clayey silt topsoil, approximately 0.2m deep.

Rubble field drains were regularly encountered cut into the geological deposits, as well as the remains of furrows relating to earlier agricultural practices. The furrows were

aligned north-south, and were approximately one to six metres apart; this corresponded with the results of the 2007 geophysical survey. The furrows only survived to a depth of up to 0.1m and were 0.4m–1.1m in width. No dating evidence was retrieved from their fills.

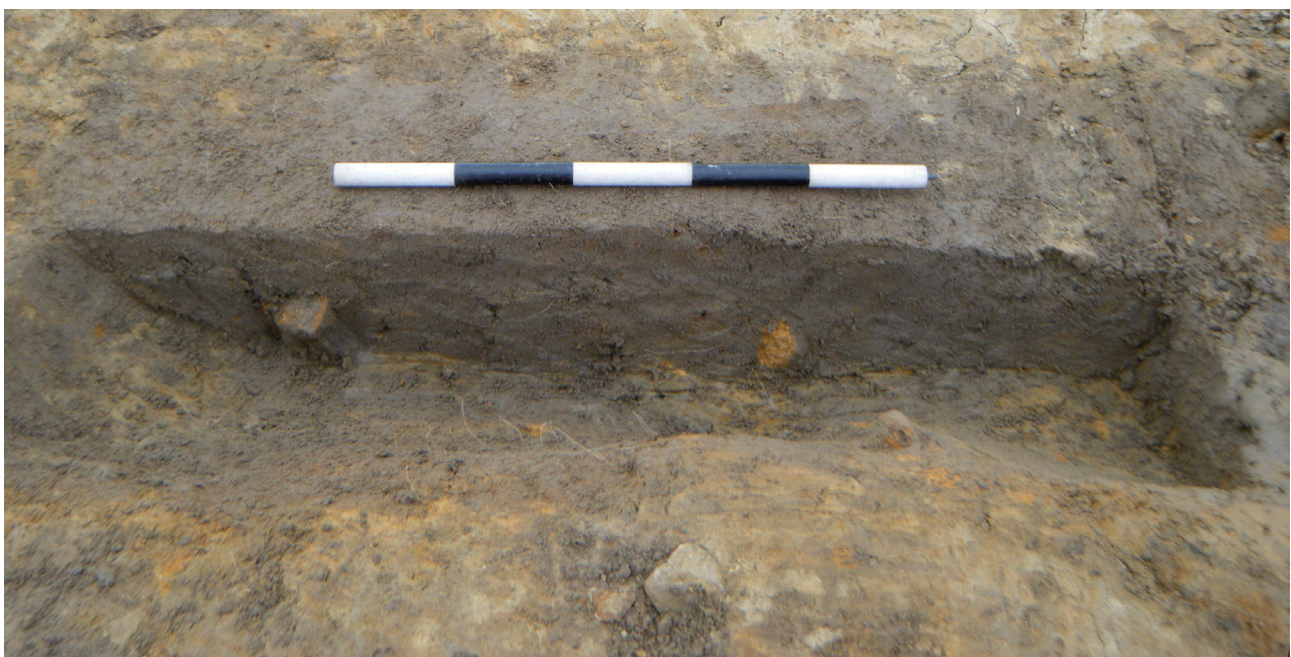
Apart from the remains of agricultural furrows the other archaeological remains were encountered towards the centre of the stripped area and comprised a sub-square enclosure ditch that truncated two furrows (Illus 2 & 3). Slots were hand-excavated through the ditch; the total area excavated equated to 50% of the feature.

The enclosure ditch [004] cut furrows [006] & [008] and was sub-square in plan, with curved corners (Illus 4). Ditch [004] was up to 0.5m wide and 0.16m deep with the sides sloping to a relatively flat base (Illus 5 & 6). The space enclosed by the ditch was 9.7m east-west by 9m north-south. An entrance, located on the southern side of the enclosure, was 2m wide. The terminal ends of the ditch on either side of the entrance were square cut in plan with gently sloping sides (Illus 7 & 8). The ditch was filled by a single deposit [003] which consisted of grey brown clayey silt containing occasional small rounded stones. No dating evidence was retrieved during excavation of the feature.

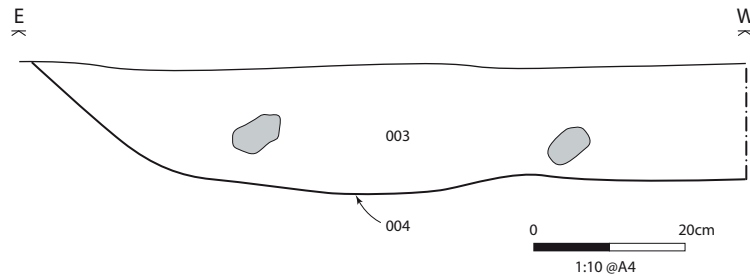
Environmental samples recovered during the works were not subjected to post excavation processing as they displayed low potential for the recovery of palaeoenvironmental remains during excavation and the features recorded on site were demonstrated to be of recent origin.

6. DISCUSSION

Archaeological monitoring of the topsoil strip revealed a pattern of north-south aligned furrows and rubble drains, which corresponds with the historically mapped use of



Illus 7
S facing shot of [004]'s west terminal end



Illus 8
N facing section of [004]'s west terminal end

the land for agricultural purposes. The square enclosure ditch encountered on site contained no direct dating evidence, however this feature when excavated proved to be stratigraphically later than the agricultural furrows.

No direct evidence for early land division was encountered on site, although the agricultural furrows were likely to have been within an early land division. Documented plans suggest the area had already been enclosed by the 1760s, while the fact that trustees have held the land (known as Bowes Manor) on behalf of its tenants since 1657 (page 1914:45) may date the enclosure of the land to the 17th century. There is also evidence that enclosure was underway on Crown land in the vicinity of Bowes as early as the mid 16th Century (page 1913:471). The recorded remains of rig and furrow are therefore likely to be medieval or post medieval in origin. The square enclosure ditch, which post-dated the furrows, is probably the remains of a post medieval enclosure of unknown function but likely relating to later agricultural activities.

A thin soil profile (generally 0.2m) was recorded throughout the extension area and appears to reflect erosion of soils down slope of the stripped area. This erosion would have been exacerbated by medieval and post-medieval ploughing. As a result any earlier features pre dating the medieval period that may have existed would have been truncated away by this process.

7. RECOMMENDATIONS

The findings of the watching brief relate to post medieval and later agricultural activities on site. It is therefore recommended that no further work be undertaken on the findings of the Phase 1 monitoring.

8. RESOURCES

8.1 Bibliography

- Kimber, M., 2006, *Hulands Quarry County Durham Cultural Heritage Assessment*. Headland Archaeology Ltd. Unpublished client report.
- Page, W. (ed.), 1913, *A History of the County of York (North Riding)*. Vol. III, The St Catherine Press, London.
- Page, W. (ed.), 1914, *A History of the County of York (North Riding)*. Vol. II, The St Catherine Press, London.

8.2 Documented Plans

- D/MOB 4/12, *Tracing of a plan* [by Richard Richardson of Darlington, Land Surveyor, post 1768], *n.d.* [later 19th century] of *Boldron In Moor* (D/MOB 4/6) as divided by the *inclosure awards*. Scale: 3 chains to 1 inch [I:2376].
- D/MOB 4/13, *Tracing of a plan* [by Richard Richardson of Darlington, Land Surveyor, post 1768], *n.d.* [later 19th century] of *Thornberry* (D/MOB 4/7) as divided by the *inclosure awards*. Scale: 4 chains to 1 inch [I:3168].

8.3 Maps

- 1857, Ordnance Survey, *Yorkshire (North Riding)*. 1:10560 scale map, sheet XII (surveyed 1856).
- 1857, Ordnance Survey, *Yorkshire (North Riding)*. 1:2500 scale map, sheet XII.10 (surveyed 1856).
- 1895, Ordnance Survey, *Yorkshire (North Riding)*. 1:10560 scale map, sheet XII.SW (resurveyed 1891–92).

APPENDICES

Appendix 1 – Site registers

Context register

Context no.	Type	Description
001	Layer	A 0.2m thick layer of soft dark brown clayey silt topsoil with occasional small stone inclusions. Recorded across the site.
002	Layer	A 0.1m thick layer of soft light brown clay subsoil with occasional small stone inclusions. Recorded across the site.
003	Fill	A grey/brown soft and compact clayey silt fill of enclosure ditch cut [004]. The homogenous fill was very clean with no finds and no charcoal flecks visible although included moderate small stone inclusions.
004	Cut	In plan this shallow ditch cut formed a sub-square enclosure with a 2m wide entrance to the south side. The enclosure was approximately 8 x 8m in size with rounded corners. The ditch cut was 0.5m wide and up to 0.25m deep and filled with a single fill [003]. The entrance terminal ends were square cut with steep sides leading to a variable base, changing from concave to flat. The ditch cut the natural and had a single fill [003]. The ditch seemed to truncate the furrow (cut [006]) in the NE corner.
005	Fill	A compact light brown/orange clayey sand fill of furrow cut [006]. The fill included occasional small stone inclusions.
006	Cut	A north/south aligned linear cut for a furrow. The cut was 0.7m wide and only 0.05m deep with an uneven base and shallow sides. The furrow was recorded running through the middle of the enclosure [004] but was not recorded across the cuts to the north or south, although it could be seen cutting the natural further to the north.
007	Fill	A compact light brown/orange clayey sand fill of furrow cut [008]. The fill included occasional small stone inclusions.
008	Cut	A north/south aligned linear cut for a furrow. The cut was up to 1.1m wide and 0.07m deep with a single fill [007]. The furrow ran down the outside eastern edge of the enclosure and seemed to be truncated by the enclosure ditch at the northern end although this was not certain.
009	Layer	A firm yellow clay forming the natural alluvial deposit across the site.

Photographic register

Frame no.	C/P + C/S	Digital	Facing	Description
1	1/32	–	SE	General pre-ex view of site
2	1/31	–	E	General pre-ex view of site
3	1/30	–	E	West end field 1 haul road
4	1/29	–	E	Haul road showing 20m strip
5	1/28	–	N	West side of field 10 stripped
6	1/27	–	NE	Working shot of field 10 being stripped
7	1/26	–	N	Rubble drain in field 10
8	1/25	–	E	Field 13 stripped
9	1/24	–	S	Field 5 area stripped
10	1/23	–	S	Field 5 area stripped
11	1/22	–	NW	Field 10 area stripped
12	1/21	–	S	Field 5 area stripped
13	2/36	013	–	Pre-ex of enclosure ditch cut [004]
14	2/35	014	–	Pre-ex of enclosure ditch cut [004]
15	2/34	015	NW	Pre-ex of enclosure ditch cut [004]
16	2/33	016	NW	Pre-ex of enclosure ditch cut [004]
17	2/32	017	SW	Pre-ex of enclosure ditch cut [004]
18	2/31	018	SW	Pre-ex of enclosure ditch cut [004]
19	2/30	019	SE	Pre-ex of enclosure ditch cut [004]
20	2/29	020	SE	Pre-ex of enclosure ditch cut [004]

Frame no.	C/P + C/S	Digital	Facing	Description
21	2/28	021	SE	Pre-ex of enclosure ditch cut [004]
22	2/27	022	SE	Pre-ex of enclosure ditch cut [004]
23	2/26	023	SE	Pre-ex of enclosure ditch cut [004]
24	2/25	024	SE	Pre-ex of enclosure ditch cut [004]
25	2/24	025	N	Detail of entrance terminal ends
26	2/23	026	N	Detail of entrance terminal ends
27	2/22	027	–	Film 2 ID shot
28	2/21	028	N	General site shot
29	2/20	029	N	General site shot
30	2/19	030	N	Detail of NE corner of enclosure [004] showing possible truncation of furrow [008]
31	2/18	031	N	Detail of NE corner of enclosure [004] showing possible truncation of furrow [008]
32	2/17	032	S	Detail of NE corner of enclosure [004] showing possible truncation of furrow [008]
33	2/16	033	S	N facing section of west terminal end, slot A
34	2/15	034	–	N facing section of west terminal end, slot A
35	2/14	035	SE	View of stone fault line running through the enclosure
36	2/13	036	N	View of furrow cut [006] through middle of enclosure
37	2/12	037	N	Detail of east terminal end of the entrance showing the square cut end
38	2/11	038	N	Post-ex shot of slot B
39	2/10	039	E	Post-ex shot of slot A
40	2/09	040	N	View of slot through furrow cut [006]
41	2/08	041	W	E facing section in slot C
42	2/07	042	S	N facing section through slot in furrow cut [008]
43	2/06	043	W	Post-ex shot of slot C
44	2/05	044	S	Shot of section through [004], slot C
45	2/04	045	E	Shot of section through [004], slot B
46	2/03	046	W	Shot of section through [004], slot A
47	2/02	047	N	S facing slot through [004], slot I
48	2/01	048	E	Post-ex of terminal end, slot I
49	–	049	E	W facing section through [004], slot I
50	3/37	050	–	Film 3 ID shot
51	3/36	051	S	Post-ex shot of slot D
52	3/35	052	E	West facing section of slot D
53	3/34	053	S	Post-ex shot of slot E
54	3/33	054	E	Post-ex of slot H
55	3/32	055	S	Post-ex shot of slot H
56	3/31	056	N	South facing section in slot H
57	3/30	057	W	East facing section in slot H
58	3/29	058	N	General shot of area at N end of site being stripped of topsoil
59	3/28	059	S	Detail of eastern 1/3 of area being stripped of topsoil
60	3/27	060	N	Detail of eastern 1/3 of area being stripped of topsoil
61	3/26	061	S	Post-ex shot of slot F

Frame no.	C/P + C/S	Digital	Facing	Description
62	3/25	062	S	North facing section of slot F
63	3/24	063	E	West facing section of slot F
64	3/23	064	W	Post-ex of slot G
65	3/22	065	N	General site shot
66	3/21	066	NW	General site shot
67	3/20	067	N	View of middle area of strip at N end of site
68	3/19	068	NE	Post-ex of enclosure, cut [004]
69	3/18	069	NE	Post-ex of enclosure, cut [004]
70	3/17	070	NW	Post-ex of enclosure, cut [004]
71	3/16	071	N	Western 1/3 of area to north after topsoil strip
72	3/15	072	N	Post-ex of enclosure, cut [004]
73	3/14	072	NW	Post-ex of enclosure, cut [004]
74	4/36	073	-	ID shot film 4
75	4/35	074	E	Working shot of area excavated on 26/04/10 at W end
76	4/34	075	E	Working shot of area excavated on 26/04/10 at W end
77	4/33	076	NE	Working shot of area excavated on 26/04/10 at W end
78	4/32	078	NE	Working shot of excavated area 26/04/10 showing wall line
79	4/31	079	NW	Area excavated on 26/04/10
80	4/30	080	N	Area excavated on 26/04/10 showing furrows
81	4/29	081	NW	Full extent of area excavated on the 26/04/10
82	4/28	082	E	Full extent of area excavated on the 26/04/10
83	4/27	083	S	Topsoil excavated on 27/04/10 in field 2
84	4/26	84	N	Topsoil excavated on 27/04/10 in field 2
85	4/25	85	NW	Topsoil excavated on 27/04/10 in field 2
86	4/24	86	N	Working shot of topsoil strip in field 13 on 27/04/10
87	4/23	87	N	Working shot of topsoil strip in field 13 on 27/04/10
88	4/22	88	S	Working shot of topsoil strip in field 13 on 27/04/10
89	4/21	89	S	View of completed strip in field 13 in the 27/04/10
90	4/20	90	N	View of completed strip in field 13 in the 27/04/10
91	4/19	91	N	View of stripped area in field 2
92	4/18	92	E	Working shot in field 2
93	4/17	93	E	Working shot in field 2
94	4/16	94	S	General view of quarry site
95	4/15	95	S	View of stripped area in field 2
96	4/14	96	N	View of stripped area in field 2 showing furrows
97	4/13	97	N	View of stripped area in field 2 showing furrows and drains
98	4/12	98	NE	View of stripped area in field 2
99	4/11	99	N	Working shot of stripping in field 13
100	4/10	100	N	Working shot of stripping in field 13
101	4/09	101	N	Working shot of stripping in field 13
102	4/08	102	N	Working shot of stripping in field 13

Frame no.	C/P + C/S	Digital	Facing	Description
103	4/07	103	N	Working shot of stripping in field 13
104	4/06	104	S	View of area stripped in field 13
105	4/05	105	S	View of area stripped in field 13
106	4/04	106	N	General view of quarry with field 2 in background
ET	01/06/2010	–	–	–
107	5/25/26	107	S	Stripped area 0900Hrs
108	5/24/25	108	N	Stripped area 0900Hrs
109	5/23/24	109	S	Charcoal scatter
110	5/22/23	110	N	Charcoal scatter
111	5/21/22	111	S	Linear feature
112	5/20/21	112	N	Linear feature
113	5/19/20	113	W	Linear feature
114	5/18/	–	N	Linear feature
115	5/17	–	W	Linear feature
116	5/15/19	116	S	Transect 2 strip
117	5/14/18	–	S	Drain
118	5/13/17	115	E	Drain
119	5/12/16	116	N	Furrow
120	5/11/15	–	N	Furrow
121	–	117	–	Working shot
123	5/10/14	118	S	Transect 3 strip
124	5/09/13	119	N	Transect 3 strip
125	5/08/12	120	W	Drain
126	5/07/11	121	S	Drain close up
127	5/06/10	122	S	Transect 4 strip
128	5/05/09	123	N	Transect 4 strip
129	5/04/08	124	S	Transect 5 strip
130	5/03/07	125	N	Transect 5 strip
131	5/02/06	126	S	Field drain

Sample register

Sample no.	Context no.	Description	Qty
1	003	Sample from Slot A	10 ltrs
2	003	Sample from Slot B	10 ltrs
3	005	Sample of furrow fill	10 ltrs
4	003	Sample from Slot C	10 ltrs
5	003	Sample from Slot I	10 ltrs
6	003	Sample from Slot D	10 ltrs
7	007	Sample from furrow fill	10 ltrs
8	003	Sample from Slot E	10 ltrs
9	003	Sample from Slot H	10 ltrs

Sample no.	Context no.	Description	Qty
10	003	Sample from Slot F	10 ltrs
11	009	Sample of natural clay	10 ltrs
12	001	Sample of topsoil	10 ltrs
13	003	Sample from Slot G	10 ltrs

Drawing register

Drawing no.	Scale	S/P	Description	Sheet
1	1:50	P	Plan of enclosure cut [004]	1
2	1:10	S	N facing section through west terminus end	2
3	1:10	S	East facing section through slot C	2
4	1:10	S	East facing section through slot A	2
5	1:10	S	West facing section through slot B	2
6	1:10	S	North facing section through slot C	2
7	1:10	S	South facing section through slot I	2
8	1:10	S	West facing section through slot D	2
9	1:10	S	East facing section through slot H	2
10	1:10	S	South facing section through slot H	2
11	1:10	S	North facing section through slot F	2
12	1:10	S	West facing section through slot E	2
13	1:10	S	South facing section through slot G	2
14	1:10	S	Profile through slot G	2