## Land North of the Former Askham Brian College Swainsea Lane Pickering North Yorkshire SE 7930 8940

**Archaeological Strip and Record** 

Authorised by	•••
Date:	

## Land North of the Former Askham Brian College Swainsea Lane Pickering North Yorkshire

## SE 7930 8940

## **Archaeological Strip and Record Report**

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## Land North of the Former Askham Brian College Swainsea Lane Pickering North Yorkshire

#### SE 7930 8940

#### **Archaeological Strip and Record Excavation**

## Non-technical Summary

An Archaeological Strip and Record excavation was conducted by MAP Archaeological Consultancy Ltd. on land to the north of the former Askham Brian College, Swainsea Lane, Pickering, North Yorkshire (SE 7930 8940) from the 23<sup>rd</sup> to the 29<sup>th</sup> of March 2010. The work involved monitoring the groundworks associated with the construction of fifteen individual dwellings with associated parking, amenity areas and roadways. The work followed a geophysical survey (WYAS 2009) a deskbased assessment and Evaluation (MAP2009 & 2010). A large ditch of probable Iron Age date and several furrows associated with medieval ridge and furrow were recorded during the works.

#### 1. Introduction

- 1.1 This report sets out the results of an Archaeological Strip and Record Excavation that was carried out from the 23rd to the 29<sup>th</sup> of March 2010 by MAP P Archaeological, Consultancy Ltd. on land to the north of the former Askham Brian College, Swainsea Lane, Pickering, North Yorkshire (SE 7930 8940-Fig 1). The archaeological work was undertaken in order to fulfil an archaeological condition attached to a Planning Application Consent for the erection of fifteen new dwellings with associated parking, amenity areas and vehicular access (Ref. No.09/01178/FUL).
- 1.2 The Archaeological Strip and Record Excavation was designed to provide an appropriate level of recording for archaeological remains, deposits or finds that might be affected by the development, following the archaeology policy issued by the Secretary of State for the Environment contained in *Planning Policy Statement 5:* Planning for the Historic Environment (PPS 5).

- 1.3 Prior to the strip and record a geophysical survey was carried out by Archaeological Services (WYAS 2009), plus a desk based assessment and trial trenching by MAP Archaeological Consultancy Ltd (MAP 2009 & 2010). The geophysical survey identified a linear anomaly that was also recorded during the trial trenching along with a number of furrows.
- 1.4 The MAP site code for the project was 05.03.10.
- 1.5 All work was funded by Broadacres Services Ltd.
- 1.6 All maps within this report have been produced from the Ordnance Survey with the permission of the Controller of Her Majesty's Stationery Office, Crown Copyright, Licence No. AL 50453A.

## 2. Site Description

2.1 The site is situated at the north-western fringe of the market town of Pickering, on the western side of the minor road leading to Newton on Rawcliffe. The grounds of the former agricultural college lie to the south, with farmland on the west and north sides. Comprising approximately 1.2 hectares, the site forms part of a pasture field, with a steel portal barn on the north-east side; there is an area of tipping on the eastern side adjacent to Swainsea Lane (Fig 2). The ground surface is relatively level and slopes downwards from the north-west to south-east, with a mean height of 41m AOD.

## 3. Soils and Geology

3.1 The site lies on soils of the Rivington 1 association. Well drained coarse loamy soils over sandstone, locally associated with similar soils affected by groundwater (Mackney *et al* 1984).

## 4. Archaeological and Historical Background

4.1 The site lies on the southern edge of the Tabular Hills, a zone on the southern side of the North York Moors that attracted early settlement. The multi period settlement at Newbridge Quarry (1km to the north) demonstrates the potential of the landscape in which the site lies.

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- 4.2 Pickering itself has a pre-conquest foundation, the Anglo-Saxon settlement presumably lying in the area of the parish church (where Anglian cross-shaft fragments were found), c. 1km to the south-east.
- 4.3 The manor of Pickering was held by the king at the time of the Domesday Survey, and was a royal borough at the time of Henry I. The medieval borough was centred on the area between the castle, the parish church and the market place. Other elements of the medieval landscape are represented by the ringwork siege castle at Beacon Hill (500m to the south of the site) and a medieval bridge in the town. The proposed development area was formerly cultivated as part of a rigg and furrow field system, the stripe-like arrangement of the field boundaries depicted on the 1952 1:10560 Ordnance survey map fossilising the former riggs and furrows.

## 5. Aims and Objectives

5.1 The aims of the Archaeological Strip and Record Excavation were to record and recover archaeological remains and finds, which could be affected by the development, and to prepare a report summarising the results of the work.

## 6. Methodology

- 6.1 The monitored groundworks involved the stripping of topsoil followed by targeted sample excavation and recording of archaeological features and deposits.
- 6.2 All work was carried out in line with the Institute of Field Archaeologists Code of Conduct (IFA 1998).
- 6.3 All deposits were recorded according to correct principles of stratigraphic excavation on MAP's *pro forma* context sheets, which are compatible with the MoLAS recording system.
- 6.4 A drawn written and photographic record was made of all significant archaeological features and deposits.

#### 7. Results

7.1. The area covered by the strip and record consisted of the footprint of the entire development area encompassing the house plots, gardens, roadways, service trenches and site compound. Following topsoil stripping the linear anomaly identified by the geophysical survey, and investigated during the evaluation, was clearly visible, along with eight later furrows. The remainder of the stripped surface of the site was of natural silty clay and fractured sandstone (Pl. 6).

## 7.2 Ditch 4006/4026 (Figs. 4 & 5, Pls. 3 & 4)

- 7.2.1 The linear feature proved to be a substantial north-east to south-west aligned ditch measuring nearly 4m wide running a distance of 50m across the north-western end of the site. Two individual segments were excavated into the ditch (contexts 4006 and 4026), both of which proved to be sterile producing no finds from any of the fills. The ditch was also part excavated during the archaeological evaluation (context 1007 MAP 2010).
- 7.2.2 Ditch segment 4006 was excavated close to the northern limit of the site and was 2.3m long, 3.9m wide, and 1.2m deep. The profile was a flat-based v-shape with a deeper central channel. A total of five fills occupied the ditch (contexts 4001-4005) with deposits 4002, 4004 and 4005 slumping into the ditch from the south-eastern side, possibly where a bank had been situated.
- 7.2.3 Deposit 4005, the primary fill, was 0.9m deep and consisted of a band of pale silty clay, with angular sandstone fragments that slumped steeply into the ditch from the south-eastern side.
- 7.2.4 The four other ditch fills (contexts 4001-4004) were very similar brown silty clay deposits containing varying amounts of stone. Deposit 4004 formed the secondary fill of the ditch; it was 1.2m deep and contained frequent angular sandstone inclusions. This fill occupied the lower half of the feature sealing primary fill 4005.
- 7.2.5 Deposits 4003 and 4002 formed the third and fourth fills respectively and Deposit 4001 the top fill. Deposit 4003 contained few stones and was located on the north-

western side of the ditch and was 0.15m deep. Deposit 4002 contained frequent angular sandstone inclusions, slumped into the ditch from the south-eastern side and was 0.25m deep. The top fill of the ditch 4001, was a less stoney silty clay deposit with a depth of 0.35m.

- 7.2.6 Ditch segment 4026 was excavated close to the western limit of the site and had the same dimensions and profile as Ditch segment 4006, i.e. 2.3m long, 3.9m wide and 1.2m deep. A total of three silty clay fills occupied the ditch (contexts 4023-4025).
- 7.2.7 The primary fill of the ditch (context 4025) was 0.2m deep and slumped into the ditch from both sides of the cut and consisted of a pale silty clay containing sandstone fragments.
- 7.2.8 The secondary and top fills (contexts 4024 & 4023) were both similar silty clay deposits containing sandstone fragments and 0.5m deep.
- 7.2.9 As no finds were recovered from either of the above ditch segments and the environmental samples produced only traces of identifiable material of no interpretative significance in residues or flots (Appendix 5), the ditch is essentially undated, although likely to be an Iron Age boundary.

#### 7.3 Furrows (Fig. 3 & Pl. 5)

7.3.1 A total of eight furrows (contexts 4008, 4010, 4012, 4014, 4016, 4018, 4020 & 4022) were recorded that spanned the width of the site; these were between 64m and 72m long, with six of them clearly overlying and post-dating the ditch. The width of the furrows ranged from 2.2m to 3.2m. The fills of the furrows (contexts 4007, 4009, 4011, 4013, 4015, 4017, 4019 & 4021) were all very similar deposits of dark brown silty clay with a few stone inclusions and no finds. During the evaluation one of the furrows produced a small quantity of pottery dating from the 15<sup>th</sup> to 17<sup>th</sup> centuries.

## 8. Conclusions

8.1 The Archaeological strip and record identified a ditch of a probable Iron Age date and furrows late medieval / post-medieval date.

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- 8.2 It seems likely that the Ditch was an Iron Age land boundary, or dyke, a type of feature that has been well-documented in previous research (e.g. Spratt 1982). A similar dyke was recorded in 2007 at Garbutt Farm, Old Byland, that example being part of the Cleave Dyke system (MAP 2007). The dimensions and form of the Swainsea Lane and Garbutt Farm features are strikingly similar, both being rock-cut features with broad flat-based-V profiles that were c. 3m wide and 1m deep.
- 8.3 The local system of Iron Age (and multi-period) land-division and settlement has been illustrated by the WYAS excavations at Newbridge Quarry, c. 1km north of the site.

  The Swainsea Lane Ditch most likely forms part of that landscape.
- 8.4 The eight furrows provide evidence of the Open Field that formerly occupied the site, the strips running parallel to Swainsea Lane. Post-medieval pottery found within one of the furrows during the earlier evaluation suggests that they remained in use until at least the 17<sup>th</sup> century.
- 8.5 In conclusion, the trial trenching at Swainsea Lane revealed a significant land boundary of assumed Iron Age date, along with evidence for the medieval (and later) Open Field that superseded the earlier system of land division. The ditch may form a continuation of features including ditches identified at the multi-period settlement at Newbridge Quarry located c. 1km to the north of the site. The results of the geophysical survey identified a second ditch (situated in the western part of the filed, outside the area of development) that terminates before intersecting with the larger boundary ditch located immediately to the west. Neither of these ditches run on a similar alignment or at 90 degrees to existing field boundaries or the medieval ridge and furrow indicating that they form part of an system of land-division.
- 8.6 The almost complete lack of environmental material from the soil samples from the ditch may suggest that any area of occupation was some distance away from the development site. All the deposits within the ditch appeared to have naturally accumulated or been backfilled into the ditch following its abandonment.

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#### 9. References

IFA 1998 Institute of Field Archaeologists Year Book and Directory of Members.

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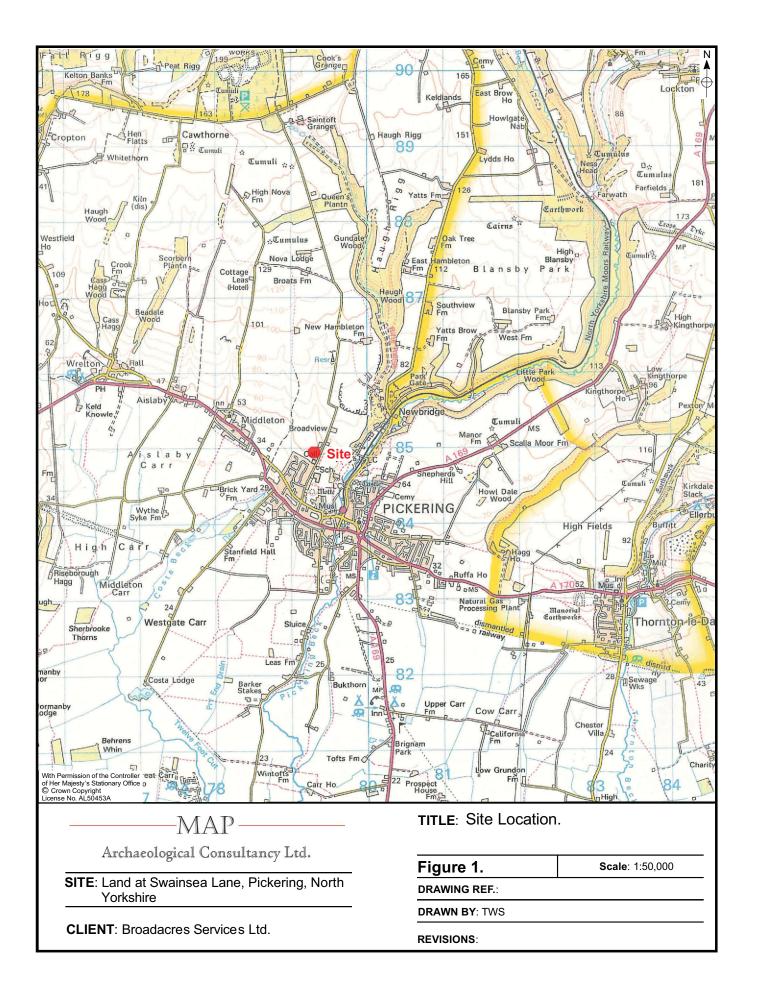
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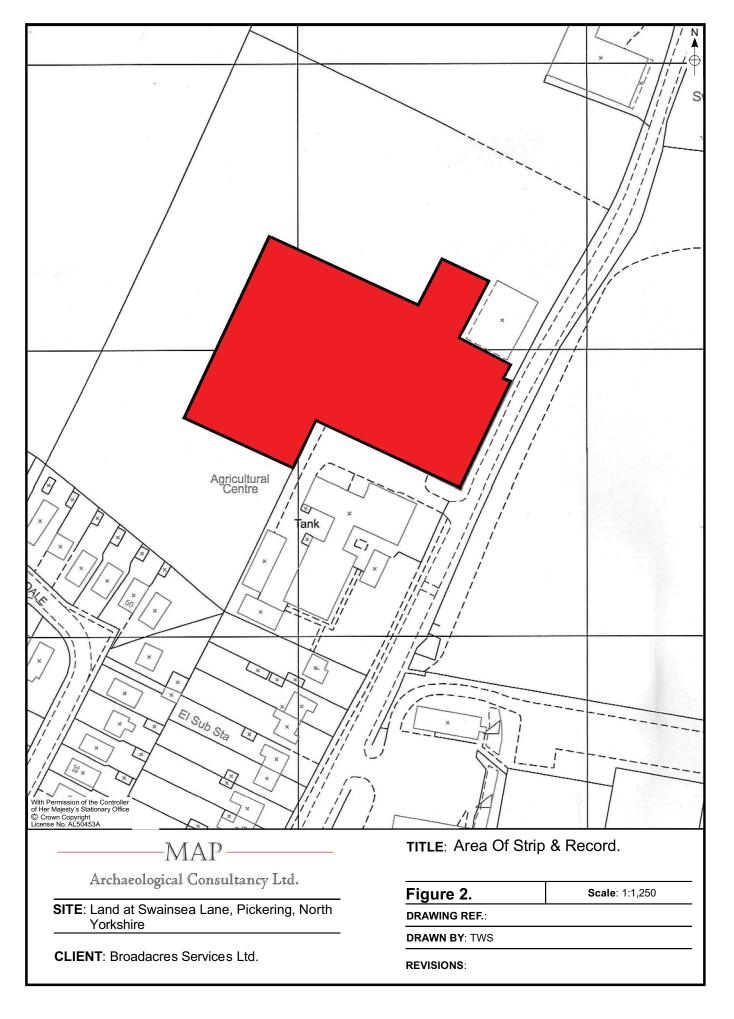
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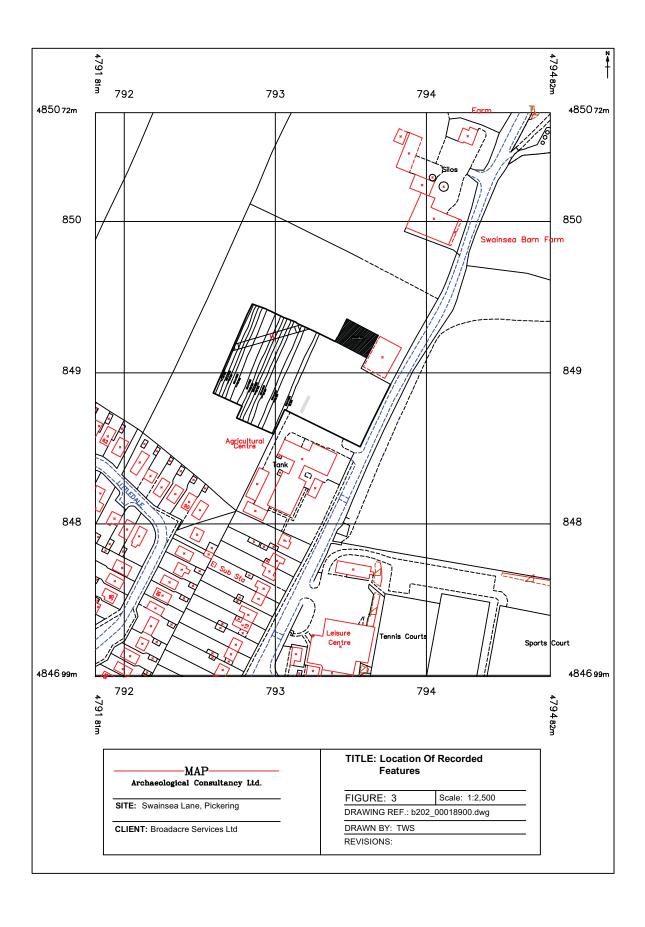
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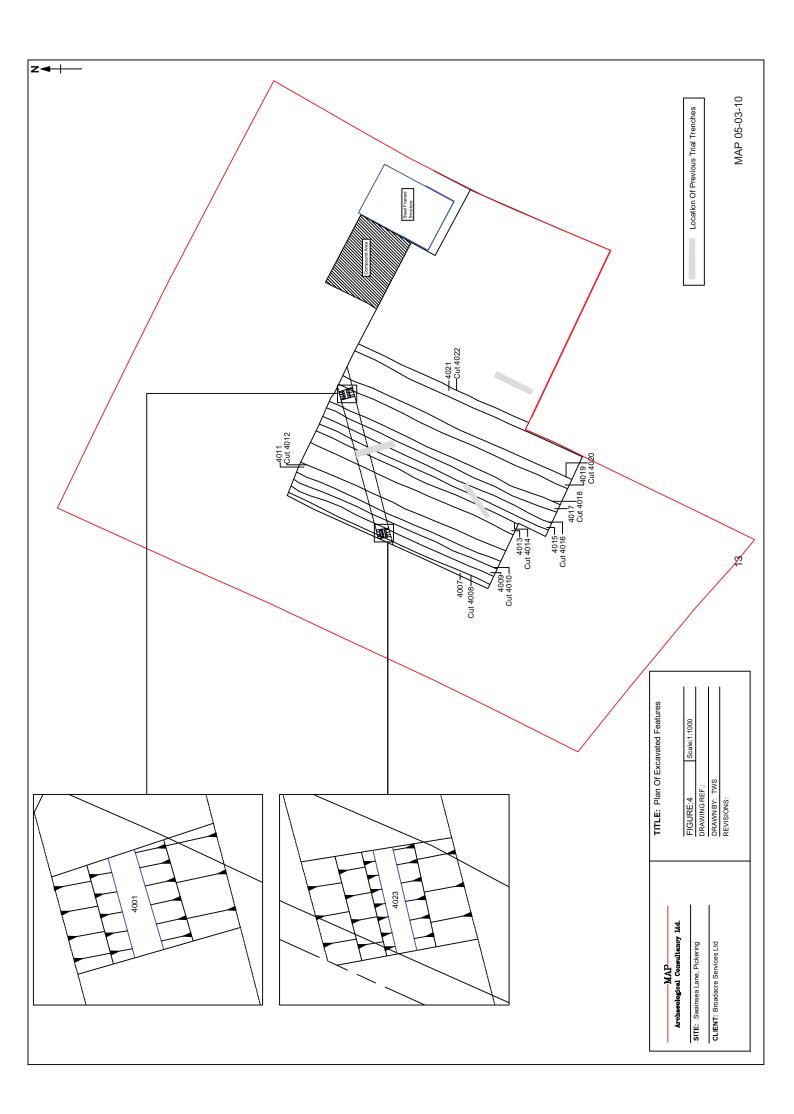
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WYAS 2009 Land at Swainsea Lane, Pickering, North Yorkshire – Geophysical Survey.









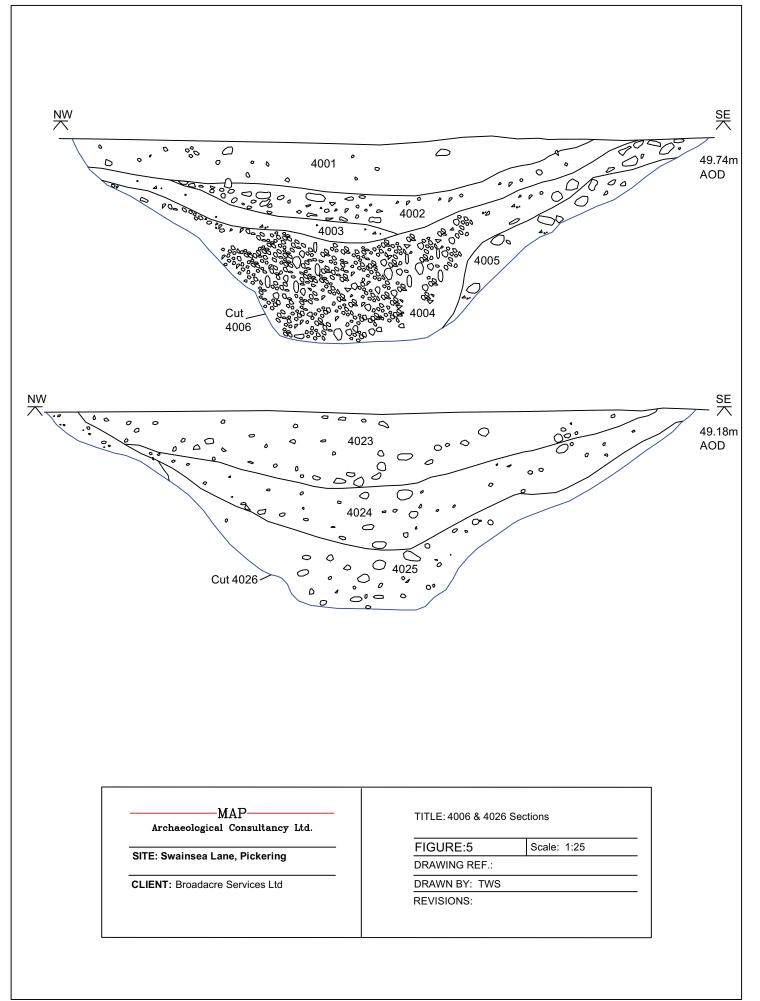




Plate 1. Stripping of Western Side of Site. Facing North-East



Plate 2. Overall View of Ditch. Facing North-East



Plate 3. Ditch Segment 4006. Facing North-East



Plate 4 Ditch Segment 4026. Facing North-East



Plate 5. Overall View of Furrows 4010, 4012, 4014, 4016, 4018 & 4020



Plate 6 View of Stripped Entrance. Facing North-West

## **APPENDIX 1**

## Swainsea Lane, Pickering 05.03.10

## **Context Listing**

Context	Description	
4001	Deposit	10YR 5/3, silty sandy clay; top fill of Ditch segment 4006
4002	Deposit	10YR 5/3, silty sandy clay; banked fill of Ditch segment 4006
4003	Deposit	10YR 5/4, silty clay; tertiary fill of Ditch segment 4006
4004	Deposit	10YR 5/6, silty sandy clay; lower fill of Ditch segment 4006
4005	Deposit	10YR 6/6, silty sand; slumped deposit in Ditch segment 4006
4006	Cut	Ditch segment; filled by 4001-4005
4007	Deposit	10YR 3/3, silty clay; fill of Furrow 4008
4008	Cut	Furrow; filled by 4007
4009	Deposit	10YR 3/3, silty clay; fill of Furrow 4010
4010	Cut	Furrow; filled by 4009
4011	Deposit	10YR 3/3, silty clay; fill of Furrow 4012
4012	Cut	Furrow; filled by 4011
4013	Deposit	10YR 3/3, silty clay; fill of Furrow 4014
4014	Cut	Furrow; filled by 4013
4015	Deposit	10YR 3/3, silty clay; fill of Furrow 4016
4016	Cut	Furrow; filled by 4015
4017	Deposit	10YR 3/3, silty clay; fill of Furrow 4018
4018	Cut	Furrow; filled by 4017
4019	Deposit	10YR 3/3, silty clay; fill of Furrow 4020
4020	Cut	Furrow; filled by 4019
4021	Deposit	10YR 3/3, silty clay; fill of Furrow 4022
4022	Cut	Furrow; filled by 4021
4023	Deposit	10YR 5/3, silty clay; top fill of Ditch segment 4026
4024	Deposit	10YR 5/3, silty clay; secondary fill of Ditch segment 4026
4025	Deposit	10YR 6/6, silty sandy clay; primary fill of Ditch segment 4026
4026	Cut	Ditch segment; filled by 4023-4025

## **APPENDIX 2**

## Swainsea Lane, Pickering 05.03.10

## **Drawing Archive Listing**

Drawing	Scale	Туре	Description
1	1:10	Section	South-west facing section Ditch segment 4006
2	1:200	Plan	Plan of features within development area
3	1:10	Section	South-west facing section Ditch segment 4026
4	1:20	Plan	Plan of Ditch segment 4026
5	1:20	Plan	Plan of Ditch segment 4006

## **APPENDIX 3**

## Swainsea Lane, Pickering 05.03.10

## **Photographic Archive Listing**

## Digital Camera

Frame	Description	Scale	Facing
1	Start of stripping	N/A	South
2	Start of stripping	N/A	South
3	Stripping of Northern end of site	N/A	South-east
4	Stripping of Western side of site	2x1m	North
5	Stripping of Western side of site	2x1m	North
6	Stripping of Western side of site	2x1m	North
7	Topsoil removal at entranceway	N/A	North-west
8	Topsoil removal around barn	N/A	North
9	Topsoil removal around barn	N/A	North
10	Topsoil removal around barn	N/A	South-west
11	Overall shot	N/A	South-west
12	Overall shot	N/A	South-west
13	General shot	N/A	South
14	Overall shot	N/A	South-west
15	Overall shot, Western side	2x1m	South-west
16	Overall shot, Western side	2x1m	South-west
17	Western side of site	2x1m	South-west
18	Ditch	2x1m	North-east
19	Ditch	2x1m	North-east
20	Ditch	2x1m	North-east
21	Overall shot	N/A	North-east
22	Furrows 4010 and 4012	N/A	North-east
23	Ditch	2x1m	North-east
24	Ditch	2x1m	North-east
25	Ditch	2x1m	North-east
26	Furrows 4008 and 4010	2x1m	North-east
27	Furrow 4012	2x1m	North-east
28	Furrow 4014	2x1m	North-east
29	Furrow 4020	2x1m	North-east
30	Stripping eastern side of site	2x1m	North-west
31	Ditch segment 4006	2x1m	North-east
32	Ditch segment 4006	2x1m	North-east
33	Ditch segment 4006	2x1m	North-east
34	Ditch segment 4006	2x1m	North-east
35	Furrows 4008, 4010 and 4012	2x1m	South-west
36	Furrows 4008, 4010 and 4012	2x1m	North-east
37	Furrow 4018	2x1m	North-east
38	Furrow 4020	2x1m	South-west
39	Furrow 4018	2x1m	South-west
40	Working shot, Ditch 4006	N/A	South
41	Post-excavation shot of Ditch 4006	N/A	North
42	Overall shot, showing furrows 4008, 4010, 4012	N/A	South
43	Overall shot, showing furrows 4014, 4016, 4018	N/A	South-west
44	Ditch 4006 and Eastern side of site	N/A	South
45	Overall shot of Furrows	N/A	South-west
46	Ditch 4006 & Furrows 4014, 4016, 4018, 4020	N/A	South-west
47	Ditch segment 4026	2x1m	North-east
48	Ditch segment 4026	2x1m	North-east
49	Ditch segment 4026	2x1m	North-east
50	Eastern side of site	N/A	South
51	Eastern side of site	N/A	East
52	Eastern side of site	N/A	North-west
53	Eastern side of site	N/A	North-west
54	Eastern side of site	N/A	North-west

## 54 Eastern side of site Film Number 1136 Film Type Black and White

Number	Context	Scale	Facing	Identifier
1	4006	2x1m	North-east	Ditch segment 4006
2	4006	2x1m	North-east	Ditch segment 4006
3	4008, 4010, 4012	N/A	South-west	Furrows 4008/4012
4	4008, 4010, 4012	N/A	South-west	Furrows 4008/4012

6	4020	2x1m	South-west	Furrow 4020
7	4008, 4010, 4012	N/A	South	Overall shot
8	4014, 4016, 4018	N/A	South-west	Overall shot
9	4026	2x1m	North-east	Ditch segment 4026
10	4026	2x1m	North-east	Ditch segment 4026

#### Film Number 1137 Film Type Colour Slide

Number	Context	Scale	Facing	Identifier
1	4006	2x1m	North-east	Ditch segment 4006
2	4006	2x1m	North-east	Ditch segment 4006
3	4008, 4010, 4012	N/A	South-west	Furrows 4008/4012
4	4008, 4010, 4012	N/A	South-west	Furrows 4008/4012
5	4018	2x1m	North-east	Furrow 4018
6	4020	2x1m	South-west	Furrow 4020
7	4008, 4010, 4012	N/A	South	Overall shot
8	4014, 4016, 4018	N/A	South-west	Overall shot
9	4026	2x1m	North-east	Ditch segment 4026
10	4026	2x1m	North-east	Ditch segment 4026

## **APPENDIX 4**

Swainsea Lane, Pickering 05.03.10

#### **Team Details**

#### Fieldwork

Charlie Morris

#### Report

Charlie Morris

Tom Silversides CAD and illustrations

Mark Stephens editorial

#### **APPENDIX 5**

Swainsea Lane, Pickering, Strip and Record Area (MAP 05-03-10) Carbonised Plant Macrofossils and Charcoal Diane Alldritt

#### 1: Introduction

Two flots from the Strip and Record Area at Swainsea Lane, Pickering (MAP 05-03-10) were examined for the presence of carbonised plant macrofossils and charcoal. Both samples came from ditch features.

#### 2: Methodology

Bulk environmental samples were processed by MAP using an Ankara style water flotation system (French 1971). The flots were dried and subsequently examined using a low powered binocular microscope. Very small trace quantities of charred detritus were present in each flot, in amounts <2.5ml. Modern root fragments were equally scarce with <2.5ml per sample.

No identifiable wood charcoal was present.

#### 3: Results

Results are presented in table 1 and discussed below.

#### 4: Discussion

The two samples from the Strip and Record Area of Swainsea Lane contained no carbonised plant remains and no identifiable wood charcoal. Ditch fill sample 1 (4004) produced a single modern seed, suggesting a low level of modern contamination in the deposit, together with some very small slivers of wood charcoal to 1mm size which were not identifiable. Sample 2 (4025) produced similarly small trace fragments of wood charcoal, with nothing identifiable due to the small size of the pieces.

#### 5: Conclusion

The Strip and Record samples produced very scarce trace evidence for wood charcoal, none of which was identifiable or particularly significant. No material suitable for radiocarbon dating was recovered.

#### References

French, D. H. 1971 An Experiment in Water Sieving. Anatolian Studies 21 59-64.

Table 1: Swainsea Lane, Pickering, Strip and Record Area (MAP05-03-10): Environmental Material from Two Samples:

Swainsea Lane, Pickering	Sample	1	2
Strip and Record Area	Context	4004	4025
MAP 05-03-10	Feature	ditch 4006	ditch 4026
	<b>Total CV</b>	<2.5ml	<2.5ml
	Modern	<2.5ml	<2.5ml
Non-Carbonised Remains			
Modern seeds		1	

# WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL STRIP AND RECORD

Land North of Former Askham Brian College, Swainsea Lane, Pickering, North Yorkshire

SE 7930 8490

## **Prepared for Broadacres**

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10<sup>th</sup> March 2010

## Land North of Former Askham Brian College, Swainsea Lane, Pickering, North Yorkshire

#### SE 7930 8490

## WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL STRIP AND RECORD

#### 1. Summary

1.1 The topsoil, overburden strip and archaeological recording is to take place during the construction of 8 no. three bedroom dwellings and 7 no. two bedroom dwellings with associated parking and amenity areas and formation of vehicular access associated with the (planning application 09/01178/FUL).

## 2. Purpose

2.1 This written scheme of investigation (WSI) represents a summary of the broad archaeological requirements to mitigate the impact of development proposals upon the archaeological resource and to comply with the archaeological planning condition. This is in accordance with the guidance of Planning Policy Guidance note 16 on Archaeology and Planning, 1990. No work on site should commence until the implementation of the scheme is the subject of a standard ICE Conditions of Contract for Archaeological Investigation agreement between the Client and the selected archaeological contractor.

#### 3. Location and Description (SE 7930 8490)

3.1 The site is situated at the north-western fringe of the market town of Pickering, on the western side of the minor road leading to Newton on Rawcliffe. The grounds of the former agricultural college lie to the south, with farmland on the west and north sides. Comprising approximately 1.2 hectares, the site forms part of a pasture field, with a

steel-portal barn on the north-east side; there is an area of tipping on the eastern side adjacent to Swainsea Lane. The ground surface is relatively level and slopes downwards from the north-west to southeast, with a mean height of c. 41m AOD.

## 4. Archaeological and Historical Background

- 4.1 The site lies on the southern edge of the Tabular Hills, a zone on the southern side of the North York Moors that attracted early settlement. The multi-period settlement site at Newbridge Quarry (1 km to the north) demonstrates the potential of the landscape in which the site lies.
- 4.2 Pickering itself has a pre-conquest foundation, the Anglo-Saxon settlement presumably lying in the area of the parish church (where Anglian cross-shaft fragments were found), c. 1 km to the south-east.
- 4.3 The manor of Pickering was held by the king at the time of the Domesday Survey, and was a royal borough at the time of Henry I. The medieval borough was centred on the area between the castle, the parish church and the market place. Other elements of the medieval landscape are represented by the ringwork siege castle at Beacon Hill (500m south of the site) and a medieval bridge in the town. The proposed development area was formerly cultivated as part of a rigg and furrow field system, the strip-like arrangement of the field boundaries depicted on the 1952 1:10560 Ordnance Survey map fossilising the former riggs and furrows.

#### 5. Objectives

- 5.1 The objectives of the archaeological work are:
  - 1. to determine by means of targeted archaeological excavation the character, extent and nature of the archaeological remains within the development area,

- 2. to locate, recover, identify, assess and conserve (as appropriate) any archaeological artefacts exposed during the course of the excavation.
- 3. where appropriate, to undertake a post-excavation assessment after completion of fieldwork and site archive to assess the potential for further analysis and publication, and to undertake such analysis and publication as appropriate,
- 4. to prepare and submit a suitable archive to the appropriate museum.

## 6. Access, Safety and Monitoring

- 6.1 Access to the site should be arranged through the commissioning body.
- 6.2 It is the archaeological contractor's responsibility to ensure that Health and Safety requirements are fulfilled. Necessary precautions should be taken near underground services and overhead lines. A risk assessment should be provided to the commissioning body before the commencement of works.
- 6.3 The project will be monitored by the Historic Environment Team, NYCC, to whom written documentation should be sent ten days before the start of the excavation including:
  - 1. the date of commencement,
  - 2. an opportunity to monitor the works.
- 6.4 Where appropriate, the advice of the English Heritage Regional Advisor for Archaeological Science, (Yorkshire and Humber Region) may be called upon to monitor the archaeological science components of the project. Archaeological contractors may wish to contact him to discuss the science components of the project before submission of tenders.

- 6.5 It is the archaeological contractor's responsibility to ensure that monitoring takes place by arranging monitoring points as follows:
  - a preliminary meeting or discussion at the commencement of the contract.
  - 2. progress meeting(s) during the fieldwork phase at appropriate points in the work schedule, to be agreed.
  - 3. a meeting during the post-fieldwork phase to discuss the draft report and archive before completion.
- 6.6 It is the responsibility of the archaeological contractor to ensure that any significant results are brought to the attention of the Historic Environment Team, NYCC and the commissioning body as soon as is practically possible. This is particularly important where there is any likelihood of contingency arrangements being required.

#### 7. Brief

- 7.1 The archaeological contractor should be informed in advance of the correct timing and schedule of site preparation and preliminary excavation works associated with the construction of the proposed development. A specified timetable should be agreed within which the archaeological excavation may be carried out prior to further construction commencing.
- 7.2 Archaeological work within the area of proposed development should include the initial supervision of the preliminary site/topsoil strip areas down to the top of archaeological deposits. Overburden such as turf, topsoil, made ground, rubble or other superficial fill materials may be removed by machine using a back-acting excavator which should be fitted with a toothless or ditching bucket. Mechanical excavation equipment shall be used judiciously, under archaeological supervision down to the top of archaeological deposits, or the natural subsoil (C Horizon or soil parent material), whichever appears first. Bulldozers or wheeled scraper buckets should not be used to remove overburden

above archaeological deposits. Topsoil should be kept separate from subsoil or fill materials.

- 7.3 Once overburden/topsoil has been removed, any further machine or hand excavation should be halted to allow the archaeological contractor to observe, clean and assess any archaeological remains on the site. Using the information and artefacts collected to this stage, all features and deposits should be assessed as to their origin or function, probable date, and importance for further recording. Features and layers identified as having potential for further recording should be excavated by hand, sampled, and recorded as set out below. This is in order to fulfil Objectives 5.1.1 and 5.1.2 above and in order to understand the full stratigraphic sequence. In case of query as to the extent of investigation, a site meeting shall be convened with the Historic Environment Team Leader, NYCC.
- 7.4 The character, information content and stratigraphic relationships of features and deposits should be determined. All linear features, such as ditches, should have their shape, character, and depth determined by hand excavation of sections. A minimum sample of 20% of each linear feature of less than 5m in length and a minimum sample of 10% of each linear feature greater than 5m in length (each section will be not less than 1m wide) should be excavated. All junctions of linear features should have their stratigraphic relationships determined, if necessary using box sections. A 100% sample of all stake-holes should be excavated, and all pits, post-holes and other discrete features should be half-sectioned by hand to record a minimum of 50% of their fills, and their shape. Any other unknown or enigmatic features should be investigated similarly. Large pits, post-holes or deposits of over 1.5m diameter should be excavated sufficiently to define their extent and to achieve the objectives of the investigation, but should not be less than 25%. All intersections should be investigated to determine the relationship(s) between features.

- 7.5 The project should be undertaken in a manner consistent with the guidance of MAP2 (English Heritage 1991) and professional standards and guidance (IFA 2001). Scientific investigations should be undertaken in a manner consistent with the English Heritage bestpractice guidelines (2003). An outline strategy of sampling for scientific dating, geoarchaeology and soil science (Canti 1996), biological analysis (English Heritage 2002), artefact conservation and analysis (Watkinson and Neal 1998), and analysis of technological residues (English Heritage 2001), ceramics, and stone should be agreed with the Local Authority, in consultation with the English Heritage Regional Advisor for Archaeological Science (RA) before commencement of site work. This strategy should be based on the results of previous archaeological work in the area. The strategy will be subject to variation as appears necessary during the excavation, following consultation with the Local Authority and the RA.
- 7.6 All specialists in Archaeological Science (both those employed inhouse by the archaeological contractor or those sub-contracted) should be named in project documents. Agreement of specialists must always be obtained before their names are listed. Their competence to undertake proposed investigations, and the availability of adequate laboratory facilities and reference collections should be demonstrated. There should be agreement in writing on timetables and deadlines for all stages of work.
- 7.7 All deposits should be fully recorded on standard context sheets, photographs and conventionally-scaled plans and sections. Each excavation area should be recorded to show the horizontal and vertical distribution of contexts. The elevation of the underlying natural subsoil where encountered should be recorded. The limits of excavation should be shown in all plans and sections, including where these limits are coterminous with context boundaries.

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- 7.8 Any significant unstratified artefacts or small finds should be collected. Metal detecting, including the scanning of topsoil and spoil heaps, should only be permitted subject to archaeological supervision and recording so that metal finds are properly located, identified, and conserved.
- 7.9 Using the information and artefacts collected to this stage, all features and deposits should be assessed as to their origin or function, probable date, and importance for further excavation. Features and layers identified as having potential for further recording should be fully excavated, sampled, and recorded. Full excavation should be carried out on features and deposits of limited potential where the stratigraphic relationships, phasing or origin of these are still unclear. Further excavation may also be needed to expose the full stratigraphic sequence across the site.
- 7.10 All artefacts and ecofacts visible during excavation should be collected and processed, unless variations in this principle are agreed with the Senior Archaeologist, NYCC. In some cases, sampling may be most appropriate. Finds should be appropriately packaged and stored under optimum conditions, as detailed in *First Aid for Finds* (Watkinson & Neal, 1998). A regular transfer of finds from the site to the conservation laboratory is desirable, particularly in the case of long term excavations
- 7.11 Where there is evidence for industrial activity, macroscopic technological residues (or a sample of them) should be collected by hand. Separate samples (c. 10ml) should be collected for micro-slags hammer-scale and spherical droplets). In these instances, the guidance of English Heritage (2001) should be followed.
- 7.12 Samples should be collected for scientific dating (radiocarbon, dendrochronology, luminescence dating, archaeomagnetism and/or other techniques as appropriate). For this excavation, tenders should allow provision for a minimum of four dates using scientific techniques.

- 7.13 Buried soils and sediment sequences should be inspected and recorded on site by a recognised geoarchaeologist. Samples may be collected for analysis of chemistry, magnetic susceptibility, particle size, micromorphology and/or other techniques as appropriate, following the outline strategy presented in the Project Design, and in consultation with the geoarchaeologist. The guidance of Canti (1996) and English Heritage (2002) should be followed.
- 7.14 All securely stratified deposits should be sampled, from a range of representative features, including pit and ditch fills, postholes, floor deposits, ring gullies and other negative features. Positive features should also be sampled. Sampling should also be considered for those features where dating by other methods (for example pottery and artefacts) is uncertain. Bulk samples should be collected from contexts containing a high density of bones. Spot finds of other material should be recovered where applicable.
- 7.15 Coarse sieved samples for the recovery of animal bones and other artefact/ecofact categories should be 100 litres plus. Flotation samples, for the recovery of charred plant remains, charcoal, small animal bones and mineralised plant remains, should be between 40 and 60 litres in size, although this will be dependent upon the volume of the context. Entire contexts should be sampled if the volume is low. Whenever possible, coarse sieved samples (wet or dry) and flotation samples should be processed during fieldwork to allow the continuous reassessment and refinement of sampling strategies. Samples from waterlogged and anoxic deposits, which might contain plant macros and entomological evidence, taken for General Biological Analysis (GBA), should normally be 20 litres in size. The English Heritage guidance should be consulted for details of sample size for other specialist samples that may be required. Allowance should be made for a site visit from the contractor's environmental specialists/consultants where appropriate.

7.16 In the event that any human remains are encountered, they must be treated at all stages with care and respect. Excavators must be aware of, and comply with, the relevant legislation and any Department of Constitutional Affairs and local environmental health concerns. Burials should be recorded *in situ* and subsequently lifted, washed in water (without additives), marked and packed to standards compatible with McKinley and Roberts (1993). Site inspection by a recognised specialist is desirable in the case of isolated burials, and necessary for cemeteries. Proposals for the final placing of human remains following study and analysis will be required in the Project Design. Further guidance is provided by English Heritage (2004). For this excavation, tenders should allow provision for any human remains to be subject to carbon and nitrogen isotope study.

#### Post-Excavation Assessment

- 7.17 Upon completion of archaeological fieldwork, where appropriate, a post-excavation assessment should be undertaken and an assessment report produced in accordance with the guidance of MAP2 (English Heritage 1991). The assessment report should summarise the evidence recovered and should consider its potential for further analysis, review the programme of archaeological science, update the project design as necessary and provide costings for the post-excavation analysis stage of work, with proposals for the production of a final report and/or publication. The site assessment report should include reports on all aspects of Archaeological Science investigated, and include assessment of their suitability for analysis, so as to inform the updated project design.
- 7.18 Assessment of artefacts should include x-radiography of all iron objects (Jones ed. 2006), after initial screening to separate obviously modern debris, and a selection of non-ferrous artefacts (including all coins and a sample of any industrial debris relating to metallurgy). An assessment of all excavated material should be undertaken by conservators and

finds researchers in collaboration. Where necessary, active stabilisation/consolidation will be carried out, to ensure long term survival of the material, but with due consideration to possible future investigations. Once assessed, all material should be packed and stored in optimum conditions, as described in Watkinson and Neal (1998).

- 7.19 Assessment of any technological residues should be undertaken. Processing of all samples collected for biological assessment, or subsamples of them, should be completed. Assessment will include recording the preservation state, density and significance of material retrieved, to inform up-dated project designs. Methods presented in English Heritage (2002) should be followed. Unprocessed sub-samples should be stored in conditions specified by the appropriate specialists.
- 7.20 Samples collected for geoarchaeological assessment should be processed as deemed necessary by the specialist, particularly where storage of unprocessed samples is thought likely to result in deterioration. Appropriate assessment should be undertaken (see Canti 1996, English Heritage 2002). Animal bone assemblages, or subsamples of them, should be assessed by a recognised specialist (English Heritage 2002). Assessment of human remains should be undertaken by a recognised specialist (English Heritage 2004).

#### **Analysis**

- 7.21 Within a time agreed with the Historic Environment Team Leader, NYCC, a timetable for post-excavation work should be produced, following consultation (including team meetings for larger-scale sites), with all specialists involved in the project. Agreement of timetables should be made in writing with external specialists.
- 7.22 A detailed and cost-effective strategy for scientific dating should be prepared, in consultation with appropriate specialists. Samples for

- dating should be submitted to promptly, and prior agreement should be made with the laboratory on turn-around time and report production.
- 7.23 All artefacts should be conserved and stored in accordance with Watkinson and Neal (1998). Investigative conservation should be undertaken on those objects selected during the assessment phase, with the aim of maximising information whilst minimising intervention. Where necessary, active stabilisation/consolidation will be carried out, to ensure long-term survival of the material, but with due consideration to possible future investigations. Proposals for ultimate storage should follow Walker (1990).
- 7.24 Appropriate analysis of technological residues should be undertaken, as outlined in English Heritage (2001). Samples or sub-samples collected for all types of biological and geoarchaeological analysis should be processed, and material retrieved analysed by recognised specialists. Any unprocessed sub-samples should be stored in conditions specified by the specialists, or a reasoned discard policy should be developed (English Heritage 2002).
- 7.25 Analysis of animal bones should be undertaken by a recognised specialist, as specified in the updated project design (see also English Heritage 2002). Analysis of human remains should be undertaken by a recognised specialist, as specified in the up-dated project design.

#### 8. Archive

- 8.1 A field archive should be compiled consisting of all primary written documents, plans, sections and photographs should be produced and cross-referenced. Archive deposition should be undertaken with reference to the County Council's *Guidelines on the Transfer and Deposition of Archaeological Archives*.
- 8.2 The archaeological contractor should liase with an appropriate museum to establish the detailed requirements of the museum and discuss archive transfer in advance of fieldwork commencing. The relevant museum curator should be afforded to visit the site and discuss the project results. In this instance, the Malton Museum is suggested.
- 8.3 The archiving of any digital data arising from the project should be undertaken in a manner consistent with professional standards and guidance (Richards & Robinson, 2000). The archaeological contractor should liaise with an appropriate digital archive repository to establish their requirements and discuss the transfer of the digital archive.
- 8.4 The archaeological contractor should also liaise with the HER Officer, North Yorkshire County Council, to make arrangements for digital information arising from the project to be submitted to the North Yorkshire Historic Environment Record for HER enhancement purposes. The North Yorkshire HER is not an appropriate repository for digital archives arising from projects.

## 9. Copyright

9.1 Copyright in the documentation prepared by the archaeological contractor and specialist sub-contractors should be the subject of an additional licence in favour of the museum accepting the archive to use such documentation for their statutory educational and museum service functions, and to provide copies to third parties as an incidental to such functions. 9.2 Under the Environmental Information Regulations 2005 (EIR), information submitted to the HER becomes publicly accessible, except where disclosure might lead to environmental damage, and reports cannot be embargoed as 'confidential' or 'commercially sensitive'. Requests for sensitive information are subject to a public interest test, and if this is met, then the information has to be disclosed. The archaeological contractor should inform the client of EIR requirements, and ensure that any information disclosure issues are resolved before completion of the work. Intellectual property rights are not affected by the EIR.

## 10. Report

- 10.1 Following post-excavation assessment and analysis as appropriate, a report should be prepared following the County Council's guidance on reporting: Reporting Check-List. The report should set out the aims of the work and the results as achieved, including photographs of operations, description of the remains including all relevant plans and sections, interpretation and assessment of the significance of the remains. The report should also include a listing of contexts, finds, plans and sections, and photographs.
- 10.2 The results from investigations in Archaeological Science, *including* negative results, should be included in the Site Archive and reported to the HER.
- 10.3 A timetable for completion of reports should be agreed with all specialists, and agreements in writing with sub-contracted external specialists are desirable. The time-table should allow for adequate provision by the excavator of contextual information, provisional dating and stratigraphic relationships of contexts. Reports should include clear statements of methodology. The results from scientific analysis should be clearly distinguished from their interpretation. Non-technical summaries of results should be included. Reports on Archaeological

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Science should be published fully, in the text of printed reports or in the main body of reports disseminated by electronic means, wherever the results merit it.

10.4 At least six copies of the report should be produced and submitted to the commissioning body, the Local Planning Authority, the museum accepting the archive, the English Heritage Regional Advisor for Archaeological Science and, under separate cover, North Yorkshire County Council Heritage Section.

10.5 If the archaeological fieldwork produces results of sufficient significance to merit publication in their own right, allowance should be made for the preparation and publication of a summary in a local journal, such as the *Yorkshire Archaeological Journal*. This should comprise, as a minimum, a brief note on the results and a summary of the material held within the site archive, and its location.

10.6 Upon completion of the work, the archaeological contractor should make their work accessible to the wider research community by submitting digital data and copies of reports online to OASIS (<a href="http://ads.ahds.ac.uk/project/oasis/">http://ads.ahds.ac.uk/project/oasis/</a>). Submission of data to OASIS does not discharge the planning requirements for the archaeological contractor to notify the Historic Environment Team Leader, NYCC of the details of the work and to provide the Historic Environment Record (HER) with a report on the work.

#### 11. Further Information

11.1 Further information or clarification of any aspects of this brief may be obtained from:

MAP Archaeological Consultancy Ltd Showfield Lane

Malton Tel. 01653 697752

#### North Yorkshire YO17 6BT

#### Fax. 01653 694747

11.2 This written scheme of investigation is valid for a period of six months from the date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques. In addition, depending upon the final design of development, the methodology of the archaeological excavation may need to be modified accordingly.

## 11.3 References

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Watkinson, D &

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1998 First Aid for Finds (3<sup>rd</sup> edition),

RESCUE & the Archaeological Section of

the United Kingdom Institute for

Conservation.

## **APPENDIX 1- SPECIALISTS**

Conservation	Ian Panter	YAT	01904 663036
Prehistoric Pottery	Terry Manby		01430 873147
Roman Pottery	Jeremy Evans		0121 7784024
	Paula Ware	MAP	01653 697752
Pre-conquest Pottery	Mark Stephens	MAP	01653 697752
Medieval Pottery	Mark Stephens	MAP	01653 697752
Post Medieval	Mark Stephens	MAP	01653 697752
Pottery			
Clay Tobacco Pipe	Mark Stephens	MAP	01653 697752
CBM	S.Garside –		01904 621339
	Neville		
Animal Bone		WYAS	0113 3837517
Small Finds	Hilary Cool		0116 9819065
Leather	Ian Carlisle	YAT	01904 663000
Textile	Penelope	Textile Research in	01904 634585
	Walton Rogers	Archaeology	
Slag/Hearths		Bradford University	01274 3835131
Flint	Pete Makey		01377 253695
Environmental		WYAS/	0113 3837517
Sampling		Diane Alldritt	0141 649 877
Human Remains	Malin Holst	York Osteology Ltd	01904 737509
C14 Dating		BERAC	0141 270136
Dendro		Sheffield University	0114 2220123
Archaeomagnetic	Mark Noel	Geoquest Associates	01624819364