

Blackdyke Farm, Black Dyke Drove, Hockwold cum Wilton, Norfolk

Planning application: 09/01977/F

HER Ref: ENF 125409

Archaeological Monitoring Report

(Continuous observation of ground works)

(© John Newman BA MIFA, 2 Pearsons Place, Henley, Ipswich, IP6 0RA)

(October 2011)

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Site details for HER

Name: Blackdyke Farm, Black Dyke Drove, Hockwold cum Wilton, Norfolk, IP26 4JW

Client: Mr B J Rutterford

Local planning authority: Borough Council of Kings Lynn & West Norfolk

Planning application ref: 09/01977/FUL

Development: Construction of agricultural livestock building

Date of fieldwork: 11 November, 2010 & 5 August, 2011

HER Ref: ENF 125409

OASIS Ref: johnnewm1-111304

Grid ref: TL 6889 8807

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Summary: Hockwold cum Wilton, Blackdyke Farm (ENF 125409, TL 6889 8807) monitoring of ground works for an agricultural livestock building some 220m into the Fen on Black Dyke Drove recorded four small pits of probable earlier prehistoric date containing small quantities of burnt flint and very sparse assemblages of charred macrofossil material indicating this site was peripheral to areas of past human activity. A probable silted up water course was also identified but the development was moved slightly to avoid this area of soft ground (John Newman Archaeological Services for Mr B J Rutterford).

1. Introduction & background

1.1 Brown & Co on behalf of their client, Mr B J Rutterford, commissioned John Newman Archaeological Services (JNAS) to undertake the archaeological monitoring of ground works required under a condition for a programme of archaeological works of the planning decision notice for application 09/01977/F. The monitoring requirements were set out in a brief by Mr J Albone of Norfolk Landscape Archaeology to satisfy the relevant condition (Appendix II). This development concerns the erection of an agricultural livestock building on Black Dyke Drove to the south of Blackdyke Farm, Hockwold cum Wilton (see Fig. 1).

1.2 Hockwold cum Wilton is located in the south western part of Norfolk with the village being on the northern side of the Little Ouse River. The parish includes three quite different landscapes; the river valley in the south, chalk uplands rising to the Brecks to the north and true low lying fens to the west. The proposed development area is located in the latter zone of the parish and is in the lower lying area to the west of the cut off channel and therefore in true peat fenland at c1-2mOD where minor topographic differences can have a huge affect on past landscape history and where the need for ground drainage is apparent from the numerous drains or ditches. Blackdyke Farm itself being 300m to the north of the site of the proposed livestock building being at a slightly higher elevation of c4m OD on the eastern, dry land, side of the cut off channel (see Fig. 2). The site of the livestock building is on the northern side of Black Dyke Drove and 220m into the Fen from the point where this drove crosses the cut off channel with the field in which it is located being currently being used as pasture.

1.3 The area around the proposed development was studied in the 1980s as part of the Fenland Project and is best summarised from the relevant publication as *'The ground drops gently from the chalk plateau to the skirtland beyond Blackdyke and Whitedyke Farms. Consisting of numerous ridges of sand and loam protruding through the peat.....This zone is visible for more than 1800m into the fen along Blackdyke Drove,'* (Silvester, 1991, 49). The archaeological potential of areas within the fen is very much dependant on such minor topographic variations and also varies by period as in the earlier prehistoric era it was more accessible and productive while from the later prehistoric conditions became too wet until more recent drainage works. This potential is apparent close to Black Dyke Drove where the Fenland project recorded *'numerous concentrations of 'pot-boilers' on either side of Blackdyke Drove'* (ibid, 56) with probable contemporary lithic evidence of later Neolithic and earlier Bronze Age date nearby. The development site therefore lay within a Fenland zone where evidence of earlier prehistoric activity in the form of *'pot-boiler'* features might be anticipated. Such features usually comprising pits, which may be timber lined, or layers containing numerous heavily burnt, heat crazed flints with their origin variously interpreted from uses such as cooking, early saunas or shamanistic 'sweat' lodges. Archaeological mitigation to allow the development to go ahead while still making a full record of any heritage assets revealed was therefore specified as a process of monitoring through a continuous presence as soil stripping progressed with resources and time available to investigate fully what may be exposed.

2. Monitoring methodology

2.1 The monitoring was carried out over two extended site attendances with the initial 26.3m x 13.3m footprint area of the livestock building being stripped of topsoil under constant supervision over a single day under generally bright conditions using a large 360 machine equipped with a 2.5m wide toothless bucket. A second site visit was then planned to observe the excavation of a soak away close to the footprint area and a decision was also made by the landowner to extend the stripped area by some 7m at its western end and move the footprint of the livestock building by the same amount to avoid a potentially 'soft' spot exposed in the south-eastern corner of the original soil strip which may be an infilled water channel (see Fig. 3- 0002). As the soil stripping progressed any indistinct areas were shovel scraped and trowelled clean before various discrete, contained, archaeological features were half-sectioned, the fill sieved, recorded, bulk sampled and then fully excavated. A more indistinct and irregular, linear, feature (0007) was part excavated before being discounted as being of non-human derivation. The sections around the stripped area were also examined and cleaned where necessary and a short section at the eastern end was recorded over the possible infilled water channel (0002). The second and less extensive phase of soil stripping was undertaken using the same machine under dry and sunny conditions, with one more feature being recorded, and a 3.5 x 3.8m soak away was also soil stripped under observation. Finally the overall stripped area was plotted in relation to locally mapped features and throughout the monitoring a series of digital images (see Appendix I) and monochrome photographs was taken.

3. Results

(See Fig. 3: Plan & sections, also Appendix I- Images & Appendix IV- Context List)

3.1 As anticipated the top soil across the stripped footprint area proved to be a dark brown peaty sand which varied in depth between 400mm at the eastern end of the site and 300mm at the western end. At the eastern end of the site removal of the topsoil layer revealed a 100mm thick, mid brown peaty sand subsoil layer (see Fig. 3- section of site edge) which in turn lay over the underlying, naturally occurring yellow sand. However at a point 17m to the west across the stripped footprint area the naturally occurring deposits at the site changed to a soft chalk and the peaty topsoil lay directly over this undisturbed material with the peaty sand subsoil grading away from the eastern edge and disappearing by the mid-point of the area. The chalk substrate to the site then continued to the limit stripped at the western end and also was visible in the soak away pit 3m further west.

3.2 The full context list is attached as Appendix IV below with the recorded site plan and sections forming Fig. 3. In summary four small, contained features (0003, 0005, 0009 & 0011) which can be described as small pits were revealed, investigated and recorded. Additionally a probable infilled water channel (0002) was exposed in the south-eastern corner of the stripped area though its dark brown silty sand fill was not investigated as this feature has been left in situ and covered with topsoil so the building foundation can avoid the soft area. Finally a curving and irregular feature (0007) close to the centre of the stripped area was partially investigated and concluded to be of probable natural origin as the remnant of an animal burrow due to its irregular sides, base and fill (0008).

3.3 The four contained features were all relatively shallow with depths varying between 200mm and 300mm. Three of the these pits (0005, 0009 & 0011) were

circular in plan and these varied in diameter from 1100mm (0011) to 1700mm (0009). The remaining pit type feature (0003) had a more elongated, almost oval, shape with dimensions of 1600mm x 700mm. All of the pits contained a dark brown peaty sand fill (0003-0004, 0005-0006, 0009-0010 & 0011-0012) but no evidence for any lining or any other hint as to function.

3.4 Soil stripping for the 3.5m x 3.8m soak away pit (0013) 3m to the west of the main footprint did not reveal any archaeological features or finds with removal of 300mm of dark brown peaty sand revealing a clean chalk substrate.

4. The Finds

4.1 Investigation of the four contained features (0003, 0005, 0009 & 0011) did not reveal any directly dateable finds with only a few heat crazed and fire reddened flints being recovered from the respective fills (0004, 0006, 0010 & 0012) in addition to a few stray fire reddened flints collected from the topsoil (0001). These finds are recorded by number and weight within the context list included as Appendix IV below but in summary the total number of heat crazed flints from the site was 3 (43g) and fire reddened flints was 17 (218g) with no individual feature containing more than 5 burnt flints. Such a low finds density pointing to this site being at some distance from any area of concentrated past human activity.

5. The Environmental evidence

5.1 The full assessment of the plant macrofossil and other remains from the three sampled features (0003/0004, 0005/0006 & 0009/0010) by Val Fryer is included as Appendix III below. In summary charred plant macrofossil remains were extremely scarce leading to the conclusion that the area of the site was peripheral to any concentrated human activity in the prehistoric period. However the mollusc shell assemblage is of some interest as it indicates that the area around the site has been marshy and liable to intermittent flooding.

6. Conclusion

6.1 The monitored soil strip revealed a relatively low density scatter of small contained features of probable earlier prehistoric (Neolithic/Bronze Age) date. While no conclusive dating material was recovered from the site the few heat crazed and fire reddened flints found in the fill of these features coupled with the sparse background scatter of similarly reddened flints suggests an early prehistoric date by comparison with other, more securely, dated features of the same overall type. The location of the site on the edge of the Fen also supports an early prehistoric date as in later periods this low lying area became wetter and liable to inundation (ibid 55, Fig. 32). However the lack of pottery or worked flints, small number of fire affected flints recovered and very low density of charred plant macrofossil remains from the features also points to this site being peripheral to any nearby concentrations of past human activity. This conclusion supporting the findings of the Fenland Project when 'pot boiler' sites were identified some 80m to the north-east, close to the cut off channel, and c150m to the south-west (ibid. 54, Fig. 31). Finally the evidence for an ancient, now infilled, water course in the south-eastern corner of the site is of interest though, as noted above, this feature was not disturbed.

6.2 In conclusion it is clear that the ground works on this site have not affected any archaeological deposits of great significance though the monitoring has produced results of moderate interest for this Fen edge area.

(Acknowledgements: JNAS is grateful to Brian Rutterford and his machine operator on site for their close cooperation with regard to this site monitoring).

(The archive for this monitoring will be lodged with the Norfolk CC Museums service under the HER Ref. ENF 125409)

References:

Silvester, R J, 1991 *The Fenland Project, No 4: Norfolk Survey, The Wissey Embayment & Fen Causeway (EAA 52)*

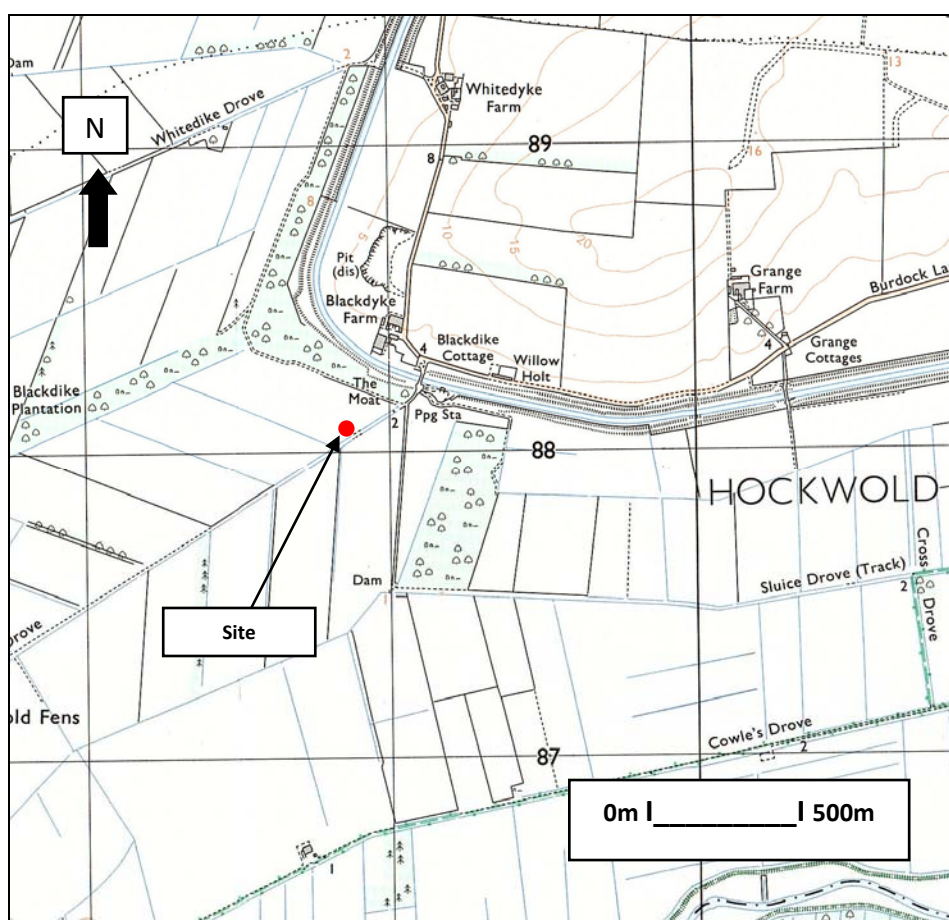


Fig. 1: Site location (Ordnance Survey © Crown copyright 2006
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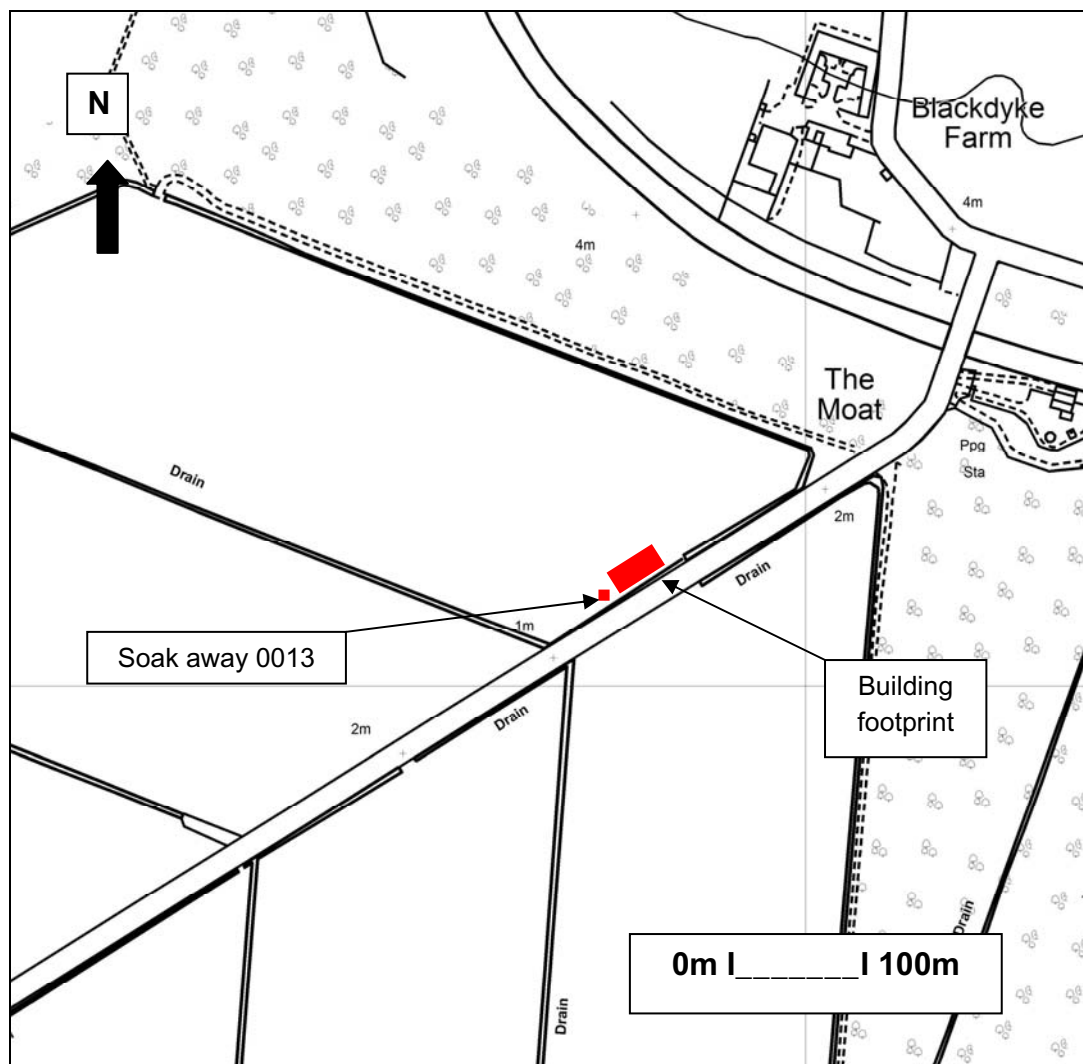


Fig. 2: Site location- detail (Ordnance Survey © Crown copyright 2011
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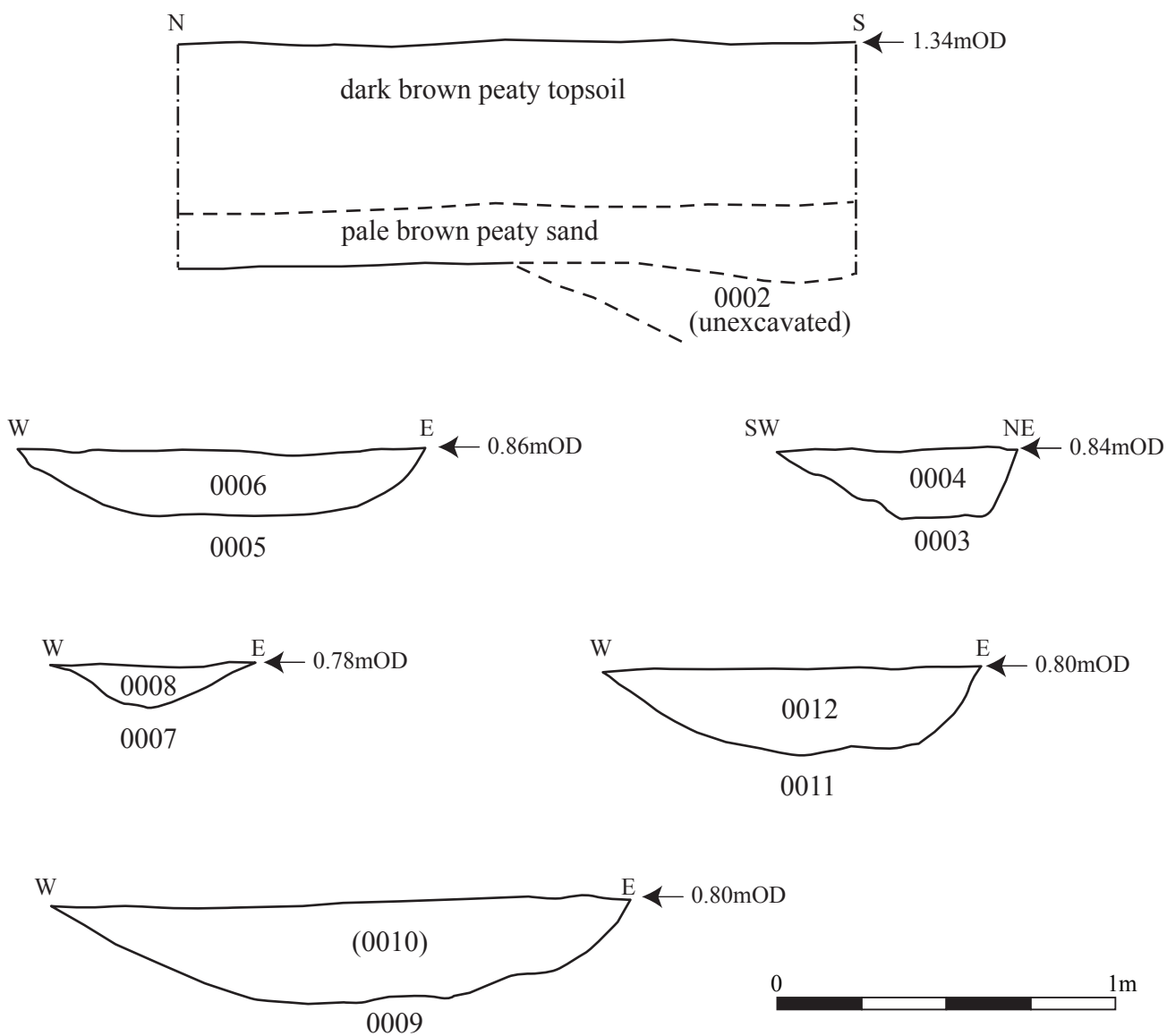
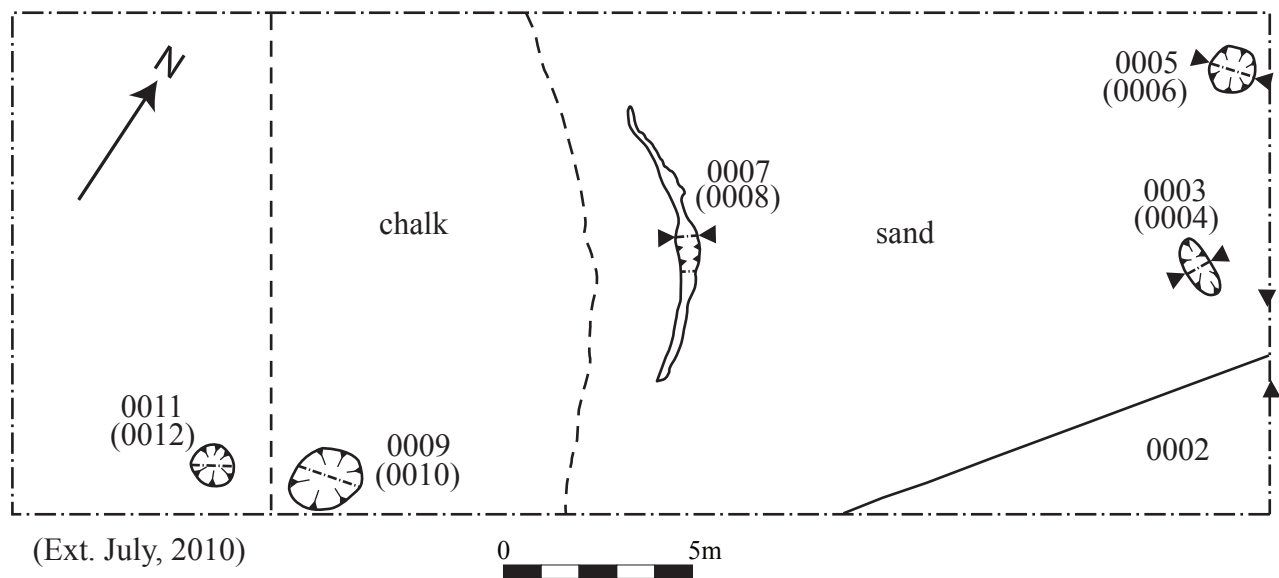


Fig. 3. Plans and sections.

Appendix I- Images



General view from west, note chalk in foreground & sand beyond



Site section at east end above 0002



Pit 0003 from south-west



Pit 0009 from north



Probable burrow 0007 from north

**BRIEF
FOR THE MONITORING OF WORKS
UNDER ARCHAEOLOGICAL SUPERVISION AND CONTROL**

Site or Project Name: Blackdyke Farm, Blackdyke Road
Parish: Hockwold cum Wilton
Grid reference: TL 6889 8807
Norfolk HER No.: To be arranged
NLA Reference: CNF42651 Associated: Yes
Site type(s) : Agricultural building
Planning Authority: Borough Council of King's Lynn and West Norfolk
Application or Reference No.: 09/01977/F
Level Required: Constant Attendance
Issued by: James Albone
Archaeological Planning Officer
Norfolk Landscape Archaeology
Union House, Gressenhall
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Tel: 01362 869279 (direct)
Fax: 01362 860385
james.albone@norfolk.gov.uk
Date: 25th February 2010
Notes: The development site lies in an area where
prehistoric artefacts, including burnt flints indicating
the presence of pot boiler mounds, have previously
been recorded.



If you need this document in large print, audio, Braille, alternative format or in a different language please contact James Albone on 01362 869279 and we will do our best to help.

THE BRIEF

The Archaeological Contractor should confirm that the Monitoring of Works Under Archaeological Supervision and Control will be undertaken in accordance with the following:

1. Provision will be made for monitoring the development, including, where appropriate, the following:-
 - all areas of below-ground disturbance, including excavations, topsoil stripping, foundation trenches, service trenches, drains and soakaways.
 - pipeline and cable trenches.
2. Monitoring will be undertaken at the level indicated i.e. occasional visit, regular visit or constant attendance.
3. Where appropriate, topsoil or spoil will be scanned by metal-detector before and during its removal.
4. All archaeological contexts and artefacts exposed, examined or excavated will be fully recorded on appropriate context, finds and sample sheets, on plans and sections and by photographic record.
5. Provision will be made for an appropriate level of analysis, including identification of artefacts, specialist reports if appropriate, production of archive and report, donation of finds to an appropriate museum, transfer and storage of artefacts and archive in an acceptable form to an appropriate museum, conservation and inclusion of the results of the project in the County Historic Environment Record.
6. Indicate that any areas of environmental potential will be sampled, as advised by the environmental specialist.
7. The results will be presented in a report, the nature of which should be commensurate with the findings.
8. The report should include appropriate scale plans showing the locations of all features and finds, and detailed plans and sections where necessary.
9. The report should include comprehensive details of all finds.
10. Three hard copies and a PDF copy on CD of the Report should be supplied to NLA for the attention of the Head of Archaeological Planning within eight weeks of the completion of the fieldwork on the understanding that this will become a public document after an appropriate period of time (generally not exceeding six months). Two hard copies and the PDF file will be deposited with the Norfolk Historic Environment Record, and the third hard copy will be forwarded to the Local Planning Authority.
11. At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ac.uk/project/oasis/> must be initiated and key fields completed on Details, Location and Creators forms. When the project is completed, all parts of the OASIS online form must be completed for submission to the Norfolk Historic Environment Record. This will include an uploaded .pdf version of the entire report. Hard copies of the report must still be provided as specified.
12. Hard copies of the report must also be provided, as specified below.
13. All works will be carried out in full accordance with the appropriate sections of Gurney, D., 2003, '**Standards for Field Archaeology in the East of England**', as adopted by the Association of Local Government Archaeological Officers for the East of England Region and published as

East Anglian Archaeology Occasional Paper 14. This is available as a PDF file on the web at www.eaareports.org.uk. Archaeological Contractors should note that the **Standards** document stipulates basic *methodological* standards. It is considered axiomatic that all contractors will strive to achieve the highest possible *qualitative* standards, with the application of the most advanced and appropriate techniques possible within a context of continuous improvement aimed at maximising the recovery of archaeological data and contributing to the development of a greater understanding of Norfolk's historic environment. Monitoring officers will seek and expect clear evidence of commitment to the historic resource of Norfolk, with specifications being drawn up within a context of added value.

14. The Archaeological Contractor will contact the HER Officer of NLA in advance of work starting to obtain a HER number for the site or, if a number is already given on the Brief, to ensure that it is still applicable.

THE MONITORING OF WORKS UNDER ARCHAEOLOGICAL SUPERVISION AND CONTROL

This means that you will need to commission an archaeological contractor to ensure that an archaeologist is present during certain phases of the development to record any features exposed or any archaeological finds.

This does not mean that the development programme will be stopped or delayed by the archaeologist, who will work alongside other contractors on site to ensure that any necessary archaeological records are made.

In the unlikely event of the discovery of unanticipated remains of very great importance, discussions will take place on how these might be preserved or recorded.

WHAT YOU NEED TO DO

You should forward a copy of this Brief to one or more Archaeological Contractors, and discuss with them the timing and costs. Your appointed contractor should be asked to confirm in writing to Norfolk Landscape Archaeology (NLA) that this brief will be adhered to.

NLA does not see Contractors' costings, nor do we give advice on costs. You may wish to obtain a number of quotations or to employ the services of an archaeological consultant.

Details of archaeological contractors based in Norfolk and beyond may be found in the Institute for Archaeologists Yearbook & Directory, available from the I.f.A., University of Reading, 2 Earley Gate, PO Box 239, Reading RG6 6AU. Tel: 0118 931 6446. Fax: 0118 931 6448. Email: admin@archaeologists.net. Website: www.archaeologists.net.

FOR FURTHER HELP, INFORMATION AND ADVICE CONTACT

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Norfolk Landscape Archaeology is responsible for safeguarding the County's archaeological heritage. NLA is consulted by Planning Authorities and provides advice on archaeological work that may be required as a result of development proposals.

Appendix III

AN EVALUATION OF THE PLANT MACROFOSSILS AND OTHER REMAINS FROM BLACKDYKE FARM, HOCKWOLD, NORFOLK (ENF 125409)

**Val Fryer, Church Farm, Sisland, Loddon, Norwich, Norfolk, NR14 6EF
March 2011**

Introduction and method statement

Evaluation excavations at Hockwold, undertaken by John Newman, recorded a limited number of features, which although not closely dated, were probably of Late Neolithic to Early Bronze Age date. Samples for the evaluation of the content and preservation of the plant macrofossil assemblages were taken, and three were submitted for assessment, all from fills within small, shallow pits.

The samples were processed by manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Table 1. Nomenclature within the table follows Kerney and Cameron (1979) and Macan (1977). Both charred and de-watered plant macrofossils were recorded, and modern fibrous roots and fungal sclerotia were also noted.

The non-floating residues were collected in a 1mm mesh sieve and will be sorted when dry. All artefacts/ecofacts will be retained for further specialist analysis.

Results

All three assemblages were small (<0.1 litres in volume) and plant macrofossils were very scarce. Small charcoal/charred wood fragments were noted along with de-watered root/stem fragments, but seeds or cereals were entirely absent. Small assemblages of terrestrial and freshwater obligate mollusc shells were present within all three samples although, at the time of writing, it was unclear whether these were contemporary with the features from which the samples were taken, or later contaminants. Shells of marsh/freshwater species were predominant throughout, possibly indicating that the site had been inundated at some stage.

Conclusions and recommendations for further work

In summary, charred plant macrofossils are exceedingly scarce, and it would appear most likely that the three pits from which the samples were taken were entirely peripheral to any focus of human activity. The few remains which are recorded are probably derived from scattered or wind-blown detritus, which was accidentally incorporated within the feature fills. The composition of the mollusc shell assemblage would appear to indicate that at some point in time, the area was marshy and possibly subject to intermittent flooding.

Although plant remains are scarce within the current assemblages, this site does offer a rare opportunity to study the settlement/exploitation of a fen edge area during the Late Neolithic/Early Bronze Age period. Therefore, if further interventions are planned, it is recommended that additional plant macrofossil samples of approximately 20 – 40 litres in volume are taken from any dated and well-sealed contexts recorded during excavation.

References

- | | |
|-------------------------------------|---|
| Kerney, M.P. and
Europe. Collins | <i>A Field Guide to the Land Snails of Britain and North-west</i> |
| Cameron, R.A.D., 1979 | |
| Macan, T.T., 1977 | British Fresh- and Brackish-Water Gastropods: A key
<i>Freshwater Biological Association Scientific Publication No. 13</i> |

Key to Table

x = 1 – 10 specimens xx = 11 – 50 specimens xxx = 51 – 100 specimens
cf = compare b = burnt

OP No.	0004	0006	0010
Feature No.	0003	0005	0009
Plant macrofossils			
Charcoal <2mm	x	xx	xxx
Charcoal >2mm		x	x
Charred root/stem		x	
De-watered root/stem	xx		
Other remains			
Bone			x
Small mammal/amphibian bone			x
White mineral concretions	xx		
Mollusc shells			
Woodland/shade loving species			
<i>Carychium</i> sp.	x		
<i>Clausilia</i> sp.	x		
<i>Discus rotundatus</i>	x xb		
<i>Oxychilus</i> sp.	xcf		
Zonitidae indet.	x		
Open country species			
<i>Vallonia costata</i>	x		
Marsh/freshwater obligate species			
<i>Anisus leucostoma</i>	xx xb		xx xb
<i>Armiger crista</i>	x		
<i>Bithynia</i> sp.			x
<i>Hippeutis</i> sp.	x		
<i>Lymnaea truncatula</i>	x xb	xcf	
<i>L. peregra</i>		xcf	
<i>Pisidium</i> sp.			x
<i>Planorbis</i> sp.	xcf		x
<i>P. planorbis</i>			x
<i>Valvata cristata</i>			x
Sample volume (litres)	20	20	20
Volume of flot (litres)	<0.1	<0.1	<0.1
% flot sorted	100%	100%	100%

Appendix IV

Context list- ENF 125409

S- sample taken

Site monitoring

Context No	Type	Part of	S	Description	Spot date
0001	U/S	NA		Unstratified finds from overall soil stripping- 8 small fire reddened flints, initially area 13m (N-S) x 26m (E-W) stripped using a large 360 machine with a 2.5m flat bucket (11/11/10), area enlarged by 7m in length to 33m (5/8/11) so bldg footprint can avoid 'soft' spot of feature 0002 in SE corner	
0002	?infilled channel	0002		In SE corner of the area stripped an approx. SW/NE aligned ?infilled channel course was partially exposed, fill of dark brown silty sand, left in situ and reburied under topsoil as bldg footprint was moved to west following additional stripping of a further 7m length of the site	
0003	Pit	0003		Small pit towards E edge of site, elongated, almost oval shape (700mm SW/NE x 1500mm (NW/SE) x 200mm deep	?preh
0004	Fill	0003	S	Fill of 0003, dark brown peaty sand, only finds 2 fire reddened flints (58g), 100% exc	
0005	Pit	0005		Small pit in NE corner of site, circular, 1200mm across x 200mm deep	?preh
0006	Fill	0005	S	Fill of pit 0005, dark brown peaty sand, only finds 5 fire reddened flints (34g), 100% exc	
0007	?Burrow	0007		Irregular curving, linear, feature near the centre of the site on approx. NW-SE alignment, very shallow (c50mm) at each end, deeper (150mm) & wider (500m) towards centre, edges also irregular, likely to be an animal burrow	?
0008	Fill	0007		Fill of irregular feature 0007, mix of dark brown sand & yellow sand with small chalk frags, 20% exc	

0009	Pit	0009		Pit towards W end of site, cut into chalk in this area, circular, 1700mm across x 300mm deep	?preh
0010	Fill	0009	S	Fill of 0009, dark brown peaty sand with 4 fire reddened flints (58g) & 1 small white heat crazed flint (15g), 100% exc	
0011	Pit	0011		Small pit in area at W end of site stripped as an addition to main area, circular 1100mm across x 300mm deep	?preh
0012	Fill	0011		Fill of 0011, dark brown peaty sand, finds 2 heat crazed flints (28g), 100% exc	
0013	Soakaway pit	0013		Small area 3.5m (SW/NE) x 3.8m (SE/NW) stripped of topsoil to depth of 400mm to reveal clean chalk natural & 3m to west of main area for soakaway	