

Figure 4. Plan showing geophysical survey in Area A and location of Testpits TPA73 & TPA80.

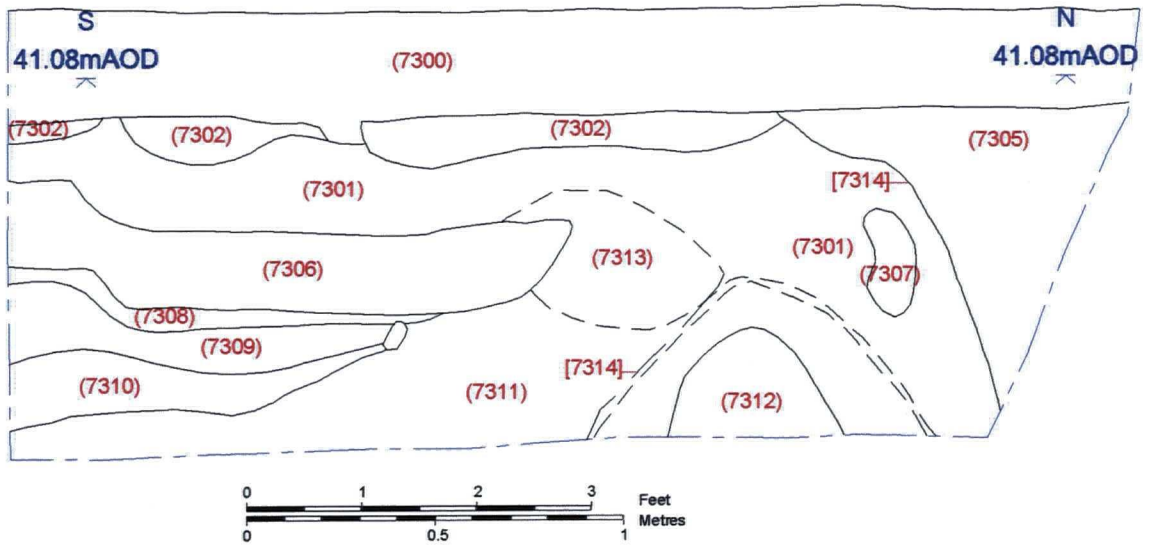


Figure 5. East facing section in Testpit TPA73, showing natural features. (Scale 1:20).

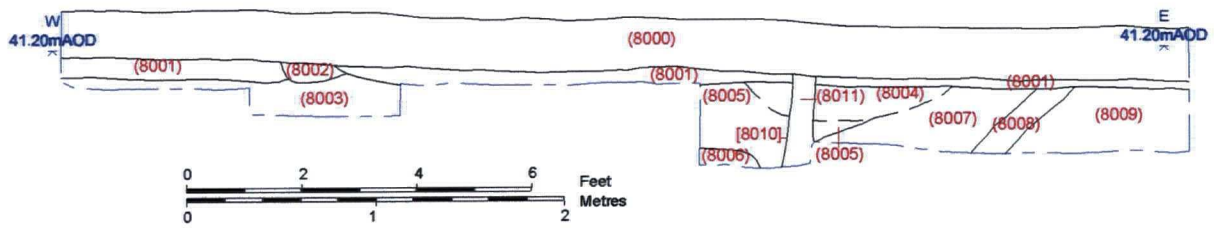


Figure 6. South facing section of Testpit TPA80. (Scale 1:40).

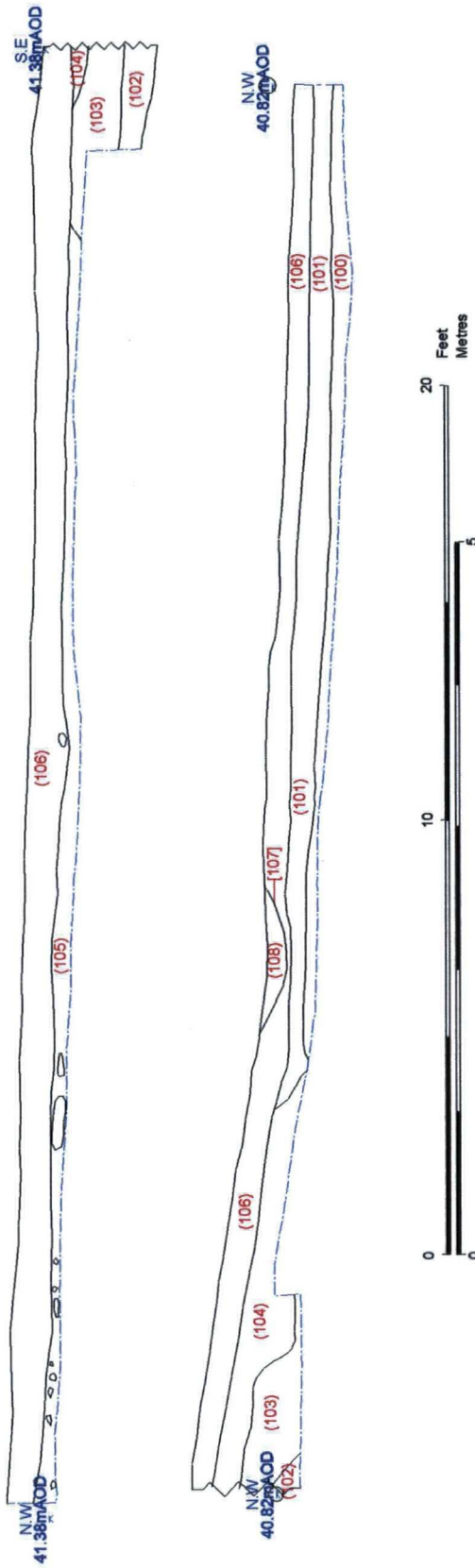


Figure 7. Southwest facing section of Trial Trench TTE1. (Scale 1:50).

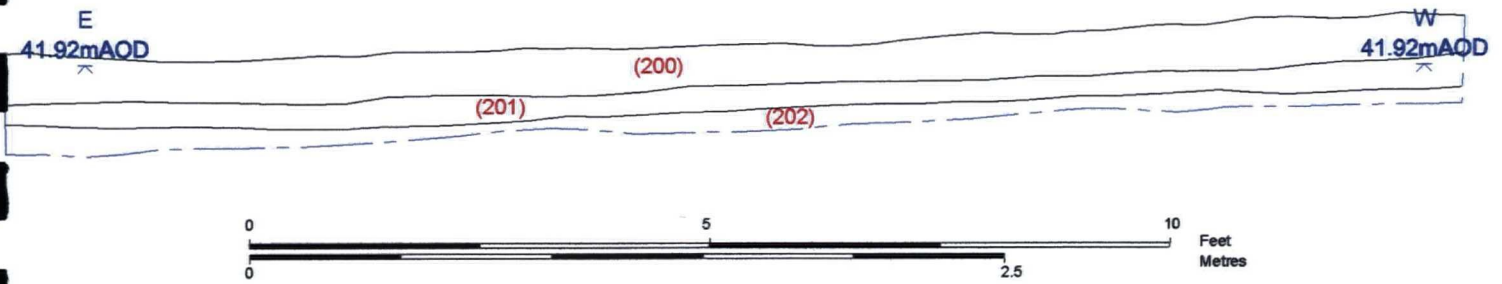


Figure 8. North facing section of Trial Trench TTE2. (Scale 1:20).

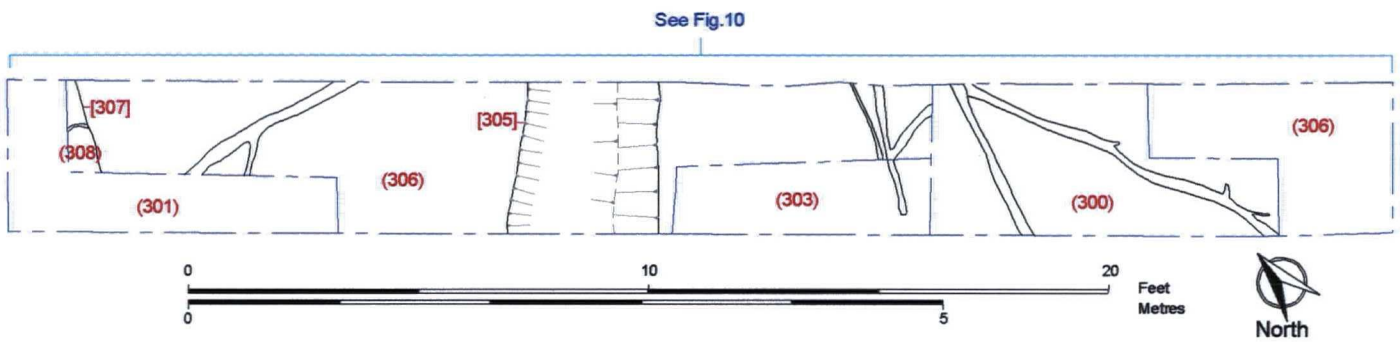


Figure 9. Plan of Trial Trench TTE3 showing root disturbance and ditch. (Scale 1:50).

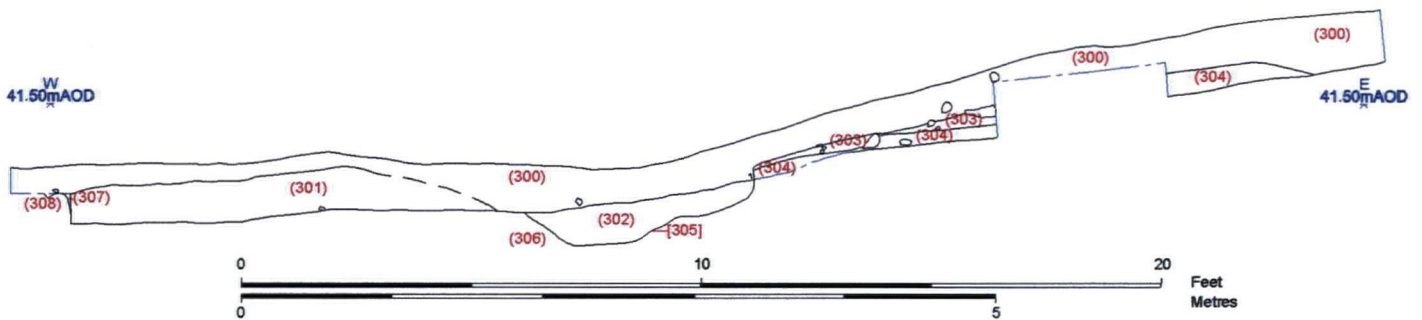


Figure 10. South facing section of Trial Trench TTE3. (Scale 1:50).

6.0 Discussion.

6.1 Area A.

The two trenches in Area A were positioned over the results of an electrical resistance survey that were interpreted as representing soil filled ditches, however, upon investigation the anomalies were found to represent natural subsurface features.

In TPA73 the features were interpreted as ice wedging. Ice wedges form in the active and permafrost zones in periglacial environments (Briggs and Smithson 1985, 384-388). Periglacial environments are located some distance away from glaciers and ice sheets and are typically represented by open wind swept plains with seasonally extensive snow cover. These environments were still ice dominated, but the ice mass was influenced by seasonal temperature changes or freeze/thaw action.

In periglacial environments when ground ice forms this leads to the desiccation of surrounding materials which leads to shrinkage and the formation of cracks forming frost polygons. At the surface such cracks fill with water at times of thawing which then go onto freeze during colder periods. Ice thus develops in the cracks and by a constant process of freeze/thawing the cracks may extend in to a large ice wedge. With climatic improvement the ice melts and the resulting voids become infilled with surface sediments (S. Carter pers. com). Such a feature (TPA7314) was identified in the box section in the southeast facing section of TPA73 (Fig.5; Plate.1).

TPA80 was positioned over a further section of the geophysical anomaly in order to investigate whether the same natural processes were continuous in that area. However, the evidence for ice wedging was not as obvious in the excavated section here and although a shallow linear feature running across the centre of the trench might have represented a periglacial feature it was by no means as clear as the one identified to the southwest in trench TPA73. It is more likely that uplifting of bedded material again through freeze/thaw action was responsible for the anomaly (*ibid.*). That is to say lighter sand deposits, context (TPA8006) and (TPA8007), bedded between denser and compact clays, contexts (TPA8008) and (TPA8009), and gravels context (TPA8005) (Fig.6). Where these deposits reached the surface the difference in the weakness/strength of the geophysical signature between the sand on one hand and the clays and gravels on the other might have produced an anomaly similar to that of a soil filled ditch of an archaeological origin.

6.2 Area E.

Trial Trench E1 was positioned to investigate whether a raised platform with a regular sub rectangular plan supported evidence for occupation. The trench was also positioned to investigate whether a low-lying sub rectangular depression located to the east of the platform represented an artificial pond.

The southern half of Area E, in which the platform and depression are located, and the northern and western part of Area F are characterised by the desiccated remains of what once used to be a peat marshland. This Area And the flasks, which were located to the southwest,

are referred to as a swamp or mire in historical documents and were described as common and meadow lands located within the parish of Well (Fern 2005).

Unsurprisingly, the results from the Trial Trench failed to identify any unequivocal evidence for occupation on the surface of the eastern edge of the platform. In that respect it is likely that the platform is a natural feature comprised till and cobble deposits. However that said it is possible that the regular eastern edge of the platform was created by human activity.

The earliest evidence for such activity may correspond to peat cutting in the medieval period. The archaeological evidence for this was tentative to say the least and draws on the shape of the edge of the platform in the excavated section, which was fairly abrupt (the interface between deposits (TTE103) and (TTE104); Fig.7; Plate.3) and the formalised nature of the depression in plan. The latter may indicate that a large area of peat was removed from the latter. A desk-based historical and archaeological assessment of Areas E and F (*ibid.*) has identified documentary evidence referring to the rights of access to the 'peat grounds' and common land, in the area under consideration, which were apparently extensively exploited from the mid 13th century (*ibid.*, 4). Peat was utilised as fuel in the medieval period and judging by the documented 'arbitration' over rights of access was an important resource to those who enjoyed access to it (Fern 2005).

Typically peat was cut at a working face between one and two metres high (which may render the interpretation of the eastern edge of the platform as such redundant as this was only recorded at c. 0.25m high). Then the peat turves were stacked, ready for removal by cart. The existence of several cart tracks belonging to different manors has been identified by Fern (2005; Fig.2), which cross Areas E and F. Furthermore, his analysis of the results of the topographic survey has highlighted the existence of several regular depressions with formalised edges throughout Areas E and F, which he has interpreted as further evidence for medieval turbaries (*ibid.*).

The eastern edge of the platform was augmented further in the post-medieval period when a linear drainage/enclosure ditch was dug more or less parallel to the base of the slope (Fig.7; context [TTE107]). This ditch was very shallow and almost impossible to detect in section, however, it was more visible as an earthwork feature and is also visible on the topographical survey (Fig.3). The ditch formed the eastern edge of a small rectilinear enclosure, which was in turn part of a larger field system which comprised a mixture of narrow linear enclosure and larger sub rectangular fields (Fig.2). The ditches were apparently dug in such a manner and spatially conceived so as to aid the drainage of the wider Area And also act as a boundary demarcating parcels of land. In keeping with the general motivation behind acts of enclosure this would have effectively brought the once marginal land into use as pastoral holdings (*ibid.*). It is difficult to see the land being used for anything much other than pasture as this area of the site, until quite recently, was seasonally waterlogged (Mr.R Smurthwaite pers. com). The land was probably enclosed during the late 18th/early 19th century on a local, private basis as no parliamentary enclosure awards survive for parish of Well. The few datable artefacts recovered from the western ditch corroborated with this date.

Furthermore, the western drainage/boundary ditch of a much longer enclosure was identified in Trial Trench E3, which was located on the western edge of the platform area (Fig.9). This ditch was a far more substantial feature both in section and as a surviving earthwork than its eastern counterpart and formed the boundary of a much larger enclosure which lay to each side of the stream (Fig.10). The reasons for the difference in size of the ditches is difficult to interpret, but bearing in mind that part of the function of the ditches was for drainage purposes it is possible that the larger ditch may have been cut through an area of land that required more effective drainage.

The field system identified in Areas E and F extended into Area D and the northern extent of the enclosures was probably represented as the linear anomalies in the geophysical survey recently undertaken in this area (ASUD 2005;Fig 6-8). Furthermore, remnants of the field system are fossilised in the modern field system as Areas B and C (Fig.2). It is known that the drainage/boundary ditches in Area D were removed quite recently (Mr. R Smurthwaite pers. com) and this seems to have been an ongoing process since the late 19th century for most of the area in question.

Finally Trial Trench E2 was positioned in the central area of the platform (Fig.3), partly over a low earthwork, comprising an amorphous mound, in order to investigate if any evidence for occupation survived there. However, the only archaeological evidence for occupation took the form of a layer of sandy clay which contained frequent flecks and fragments of fired clay and occasional pottery sherds and animal bone. The deposit dated to the mid 18th century or later. The material probably represented a dump of a comparatively recent date.

7.0 Conclusions.

In Area A the results from the evaluation trenches placed across geophysical anomalies thought to represent a series of multiphase enclosures show that the features represented a system of polygonal natural features that originated in the periglacial environment of the last ice age. This discovery hints at the existence of similar natural features within the site area, which should be taken into account when further geophysical surveys are undertaken.

The Trial Trenches in Area E were positioned on the eastern, western and central area of a sub rectangular raised platform, which appeared to have been improved with regular formalised edges on its northern, eastern and western margins suggesting that the platform had been utilised for occupation. The results from the excavation of the Trial Trenches showed that the platform's shape was the result of several phases of activity; none of which represented formal occupation of the platform. The straight eastern edge of the platform might have been the product of peat digging activity in the medieval period. That is to say there is tentative evidence indicating that the shallow depression to the east of the platform was part of an extensive area of medieval turbaries. A recent desktop survey (Fern 2005) covering Areas E and F identified the area under consideration as common land in the medieval period which was used for rough grazing and peat cutting. At that time the area was described as a peat mire. A dump of sandy clay containing flecks and fragments of fired clay was identified in the central area of the platform.

The eastern edge of the platform was augmented further in the post-medieval period through the digging of a drainage boundary ditch, which formed the western edge of a small sub rectangular enclosure. This feature was in turn part of a wider field system of linear and sub-rectangular enclosure that was further identified on the western edge of the platform in Trial Trench E3. Furthermore, the enclosures are known to have extended across Areas B, C, D, E and F and were created in the late 18th/ early 19th centuries during the enclosure movement and represented the improvement of marginal land for pastoral use.

The only other evidence for human activity associated with the platformed area was a dump of clay silt containing fragments of fired clay. This deposit was recorded in the Trial Trench positioned in the central area of the platform: trial trench E2.

In summary it can be seen that the platform gained its regular form through peat digging and the excavation of drainage/boundary ditches along its northern, eastern and western edges. Its southern edge probably formed by erosion associated with fluvio-glacial processes. This activity augmented the form of a natural spur of land, which comprised a mound of glacial till containing frequent cobbles.

8.0 Bibliography.

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9.0 Appendix 1 ~ List of Contexts.

Context	Description	Extent	Depth
<i>TPA73</i>			
7300	Friable dark brownish black sandy silt topsoil	Trench	0.36m
7301	Compact light brownish grey (with orange mottling) clay sand fill of ice wedge	N/A	0.85m in section
7302	Stiff mid greenish/greyish blue seam of natural clay	N/A	0.14m in section
7303	Compact natural gravel deposit	N/A	N/A
7304	Linear straight sided cut for modern land drain (unexcavated)	N/A	N/A
7305	Weakly cemented mid greenish grey natural clayey sand and gravel deposit	N/A	0.84m in section
7306	Compact light brownish/greenish grey natural sand and gravel deposit	N/A	0.24m in section
7307	Compact mid brownish grey natural silty gravel deposit	N/A	0.29m in section
7308	Loose mid greyish brown natural gravel deposit	N/A	0.08m in section
7309	Compact mid brownish/greenish grey natural clay sand deposit	N/A	N/A
7310	Compact mid orange natural sand deposit	N/A	0.16m in section
7311	Compact mid greenish/greyish natural sandy gravel deposit	N/A	0.38m in section
7312	Compact greenish/greyish brown natural clay silt deposit	N/A	0.28m in section
7313	Compact greenish/greyish natural clay silt deposit	N/A	0.38m in section
7314	Linear irregular interface forming ice wedge	N/A	N/A
<i>TPA80</i>			
8000	Friable dark greyish brown sandy silt topsoil deposit	Trench	0.28m
8001	Weakly cemented light brownish grey subsoil deposit	Trench	0.11m
8002	Loose grey natural sandy gravel deposit	N/A	0.11m
8003	Loose light orangish grey natural gravel deposit	N/A	N/A
8004	Loose light orangish grey natural gravel deposit	N/A	N/A
8005	Compact light greyish orange natural gravel deposit	N/A	N/A
8006	Compact mid grey natural sandy clay	N/A	N/A
8007	Compact light grey natural sand	N/A	N/A
8008	Compact light grey natural sandy clay	N/A	N/A
8009	Compact mid greyish orange natural sandy clay	N/A	N/A
<i>TTE1</i>			
100	Compact dark brownish black organic natural peat deposit	N/A	0.34m
101	Compact light/mid greenish brown natural clay deposit	N/A	N/A
102	Compact light bluish green natural sandy clay	N/A	N/A
103	Compact dark blue natural clay	N/A	N/A
104	Compact light greenish brown natural clay	N/A	N/A
105	Compact mid greyish blue natural clay	N/A	N/A
106	Friable dark greyish brown sandy silt topsoil	N/A	0.27m
107	Drainage ditch cut	N/A	N/A
108	Drainage ditch fill	N/A	N/A
<i>TTE2</i>			
200	Friable mid brownish black loam silt topsoil deposit	Trench	0.15m
201	Firm mid greyish brown sandy clay with frequent flecks and fragments of CBM, pot sherds, flint and fragments of bone	Trench	0.13m
202	Firm dark yellowish brown natural sandy clay	Trench	N/A
<i>TTE3</i>			
300	Friable dark greyish brown sandy clay topsoil deposit	Trench	0.30m
301	Firm dark greyish brown natural silty clay deposit	N/A	0.24m
302	Compact mid greyish brown sandy silty clay ditch fill	1.00m wide	0.28m

303	Compact light yellowish grey silty sand re-deposited natural	1.00m wide	0.10m
304	Stiff dark greyish blue natural clay	N/A	N/A
305	Ditch cut with steep concave/stepped sides and a concave base	1.00m wide	0.28m
306	Compact/firm light yellowish/brownish grey natural silt deposit	N/A	N/A
307	Unexcavated cut for modern horse shoe land drain	N/A	N/A
308	Land drain	N/A	N/A

10.0 Appendix 2 ~ Archive Index.

10.1 Drawing Register.

Dwg No	Description	Scale	Date	Initials
37	East facing section TPA73	1:10	28/06/05	KS/AD
38	South facing section TPA80	1:10	01/07/05	KS
39	Southwest facing section TTE1	1:10	14/07/05	KS
40	Plan of 201 in TTE2	1:20	20/07/05	JS
41	Plan of 202 in TTE2	1:20	20/07/05	JS
42	North facing section TTE2	1:10	21/07/05	KS
43	South facing section TTE3	1:10	22/07/05	KS
44	Plan of TTE3	1:20	22/07/05	JS

10.2 Photographic Register.

Frame	Description	Scale	Date	Initials
<i>Film 26410/06/0515:05 Colour Slide</i>				
2	Overall shot of TPA73	2m and 1m	10/06/05	KS
3	Overall shot of TPA73	2m and 1m	10/06/05	KS
4	Overall shot of TPA73	2m and 1m	10/06/05	KS
5	Overall shot of TPA73	2m and 1m	10/06/05	KS
6	Overall shot of TPA73	2m and 1m	10/06/05	KS
7	Overall shot of TPA73	2m and 1m	10/06/05	KS
8	Pest deposit (100) in TTE1	0.5m	13/07/05	DS
9	Pest deposit (100) in TTE1	0.5m	13/07/05	DS
10	Pest deposit (100) in TTE1	0.5m	13/07/05	DS
11	Context (201) in TTE2	2 x 1m	19/07/05	DS
12	Context (201) in TTE2	2 x 1m	19/07/05	DS
13	Context (201) in TTE2	2 x 1m	19/07/05	DS
14	Overall shot of TTE3	2 x 1m	22/07/05	KS
15	Overall shot of TTE3	2 x 1m	22/07/05	KS
16	Overall shot of TTE3	2 x 1m	22/07/05	KS
17	South facing section TTE2	1m	27/07/05	KS
18	South facing section TTE2	1m	27/07/05	KS
19	South facing section TTE2	1m	27/07/05	KS
20	South facing section TTE2	1m	27/07/05	KS
21	South facing section TTE2	1m	27/07/05	KS
22	South facing section TTE2	1m	27/07/05	KS
23	South facing section TTE3	1m	27/07/05	KS
24	South facing section TTE3	1m	27/07/05	KS
25	South facing section TTE3	1m	27/07/05	KS
26	South facing section TTE3	1m	27/07/05	KS
27	South facing section TTE3	1m	27/07/05	KS
28	South facing section TTE3	1m	27/07/05	KS
<i>Film 0203/05/0514:14 Black and White</i>				
8	Overall shot of TPA73	2m and 1m	10/06/05	KS
9	Overall shot of TPA73	2m and 1m	10/06/05	KS
10	Overall shot of TPA73	2m and 1m	10/06/05	KS
11	Overall shot of TPA73	2m and 1m	10/06/05	KS
12	Overall shot of TPA73	2m and 1m	10/06/05	KS
13	Overall shot of TPA73	2m and 1m	10/06/05	KS

14	Pest deposit (100) in TTE1	0.5m	13/07/05	DS
15	Pest deposit (100) in TTE1	0.5m	13/07/05	DS
16	Pest deposit (100) in TTE1	0.5m	13/07/05	DS
17	Context (201) in TTE2	2 x 1m	19/07/05	DS
18	Context (201) in TTE2	2 x 1m	19/07/05	DS
19	Context (201) in TTE2	2 x 1m	19/07/05	DS
20	Overall shot of TTE3	2 x 1m	22/07/05	KS
21	Overall shot of TTE3	2 x 1m	22/07/05	KS
22	Overall shot of TTE3	2 x 1m	22/07/05	KS
23	South facing section TTE2	1m	27/07/05	KS
24	South facing section TTE2	1m	27/07/05	KS
25	South facing section TTE2	1m	27/07/05	KS
26	South facing section TTE2	1m	27/07/05	KS
27	South facing section TTE2	1m	27/07/05	KS
28	South facing section TTE2	1m	27/07/05	KS
29	South facing section TTE3	1m	27/07/05	KS
30	South facing section TTE3	1m	27/07/05	KS
31	South facing section TTE3	1m	27/07/05	KS
32	South facing section TTE3	1m	27/07/05	KS
33	South facing section TTE3	1m	27/07/05	KS
34	South facing section TTE3	1m	27/07/05	KS
<i>Digital</i>				
1	Overall shot of TPA73	2x1m	29/06/05	AD
2	Overall shot of TPA73	2x1m	29/06/05	AD
3	Overall shot of TPA73	2x1m	29/06/05	AD
4	Overall shot of TPA73	2x1m	29/06/05	AD
5	Overall shot of TPA73	2x1m	29/06/05	AD
6	Overall shot of TPA80	2x1m	01/07/05	AD
7	Overall shot of TPA80	2x1m	01/07/05	AD
8	Overall shot of TPA80	2x1m	01/07/05	AD
9	Overall shot of TPA80	2x1m	01/07/05	AD
10	Peat deposit (100) in TTE1	0.5m + 1m	13/07/05	DS
11	Peat deposit (100) in TTE1	0.5m + 1m	13/07/05	DS
12	Peat deposit (100) in TTE1	0.5m + 1m	13/07/05	DS
13	Northwest end of TTE1	2 x 1m	14/07/05	AD
14	Northwest end of TTE1	2 x 1m	14/07/05	AD
15	Natural bank in TTE1	2 x 1m	14/07/05	AD
16	Natural bank in TTE1	2 x 1m	14/07/05	AD
17	Natural bank in TTE1	2 x 1m	14/07/05	AD
18	Southeast end of TTE1	2 x 1m	14/07/05	AD
19	Southeast end of TTE1	2 x 1m	14/07/05	AD
20	Southeast end of TTE1	2 x 1m	14/07/05	AD
21	Natural bank in TTE1	2 x 1m	14/07/05	AD
22	Deposit (201) in TTE2	1m + 1m	19/07/05	KS
23	Overall shot of TTE2	1m + 1m	19/07/05	KS
24	North facing section in TTE2	1m + 1m	21/07/05	KS
25	North facing section in TTE2	1m + 1m	21/07/05	KS
26	Overall shot of TTE3	1m + 1m	21/07/05	KS
27	South facing section in TTE3	1m + 1m	22/07/05	KS
28	South facing section in TTE3	1m + 1m	22/07/05	KS
29	South facing section in TTE3	1m + 1m	22/07/05	KS
30	South facing section in TTE3	1m + 1m	22/07/05	KS

11.0 Appendix 3 ~ Finds Assessment Report.

Alan Vince.

11.1 Summary.

A small quantity of finds was recovered from features excavated at Nosterfield Oaklands, North Yorkshire by *On-Site Archaeology*. These finds broadly date the features to the post-medieval period whilst those from context 201 date to the early 18th century, giving an early 18th-century or later deposition date for the context.

11.2 Description.

The finds were identified and recorded by number (Nosh), maximum number of objects (NoV) and weight in grams (Weight). The totals recorded are given in Table 1.

Table 1.

Context	Data	CBM	CINDERS	FCLAY	GLASS	POTTERY	Grand Total
201	Nosh	3	2	19	1	2	27
	NoV	3	2	19	1	1	26
	Weight	4	3	70	1	2	80
300	Nosh	4				1	5
	NoV	4				1	5
	Weight	3				6	9
302	Nosh	4					4
	NoV	1					1
	Weight	133					133

11.2.1 Ceramic Building Material.

Eleven fragments of ceramic building material were recorded. Most were too fragmentary to be identified in detail but one fragment of flat roof tile (context 300) and four joining fragments of brick (context 302) were identified. The brick is hand-moulded without any dimensions and therefore cannot be closely dated without a local dated fabric series. Flat roof tile was introduced to Yorkshire in the 12th century and continued to be used into the 19th century, although during the 17th and 18th centuries pantiles supplanted flat tiles. Although the high status use of brick may have been present in the area in the late medieval to Tudor period, the most likely date is from the 17th to the mid 19th centuries.

11.2.2 Cinders.

Two fragments of unidentified black vesicular material were recovered from context 201.

11.2.3 Fired Clay.

Nineteen fragments of fired clay were recovered from context 201. The pieces show little sign of working apart from flat faces (which might be shrinkage cracks). They contain few inclusions apart from rootlet voids and coarser grass or straw impressions. They are lower-fired than the ceramic building material and appear to be accidentally burnt clay. There is,

however, no sign of wattle impressions, nor of finger marks or lenses of differing texture. The function of the material is therefore not known.

11.2.4 Glass.

A single fragment of window glass was recovered, from context 201. The faint light green colour and the degree of weathering suggest a 17th- or early 18th-century date.

11.2.5 Pottery.

Two fragments of a Staffordshire Mottled ware cup or bowl were recovered from context 201. This type was produced in the early to mid 18th centuries.

A single fragment of a heavily abraded slipped bowl, with traces of glaze, was recovered from context 300. It is probably a local copy of those produced in Staffordshire in the mid 17th- to early 18th century.

11.3 Assessment.

The finds provide *termini post quem* for the three contexts as follows:

Context 201: early 18th century

Context 300: Mid 17th century

Context 302: Early 17th century (but probably much later)

With further work on the post-medieval finds of this part of North Yorkshire it would be possible to refine this dating and the finds should therefore be retained for potential future study.

11.4 Appendix A.

Context	class	Cname	Subfabric	Form	Part	Description	Nosh	NoV	Weight	Use	Condition
201	CBM	PMTIL	-		BS		3	3	4		
302	CBM	PMTIL		BRICK	BS		4	1	133	MORTARED	
300	CBM	-		-	BS		3	3	3		
300	CBM	PMTIL		FLAT	BS	17/19C?	1	1	0		
201		CINDERS			BS		2	2	3		
201	FCLAY	FCLAY		-	BS	SOME FLAT FACES	19	19	70		
201	GLASS	PMGL	LTGR	WIND	BS		1	1	1		
201		POTTERY STMO		CUP/BOWL	BS		2	1	2		
300		POTTERY SLIP		BOWL	BS		1	1	6		VABR

12.0 Appendix 4 ~ Notes from a site visit 14th June 2005.

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12.1 Introduction.

These notes summarise the topics discussed during a site visit in the company of Nick Pearson of *On-Site Archaeology*. I have also had an opportunity to read the report on the desk-based assessment prepared by Mike Griffiths & Associates and draft copies of geophysical survey plots and the topographic survey of the east end of the Oaklands extension.

12.2 Pits along the peat boundary.

We examined 2 x 2 m test pits under excavation. These are designed to confirm the limit of peat deposits as mapped by Tarmac, with adjacent pairs of pits on either side of the mapped boundary. No actual peat was seen in the test pits open on the day and it is clear that none has been seen to date. In some of the test pits the ploughsoil is distinctly peaty in composition and it is assumed that this is the last vestiges of a formerly more substantial peat deposit, largely destroyed by drainage, oxidation and then cultivation.

It is unlikely that the test pits will improve our understanding of the extent of the surviving peat deposit as they lie in a diffuse marginal zone where the peat gradually loses its identity. There is apparently no well-defined margin like that seen previously elsewhere in Nosterfield Quarry. Given the absence of peat in the test pits, I recommend that a full section is cut down into the underlying subsoil (either gravel, till or lacustrine clays) and recorded to provide a record of the stratigraphy. Detailed sediment descriptions of all layers should be made.

A comparison of the (Tarmac) mapped extent of peat and the local topography suggests that the peat occupies the centre of a very shallow depression, which is closed at its downstream end (at the east end of Areas A and D). The mapped limit of the peat roughly conforms with a slight break of slope on its north side in Area D but the southern boundary in Area A appears to be more convoluted than the map suggests.

The obvious comparison to be made is with the Flasks, which is the next shallow basin downstream from this area. The Oaklands peat deposit is clearly highly damaged by drainage and oxidation, as is the Flasks. I have not seen any data from the Tarmac survey that would indicate how much peat survives in the centre of the deposit at Oaklands where it is likely to be deepest. The original extent of the deposit is also unclear at present. Topography provides reasonably clear limits to the north and southwest but the southern boundary is not at all clear.

I note that further work on the peat is proposed as part of Phase 1 of the evaluation, including radiocarbon dating and palaeoenvironmental assessment. Clearly the degraded peat at the margins, exposed in the test pits, is not suitable for this purpose and better

preserved deeper deposits will have to be identified. This raises one potential problem. If the peat deposit experienced significant lateral growth, basal dates will be much later towards the margins. Lateral growth has implications for the extent of archaeological features and their preservation under peat. It will be important to try to obtain data widely from the peat deposit, not just concentrating on the best-preserved sections. Careful consideration will have to be given to the suitability of degraded peat deposits for radiocarbon dating.

12.3 Cropmark 1.

Cropmark 1 in Area A was discussed and we compared the resistivity survey data with the cropmark transcription, local topography and a trial trench opened over part of the cropmark. The cropmark corresponds well with linear low-resistance anomalies although many more similar resistance anomalies are present than have been recorded as cropmarks. One of these anomalies can be interpreted as an example of the recent parallel field boundaries that have been identified across Areas A and D. The other linear anomalies form a series of linked irregular polygons, including those recorded as Cropmark 1.

The trial trench has exposed an area of fine-textured sediment in the position where the cropmark/resistance anomaly was recorded. The contrast between the clay and surrounding gravels is sufficient to explain the lower resistance and there is no reason to doubt that this is the cause of both phenomena. Is this a man-made feature or a natural feature? It was not fully excavated at the time of my site visit so this remains to be tested. The cropmark was assumed to be a man-made enclosure but the resistance anomalies have the characteristics of ice-wedge polygons: irregular straight-sided polygons with 3-way junctions. Full excavation of the feature in the trial trench may resolve which of these two interpretations is correct: an ice wedge should narrow to a deep, ill-defined base, a man-made ditch should have a relatively shallow broad base. Clearly it is very important that we correctly identify what these features are as the implications for the wider archaeological potential of the site are substantial. The features appear to be under the residual peat cover: ice wedges would be of late glacial date and allow the peat to be early Holocene (as in the Flasks). An enclosure would be of Neolithic or later date and require the peat to be of later prehistoric date, burying an early prehistoric land surface.

12.4 General impressions.

My overall impression at this stage is that the landscape of the Oaklands Extension is similar to that encountered already elsewhere in Nosterfield Quarry. Therefore similar approaches will be suitable in determining the landscape history and related archaeological potential.

One potential difference is an apparent absence of gypsum subsidence hollows. I have not attempted to follow this up in detail but you should note that the western edge of the concealed outcrop of the Middle Permian Marls runs through areas E and F (just east of easting 428000). The principal gypsum beds are in these marls so collapse features are

unlikely to occur further west where the gravels directly overlie the Lower Magnesian Limestone.

13.0 Appendix 5 ~ The Plates.



Plate 1. Ice wedge in southwest facing section of Testpit TPA73. (Scale of 2 x 1m).



Plate 2. Peat 100 in Trial Trench TTE1. (Scale of 0.5m & 1m).



Plate 3. Possible peat cutting interface in Trial Trench TTE2. (Scale of 2 x 1m).



Plate 4. Ditch 305 in Trial Trench TTE3. (Scale of 1m).