TIMBERS RECORDED AT WATERMEAD COUNTRY PARK, LEICESTERSHIRE (Accession no. A57.1996)

Matt Beamish

Figure list

Introduction

Eighteen timbers were recorded in detail (tabulated results in Figure 7). These comprised 5 from the jetty/bridge structure, and 8 from the trough, an upright to the north of the Burnt Mound, and 3 pieces excavated from the peat deposits, and an unstratified piece.

The timbers were studied for tooling, conversion and evidence of reuse.

The Trough

The bottom lining was essentially formed by six larger timbers (Ts 13, 14, 15, 17, 18, and 20). Smaller cracks were filled by Ts 16 and 21. All of these are probably of Alder, although one could only be identified to Alder or Hazel.

All these pieces were fragmentary, soft and some had been penetrated by the roots of reeds. Some appeared compressed.

All the larger pieces had been tangentially split. The wood appeared slow-grown; a ring count of 50 from a tree of around 200mm diameter was made (T14). The surfaces of most of the pieces were too eroded to be sure which part of the conversion the pieces had come from, although some had surviving bark. Evidence of tooling was minimal and little attempt had been made to flatten convex or concave surfaces.

Blade impressions

Two blade facets up to 50mm wide survived at one end of T17. As these appeared to be shaping the end of the piece rather than making it shorter, they may indicate that it had been re-used in the trough. The marks were too eroded to allow blade width estimations and no signatures were visible.

Two part blade profiles were found on a small piece amongst the trough boards (T25, Figure 1). The marks show that a narrow blade, probably not wider than 16 or 17mm had been used along the grain, perhaps to split the wood.

Blade impressions also survived partially at one end of another piece, T20 (Figure 2). Here narrow concave cuts up to 17mm wide in this instance perpendicular and across the grain overlay a more ragged surface that was not cleanly cut.

It is possible that the same tool with a 17mm wide blade was used on both pieces.

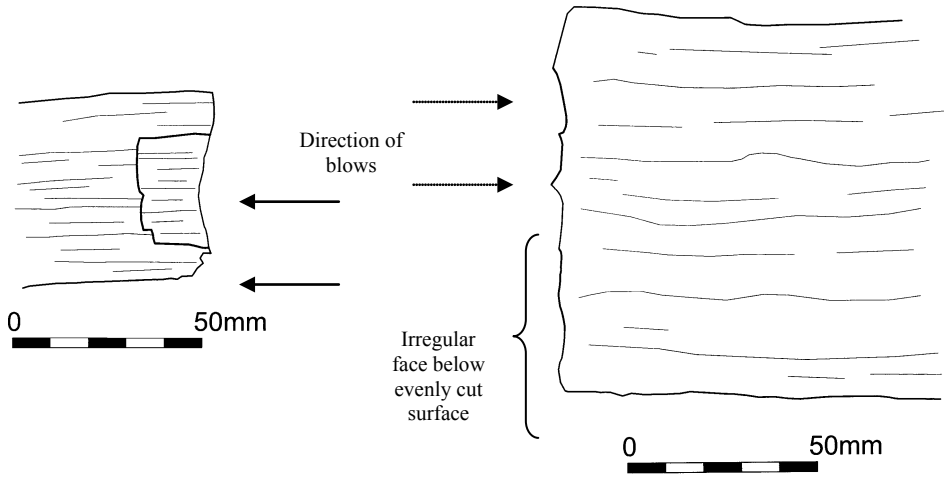

Figure 1: Timber 25 showing part blade profiles. Blows are along the grain. Blade width c. 17mm.

Figure 2: Timber 20 showing part blade section. Blows are across the grain. Blade width *c.*17mm.

Joinery

At one end of another piece, T18, remnants of a hole, or housing survived (Figure 3). In plan this was rectangular, 110mm long and probably not more than 100m wide. At 40mm deep, it was not quite as deep as the timber was thick, although as the sides of the hole were tapered and irregular, it was probably designed to fully penetrate the piece. Two cut marks were recorded in one corner the shorter of which probably represented a single blow from a blade 17mm wide.

The insides of the hole were irregular and had not been cleanly made. It appeared that waste material had been removed by ripping it out along the grain.

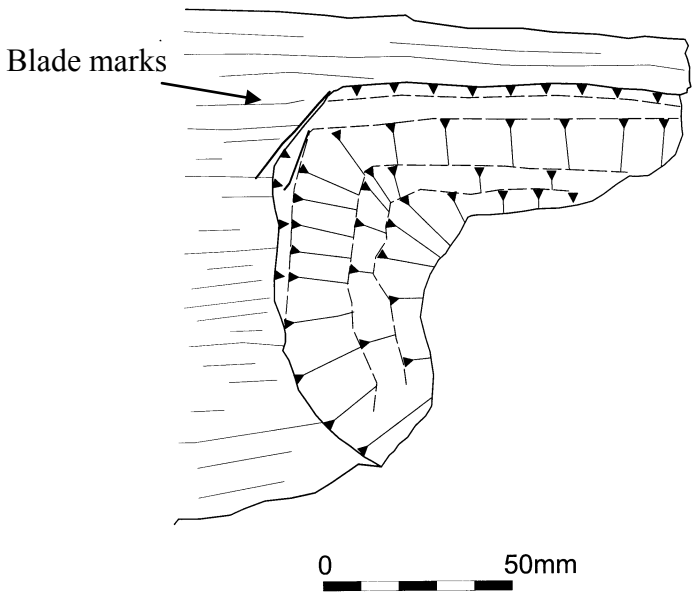

Figure 3: Timber 18, broken remnant of hole or mortice

The Bridge\Jetty timbers

The jetty or bridge was formed from five upright, pile driven timber posts, in two parallel rows: T1, 2,3, 4 and 10. All these timbers were of oak, were fast grown and were in good condition. Four had been used ‘in the round', complete with bark, and one halved.

Preparation

The timbers had all rotted off at their upper ends, and survived to lengths between 900 and 1700mm. The surviving portions of the timbers were in good condition. All timbers had been sharpened to a pencil point, with hafted tools. On some the sharpening was restricted to the last 200mm, whereas on the longest surviving timber, over 1m had been effectively prepared.

Four of the five had evidence of branch removals. The end 50mm of the sharpened tip of one piece (T3) was clearly compressed and distorted; a gravel concretion on the very tip implied that this resulted from when the timber was driven into the underling gravels. It perhaps indicated that the timbers were used while still green (c.f. Heal 1991 p.140).

A probable hewing mark was recorded on T1, where wood fibres spanning the split between the halves were severed (c.f. Darrah, 1982 Fig 12.17) so completing the splitting of T1 from its counterpart.

The profiles of the pieces timbers c150mm above the points varied from octagonal to decahedral, with facets typically between 30mm and 40mm wide.

The longest piece (T4) was not straight but kinked by approximately 20 degrees at a mid point. The pith on this piece was off-centre, indicating that it was branch wood.

There were no indications that the pieces had been reused. It seems most likely that the pieces were prepared and used for structure.

Woodland management

Distorted bark growth was recorded over a knot (T10). It is unclear whether the knot was caused by a premeditated or casual branch removal.

A 100mm long knot 700mm above the sharpened point of the timber was investigated for signatures (T2). One of a series of blade impressions was partly obscured with new bark growth at one end. This bark was carefully removed, exposing a fuller blade mark beneath. This implies that a branch was removed from the growing tree, a period of time before that piece was then selected for use and felled (Figure 4).

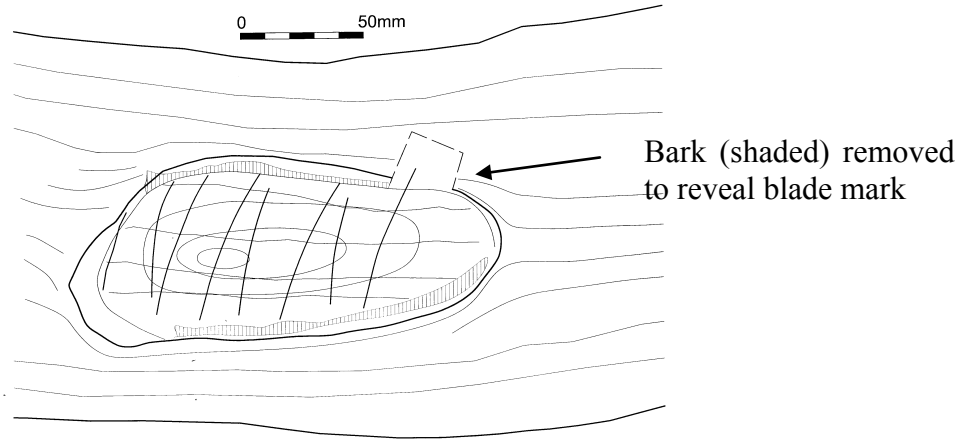

Figure 4: Timber 2, part grown over branch removal

Blades

Six partial blade signatures (B1-6, Figure 6) were identified, although several of these may have belonged to the same blades, and probably a maximum of four blades could be distinguished (not including the tooling facets where no signature information was preserved).

No complete blade profiles were recorded. The lack of complete blade profiles makes any certainty over the number of blades involved weak. The minimum blade widths recorded varied from 35mm to 52mm.

All the facets studied were strong, clear and well-defined and appeared to have been made by metal blades. Most facets were flat, although those on T1 showed some small curvature to the back of the blade (Figure 5)

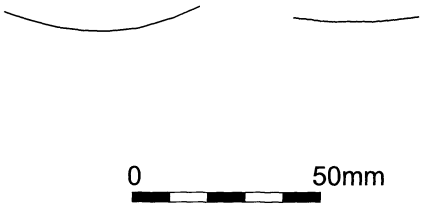

Figure 5: Part blade end profile and part blade back profile. Timber 1 (blade 2)

Links between signatures were made between Timbers 1 and 3, and 2 and 10. The signature of a tool found on T4 could have developed from that found on Timbers 1 and 3. Thus is seems that at least two tools were used in the sharpening of the piles.

The stong signature (blade 2) found on Timber 1 was in places clearly reversed, showing that the tool used was bifacial.

Blade No	***Profile***	***Signature***	***Width***	***Compares to/Derived from***	***Found on***
1	Part	VWeak	50+		T3
2	Part	Strong	52+	l/h and r/h signatures. Blade back also.	T1
3	Part	V Weak	35+		T2 early branch removal
4	No	V Strong	48+	Blade facet width is very regular, suggesting blade width is unlikely to be much wider.	T4 point. Could evolve from B1
5	No	Strong	39+		T10 point
6	No	Strong	40+		T2 point

Figure 6: Summary of recorded results

Other pieces

A stake end was discovered within a clay filled channel to the north of the burnt mound and bridge. This piece was very different in character to the bridge piles, with a short eroded tip on which no tooling survived. The timber was very slow grown oak.

Discussion

The Neolithic timbers

The limited tooling information found on the pieces from the trough are consistent with the use of a very narrow bladed stone axe or possible a chisel. Further comment is not possible on the limited information available.

Tangential conversions appear the more usual Neolithic product (c.f. Heal 1991, p140, Taylor 1998 p.147) with the little attempt to flatten the convex and concave faces of tangential splits also the norm.

Very few Neolithic jointed pieces have been found and recorded, much evidence of woodworking in this period related to small roundwood work. Consequently the housing at the end of one piece has some significance. Holed and notched pieces were found amongst the upper planks of the Neolithic trackways from the Somerset Levels (Coles and Orme 1976 p.55, Orme 1982 p.89). This perhaps best equates with a similar construction.

The Saxon timbers

The evidence of the grown-over de-branching marks clearly indicates that the timber came from a managed resource. The small cross-sectional profile together with the off-centre pith of some of the pieces, and the in cases irregular growth implies that the timbers were prepared from branch wood of trees (but not out of reach of the woodman's axe).

Timber		**Length (mm)**	**max dia. mm)**	**Species & rings**	**Conversion**	**Ends/comments**	**Toolmarks profile**	
							Profile	Signature
T1	upright	1150	130	Oak. (fast grown) 15. (10 sap) 8.5mm av ring. Heart central.	halved roundwood	Possible splitting mark cf Darrah 1982 BAR 15129 Fig 12.17 Pencil point end	B2 part	Part
T2	upright	1130	120	Oak. 20. (14 sap. Double heart)	roundwood	Grown over knot, with tool sigs below.	B3 part	Part
T3	upright	880	85	Oak. (fast grown) 9. Heat central	roundwood	Compression of end: driven when green	B1 part	Part. <u>No sigs on sharpened end. Clean blade?</u> 51mm + Unlikely to be B2
T4	upright	1730	120	Oak. 23. (pith off centre-branch)	roundwood	Signature on knot different to rhose on pile end	B4 comp	
T8	upright	790	250x150	Oak. very slow grown.	halved roundwood	Eroded stake: cf Wedge variant end Godbold and Turner Med Arch 1994.		

T9	stake frag.	230	110	?Blackthorn	roundwood	Not convincingly sharpened.		
T10	upright	1130	100	Oak. 15.			B5 part	very distinct triple fine sig (+ in blade)
T13	trough	590	90x35	Alder/Hazel	tangential split	Root damaged		
T14	trough	870	120x40	Alder. 50. Tree 200mm di?	tangential split	Fragmented		
T15	trough	750	80x40	Alder.	tangential split	Fragmented		
T16	trough	610		Alder	roundwood			
T17	trough	960	160x60	Alder.	tangential split	Some tool facets. Reused?		
T18	trough	820	170x30	Alder.	tangential split	Part mortice. Reused		
T20	trough	680	100x35	Alder	tangential split	Cut and snapped end		
T21	trough	500	95x20	Alder	tangential split	“Notch” at end		
T25		250	50x15		tangential	Possible blade marks in end grain (from splitting?)		
T35		1200	150x80	Alder/Hazel (too degraded otherwise) 50-60.	tangential	2 notches. Very fragmentary	part	

T40	loose in peat context 129	410	40x10	Oak (fast grown)	tangential	1 notch.		
T41	loose					blade marks on chopped ends		

Figure 7: Recorded details of the Watermead timbers

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