



PORLOCK BAY

&

MARSH

*ARCHAEOLOGICAL MONITORING*

*2008 – 2009*

*ANNUAL REPORT*

Prepared for the

EXMOOR NATIONAL PARK AUTHORITY

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*ARCHAEOLOGICAL MONITORING*

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Prepared for

the

**EXMOOR NATIONAL PARK AUTHORITY**

by

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**INTRODUCTION**

This document reports on the annual programme of archaeological and geo-archaeological monitoring in Porlock Bay and Marsh between April 2008 and March 2009. The work is undertaken on behalf of the Exmoor National Park Authority with the kind permissions of the Porlock Manor Estate and the National Trust.

Archaeological monitoring has been ongoing since the breach in the shingle ridge in 1996 but with increased frequency since 1998 following the discovery of the remains of an aurochs skeleton eroding out of the beach sediments (McDonnell 1998; 2002a; 2003; 2004a; 2005a; 2006; 2008; 2009). For a summary of the archaeological and lithostratigraphic work in the area see McDonnell (1995; 2002b; 2005b); Canti *et al* (1996); Jennings *et al* (1998); Straker *et al* (2004).

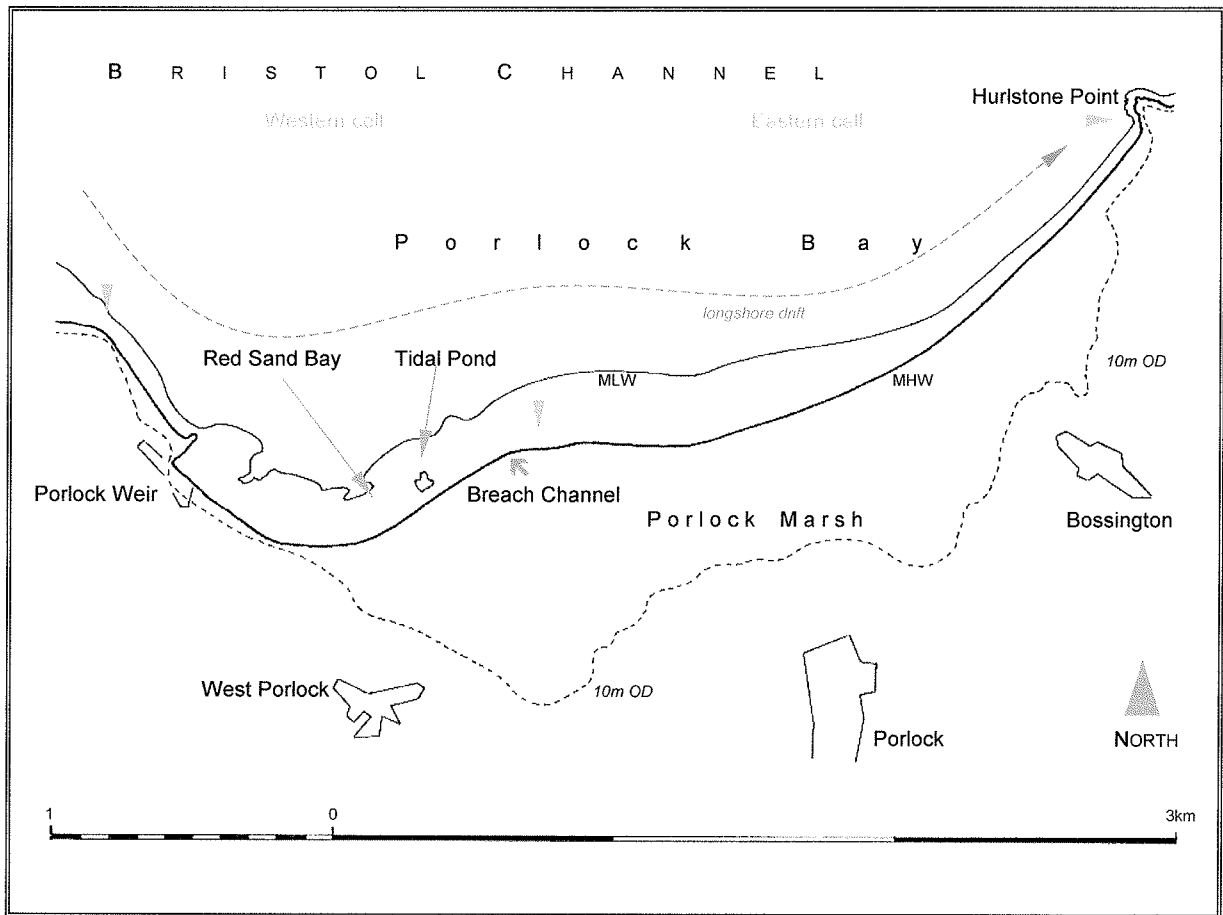


Figure 1. Porlock Bay.

## 2008-2009 SUMMARY REPORT

The exposure of archaeological and geo-archaeological features and structures in Porlock Bay continues to occur on the eastern side of the western cell between the remains of the New Works outlet and the western side of Red Sand Bay (Fig. 1). Records of new archaeological and geo-archaeological are fewer this year and probably reflect the slow down in both the erosion of fine sediments and movement of coarse sediments.

The principal archaeological record this year relates to a 4.75m length of waterlogged wood (**093**) found stranded in Red Sand Bay. Concreted iron was noted in association with large iron ?nails or studs (Figs. 7-11). There are 14 square holes through the wood (c. 15mm x 15mm). Nine of these holes have hand forged iron nails or the remains of nails in them driven from the outer part of the otherwise un-worked split trunk. The function and structural context of this item is uncertain.

The palaeochannels to the SE of the tidal ponds are becoming less distinct with either the fills eroding down to different channel sediments or the colours are simply weathering.

Geomorphological activity in the Bay and on the Marsh during 2008-2009 has for the fourth, consecutive year been characterised by a slow down in changes to the beach profiles and to the exposure of new archaeological features. The deposits of sand continue to encroach on areas not previously seen during the last ten years and are now, more often than not, covering the perched area of palaeochannels to the SE of the Tidal Pond.

The south eastward retreat of the toe of the shingle ridge has slowed. There are both regressive and stable episodes within a more general progression of retreat to the SE. Since February 2007 when the distance to the aurochs site peg was 44.0m it has oscillated between 36.8m and 43.5m. In January 2009 it was 43.5m while in April 1998 it was only 1.50m from the peg.

The shingle continues to move eastwards up the breach channel, where it cuts through the marsh sediments, and across the marsh surface on the edge of the channel. Data collected since January 2007 show it has moved 8.2m in that time.

The Tidal Pond is also still steadily expanding to towards the SE with the site of the aurochs excavation now continually under water in the pond (Fig. 13). This is due to shingle damming the western outfall of the pond and the down cutting of sediments in the area of the aurochs site peg. Measurements of the height of this peg show that the down cutting of the alluvium in this area, between November 2002 and April 2009, was 310mm.

The time spent dealing with the water logged wood (**093**) and preparing that data both as tables and graphics for this report, has reduced the time spent in the field this year. For the same reasons the GPS log, unit record and photographic record tables are omitted from this report this year but are retained as part of the digital archive.

## ARCHAEOLOGICAL MONITORING: APRIL 2008 – MARCH 2009

Note: All tidal data refers to Porlock Bay (PB) unless stated otherwise; time GMT unless stated otherwise:  
BST equals GMT +0100.  
UKHO is the United Kingdom Hydrographic Office.  
POL refers to the Proudman Oceanographic Laboratory data used in local tide tables.

**18 06 08** HW PB 06:02 & 18:21 BST POL Ex note book

### Red Sand Bay

Red Sand Bay continues to be covered with sand obscuring organic deposits **088** and submerged forest remains **087**. Only the peat deposits **094** at the head of the Bay are showing.

### PA peg

The Aurochs site peg lies c.38m from the first scattering of shingle ridge cobbles. The top of the peg stands 350mm above the alluvium.

### Breach channel

There are no significant changes in the breach channel where it cuts through the marsh sediments.

**18 09 08** LW PB 13:46 UKHO vol 14 pp 26 & 27

### Red Sand Bay

A substantial covering of sand across much of the Bay generally c.300mm deep though shallower to seaward. Submerged forest remains completely covered.

### 093 Waterlogged wood with iron work

A length of wood was found stranded in the sands of Red Sand Bay on the shoreward side of the breakwater across the mouth of the Bay, at SS 87146 47824 (Hand held GPS). It was lying at right angles to the tide at



Figure 2: Waterlogged wood **093** as found in Red Sand Bay.

330° 00' (Mag)(Fig. 2). It was c.4.85m long and >200mm wide and completely waterlogged with some bladder wrack attached. Concreted iron was noted being associated with large iron ?nails or studs (Figs. 4, 5 & 6). There are 14 square holes through the wood (c.15mm x 15mm). At this stage the wood looked to be an unworked limb or trunk.

A small trench was dug either side of the item at its centre at which point the log was c.140mm thick (Fig. 3). The underside was possibly flat with other iron work felt by hand. The log was lying on the surface of the alluvium and engulfed by sand (Fig. 2).

The wood was provisionally identified on site as oak by Vanessa Straker (EH). The item was photographed (Figs. 2-6) and left *in situ* being too large to deal with on this occasion.



Figure 3: Excavation to determine depth and context.

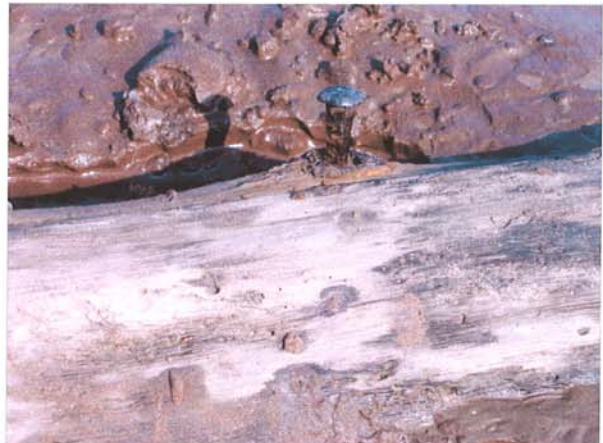


Figure 4: Nail head with limited ferrous concretion.



Figure 5: Nail heads with ferrous concretion.



Figure 6: Nail head with ferrous concretion.

### PA peg

The Aurochs site peg now lies 39m to the first scattering of shingle ridge cobbles and 44m to the start of continuous cobble cover. A best estimate for the toe of the ridge would be 40m.

The top of the peg now stands 350mm above the alluvium and is much decayed on the top with only a small surface left to measure to. This needs replacing soon.

**Palaeochannels**

These features are now very faint and the wind blown organic strand line (061) survives now only intermittently. A thin covering mud does not help on this occasion.

**2004 Excavation peg**

The site datum peg on the marsh surface is now 3.20m from the shingle migrating up the breach channel. It is also now 640mm from the edge of the eroding breach channel.

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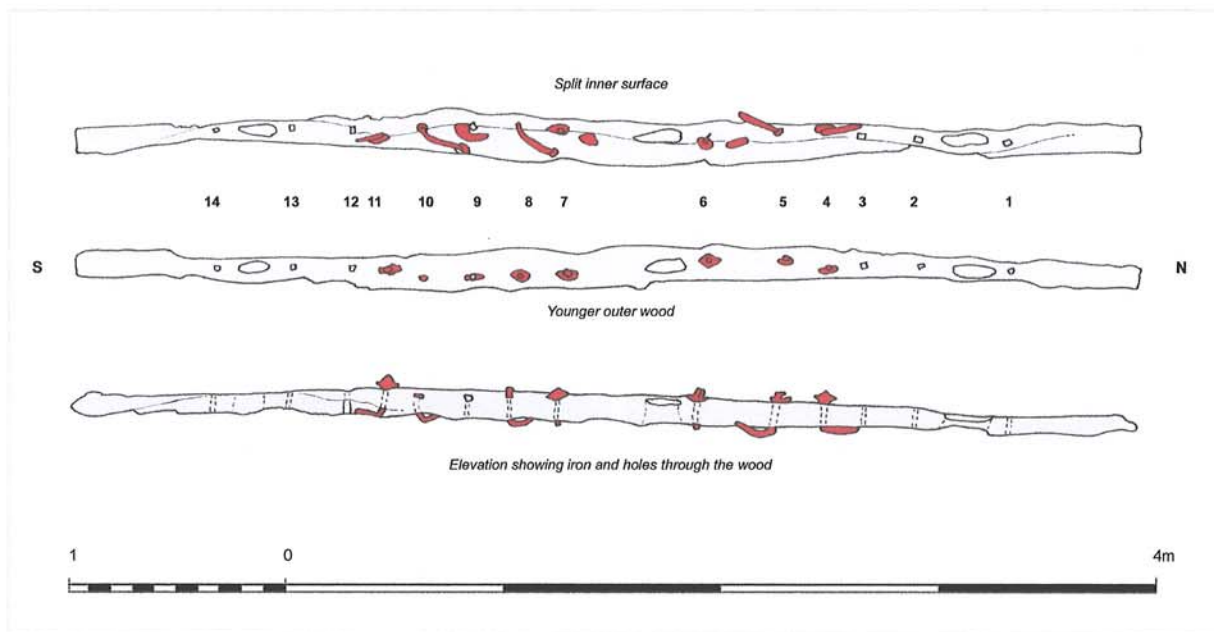
**093 Waterlogged wood with iron work**

Retrieving wood from foreshore with help from Lee Bray and Faye Glover (ENPA). In order to move the wood it had to be sawn, by hand, into three sections. Core of the wood very hard!

17-18; 20-22 10 08	vol 14 pp 28-31
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**093 Waterlogged wood with iron work**

The item was drawn, photographed and described in detail over four days. It was drawn at 1:10 on the upper and lower surfaces and on one side elevation.



**Figure 7:** Plans and elevation of 093. The nail holes and nails are numbered from the northern end as found on the beach and their details summarised in tables I & II.

It comprises an oak trunk 4.75m long, split in half longitudinally, up to 200mm wide in the central section and has c.40 annual growth rings. The three large holes through the item are natural features

and are eroded knot holes. There is an irregular line of fourteen holes through the outer, younger wood to the irregular split surface of the inner tree. The passage of the holes are not parallel to each other but at loose angles from the (?)vertical. The fifteenth hole recorded on the beach is, on closer inspection, a knot hole. Despite the fortuitously spatulate ends the timber is otherwise unworked.

Nine of the smaller holes have hand forged, iron nails or the remains of nails in them driven from the outer part of the trunk. The nails are large and are often accompanied by ferrous concretion which obscures some detail. The longest complete nail is c.365mm long, all are square sectioned and at least three have square heads; other heads are obscured by concretion or missing.

Five nails are clenched of which three are clenched clear of the wood while the other two have their heads standing proud of the outer surface of the trunk. Four nails have either both head and point missing or have indeterminate, rusted ends.

**TABLE I: NAIL DATA**

No.	HOLE			IRON				
	shape	depth	size	nail	clenched	length	nail head	comment
1	rounded		25mm <sup>2</sup>	nail	-	c. 6mm	headless	part nail in hole
2	square	88mm	15mm <sup>2</sup>	-	-	-	-	empty hole
3	sub rounded*	98mm	20mm <sup>2</sup>	-	-	-	-	* hole square shafted in centre of wood
4	-	-	-	nail	y	345mm	fe conc.	nail 16mm x 16mm at distal end and possibly expanded by fe concretion
5	-	-	-	nail	y	345mm	square in fe concretion	head 20mm x20mm standing 28mm proud; shaft c. 8mm x 9mm; clenched 15mm above lower surface though bend suggests may have originally been more
6	-	-	-	nail	-	165mm	headless	broken ends in fe concretion; proximal end 32mm proud of wood; square shafted >8mm x 8mm;
7	-	-	-	nail	-	c. 152mm	headless	broken ends in fe concretion; square shafted
8	-	-	-	nail	y	365mm	?square gone round at 24mm x 20mm	head standing 32mm proud of upper surface; clenched 35mm above lower surface though bend suggests may have been 65mm
9	square	c. 114mm	14mm <sup>2</sup>	-	-	-	-	-
10	-	-	-	nail	y	360mm	square headed 12mm x 12mm in limited fe concretion	head 10mm proud of surface of wood; clenched 60mm above lower surface
11	-	-	-	nail	y	340mm	possibly rounded but hidden within fe concretion	head substantially concreted standing c. 55mm above surface of the wood
12	sub round	48mm	22mm <sup>2</sup>	-	-	-	-	-
13	square	57mm	17mm <sup>2</sup>	-	-	-	-	-
14	rounded	-	-	nail	?	c. 10mm	headless	part nail in central section of hole



**Figure 8:** Square nail hole 13.



**Figure 9:** Iron concretion around nail head 11 with impression of wood grain on underside of corroded head.



Figure 12: New and old PA peg.



Figure 13: Newly installed PA peg in Tidal Pond.

### 2004 Excavation peg

The site datum peg on the marsh surface is now 2.80m from the shingle migrating up the breach channel through the marsh sediments. It is also now 600mm from the edge of the eroding breach channel.

### 094 Peat deposits in Red Sand Bay

There is more, though fragmentary, sections of the high peat currently exposed by the retreating shingle barrier at the head of Red Sand Bay. Sand coverage probably causes fragmentary exposure.



Figure 14: Peat deposits 094.



Figure 12: New and old PA peg.



Figure 13: Newly installed PA peg in Tidal Pond.

### 2004 Excavation peg

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### 094 Peat deposits in Red Sand Bay

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Figure 14: Peat deposits 094.

The GPS readings for this deposit do not plot out coherently and though given here are not included in the table of GPS data.

- A SS 87267 47780 E end.
- B SS 87245 47749 Disappears under sand.
- C SS 87211 47738 Start of fragmentary exposures of peat and submerged forest remains up to the toe of the shingle barrier.
- D SS 87192 47724 Sporadic peat and submerged forest exposed in sand though still extending up to the shingle barrier.
- E SS 87163 47716 W end; no further exposures observed in this direction though sand covered to the E.

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Site meeting with Rob Wilson-North, Lee Bray and Vanessa Straker. First swallows and a seal close to in the Bay.

### **Red Sand Bay**

Red Sand Bay is now in its usual sand covered condition with no significant exposures of peat or submerged forest visible.

### **PA peg**

175mm above surface on the N side with shingle reducing height to <50mm on the S side. At 1341 the tide had still not reached the Tidal Pond.

### **2004 Excavation**

The stump of the medieval stake **PB04.014** (McDonnell 2005) is again visible in the side of the channel having been recently obscured by slumped sediments.

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