MESOLITHIC TO BRONZE-AGE HUMAN ACTIVITY AND IMPACT AT THE WETLAND-DRYLAND EDGE: INVESTIGATIONS AT LLANDEVENNY

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INTRODUCTION

The following short paper details the results of initial fieldwork at Llandevenny, southeast Wales, undertaken as part of the author's postgraduate research in the Archaeology Department, The University of Reading, supervised by Prof. Martin Bell and Dr. Petra Dark. The research is concerned with understanding the ways in which human communities were utilising the wetland and associated dryland environments of the Severn Estuary from the Mesolithic to the Bronze Age. The focus, in particular, is on the pollen, macrofossil, micro-charcoal and artefactual evidence for human activity and impact (eg fire events, clearances, agricultural activity) in close proximity to the wetland-dryland edge, and from selected intertidal sites. Prior to current research, Barland's Farm, Vurlong Reen (Walker *et al* 1998) and Caldicot (Nayling and Caseldine 1997) represented the only palaeoenvironmental studies undertaken along the northern margins of the Gwent Levels. Of these sites, only Vurlong Reen and Caldicot produced evidence for human activity. At Vurlong Reen this took the form of pollen evidence for possible clearance activity *c.* 5250-5500 and *c.* 4000 BP (Walker *et al* 1998), whilst at Caldicot, the pollen evidence for clearance on the associated dryland *c.* 4600 and *c.* 4300 BP was augmented by direct archaeological evidence for human activity within the valley floor over the course of the Mesolithic to Bronze Age (Nayling and Caseldine 1997). However, despite such studies, there remains a general paucity of research concerning evidence for human activity and impact from wetland-dryland edge sites in comparison to both palaeoenvironmental and archaeological work undertaken from upland and coastal/intertidal contexts (eg Bell *et al* 2000; Caseldine 1990; Crampton and Webley 1966; Scaife 1994; Smith and Cloutman 1988; Smith and Morgan 1989). In intertidal contexts the associated archaeology is often well exposed and abundant. As a consequence, whilst we may have a reasonable understanding of the pattern of human activity within the former wetland, we have far less understanding of the relationship between these activities and those which occurred on the neighbouring dryland. As such, the present study will be significant, not just in advancing our understanding of the relationships between human activity on the wetlands and associated drylands, but also in providing additional information on potential patterns of human landuse, settlement and mobility within the wider landscape during prehistory.

LLANDEVENNY: SITE SETTING AND CONTEXT

The site of Llandevenny (NGR ST 41258665) lies at the present margins of the Gwent Levels, *c.* 5 km east of Newport (Figure 1, overleaf). The site is 6 km north-east of the excavated Mesolithic site on the former island edge at Goldcliff East (Bell *et al* 2003, this volume) and would, in prehistory, have been one of the nearest areas of dryland to that site. Here the sandstone bedrock (Squirrell and Downing 1969) forms a low promontory *c.* 5-15 m OD, from which a deep sequence of Holocene sediments, chiefly peats, but also estuarine silts and clays, extends across the now embanked former coastal wetlands. Commercial borehole data (Allen 2001) indicate that immediately south of Llandevenny these peats attain a maximum thickness of *c.* 6 m, and as such, represent the thickest peats to be found on the Gwent Levels. Initial fieldwork in March 2002

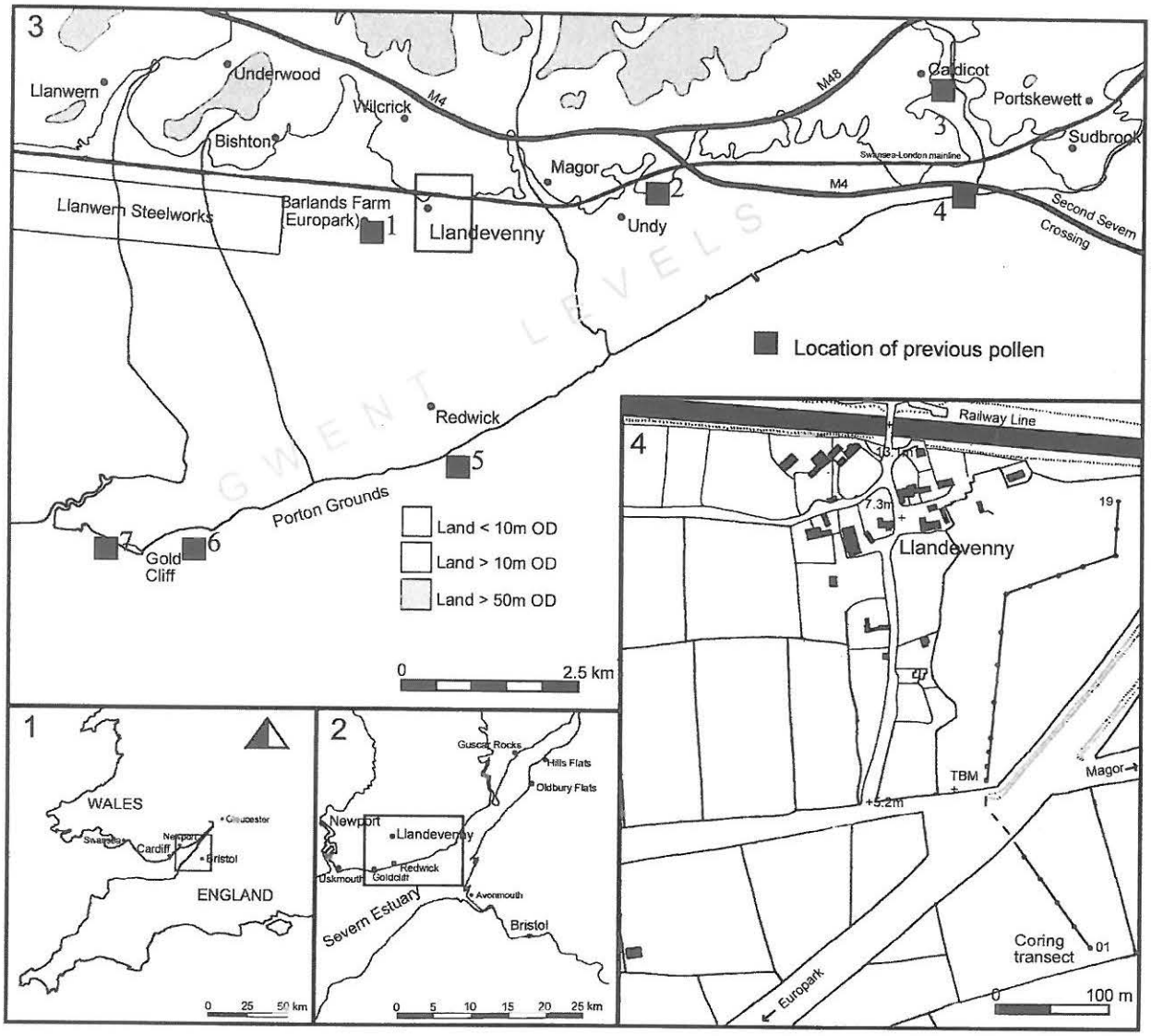

Figure 1: Site setting and context of Llandevenny, southeast Wales. Pollen studies: 1, Barland's Farm (Walker et al *1998). 2, Vurlong Reen (Walker* et al *1998). 3, Caldicot (Nayling and Caseldine 1997). 4, Caldicot Pill (Scaife 1994). 5, Redwick (Bell* et al *2000). 6, Goldcliff East (Smith and Morgan 1989). 7, Goldcliff West (Bell* et al *2000).*

identified the potential for coring over the wetland-dryland transition, and therein, subsequent opportunities to retrieve samples for palaeoenvironmental analysis, and to explore the potential evidence for activity.

CORING

A coring transect of *c.* 500 m length was laid out to the immediate south of Llandevenny across the wetland-dryland transition, in order to determine the nature of the sediments at this locality prior to sampling for palaeoenvironmental analysis (Figures 1 and 2). Coring points were initially established at 30 m intervals (reduced to 10 m in proximity to the dryland), and sunk using a manual gouge auger. Although a large number of commercial boreholes have been sunk in the area surrounding Llandevenny, the sedimentary sequence is only known in outline. What was initially supposed from the commercial data to be a single main peat unit of *c.* 6 m has subsequently turned out in cores 01-05 to be two individual peat layers separated by an intervening estuarine clay,

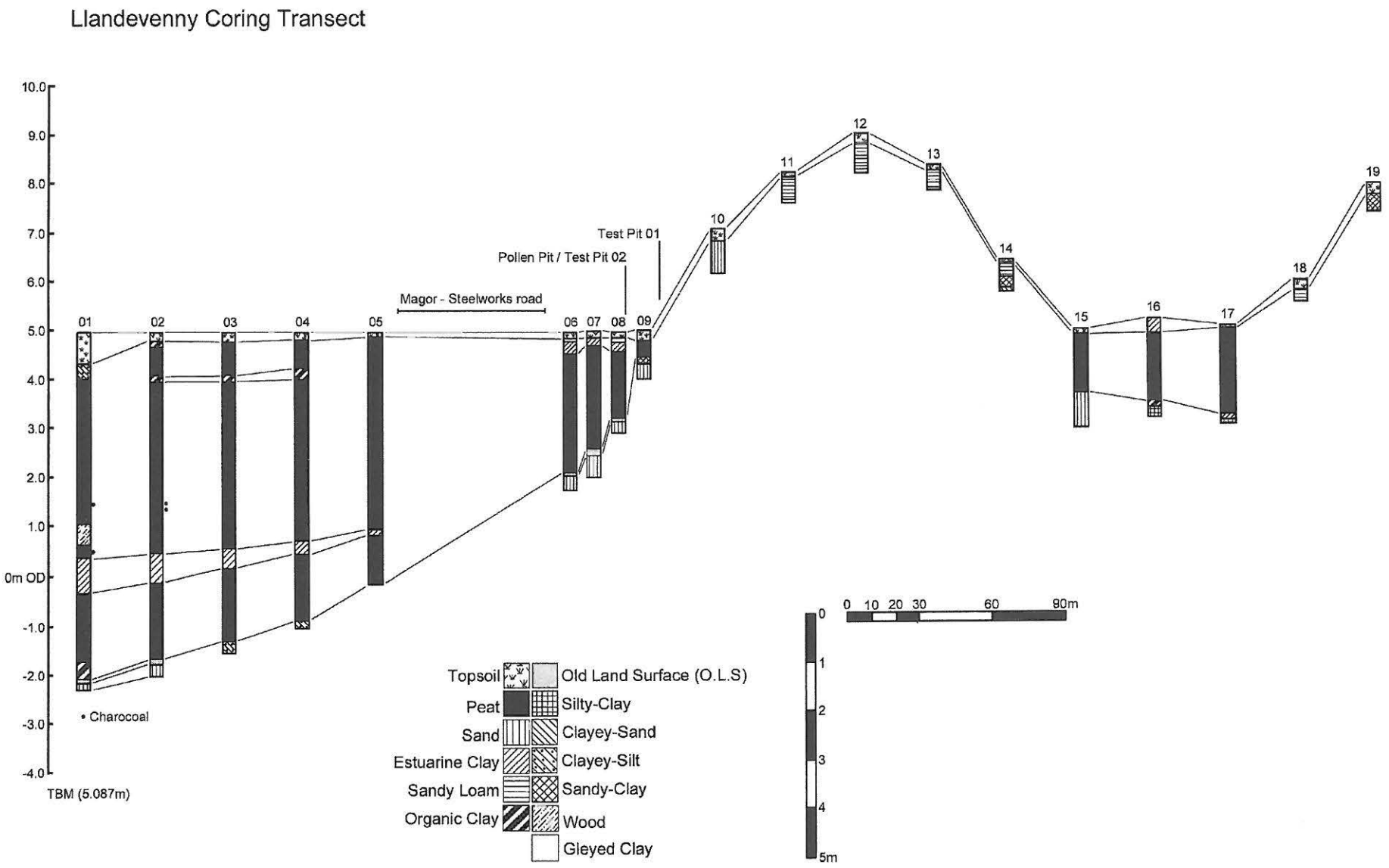

Figure 2: Llandevenny coring transect.

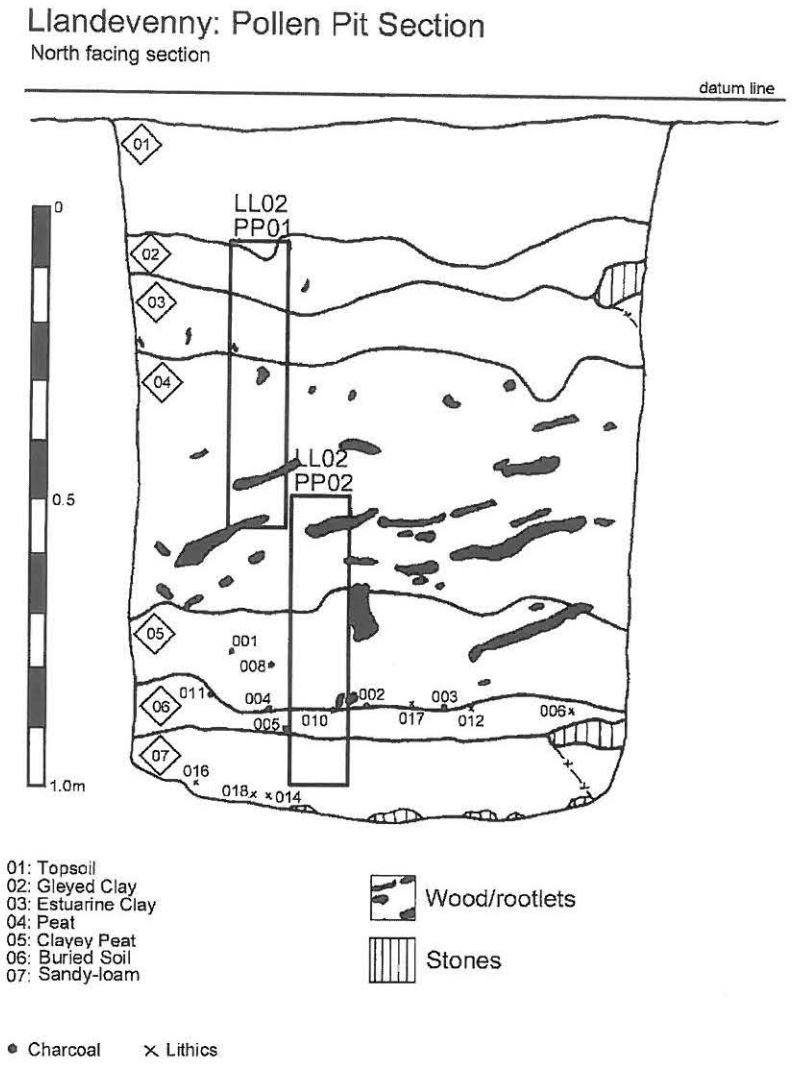

Figure 3: Llandevenny pit section.

representing a period of marine transgression. The intervening estuarine clay unit thins to a few centimetres within core 05, beyond which both basal and upper peat units combine and thin substantially in close proximity to the dryland. A total peat thickness of 2.4 m in core 06 is reduced to just 30 cm within a distance of 30 m in core 09, located only 5 m from the edge of the dryland. In addition, a simple sequence of topsoil overlying peat in cores 01-05 is succeeded within cores 06-08 by a more complex sequence comprising topsoil underlain by a gleyed clay and a moderately organic grey clay overlying peat. The peat itself is non-uniform in nature, containing both woody and reedy plant matter, and varying in levels of humification. Charcoal was observed in both cores 01 and 02 (Figure 2), in both cases focused at the same general depth, and could reflect two fire events. Underlying the lower peat unit in cores 01 and 02 is a grey silty-sand *c.* 8 cm thick, which is considered to represent a buried soil. This in turn is underlain by a dark greyish brown sandy loam, possibly head, or the Ipswichian beach known from the area (Allen 2001). Neither unit is present in cores 03-04, although conceivably the greyish brown silty-clays at the base might represent both buried soil and head smeared within the barrel of the gouge auger. This is considered the most likely scenario, since the buried soil reappears in cores 06-08 and in the pollen pit (Figure 3), located in-between cores 08 and 09 (Figure 1). The sands underlying the buried soil in 06-08 are also considered likely to represent head, or Ipswichian beach, since this unit was also exposed at the base of the pollen sampling pit, but represents a sandy-loam rather than a pure sand. However, one must not discount the possibility that some of the basal sediments

Deposit	Peat	Clayey-Peat	Buried Soil	Sandy-loam	Buried Soil/ Sandy loam	Context Unsure	Total
Context	(4)	(5)	(6)	(7)	(6/7)	-	
Cores	-	-	1	-	-	-	1
Flakes	1	-	4	4	6	2	17
Blades	-	-	-	-	-	-	-
Chips/Shatter	2	2	14	34	25	-	77
Microlith	-	-	-	1	-	-	1
Total	3	2	19	39	31	2	96

Table 1: Preliminary composition of Llandevenny lithic assemblage.

may represent colluvial deposits derived through slopewash from the dryland. Cores 10-14 were exclusively on the dryland, comprising a simple sequence of topsoil overlying sands and sandy loams. The former wetland outcrops along the eastern flank of the dryland, represented in cores 15-17 by a sequence of peats *c.* 1.5 to 2 m depth. Cores 18 and 19 exhibit a shallower, yet equivalent dryland sequence of topsoil overlying brown sandy loam deposits.

SAMPLING

A single 1 m sq. pit was sunk for palaeoenvironmental sampling. The sequence (Figure 3) conforms to that established through coring, most importantly including a buried soil overlying head, and sealed by *c.* 1 m peat. During excavation worked lithic artifacts were retrieved from the buried soil and underlying head, while charcoal was observed in section from both the basal sediment (07), buried soil and up into the base of the peat. The presence of charcoal and lithics suggests that the basal deposit is not head, but could represent either a pedogencially altered head or colluvial deposit at the edge of the dryland. Two 50 cm monolith tins taken from the north facing section are currently the subject of pollen, plant macrofossil and micro-charcoal analysis. Bulk samples were taken from the south facing section for bulk sieving in the laboratory. This produced an additional 87 worked lithics (Table 1), including a microlith identified as an obliquely blunted point of probable late Mesolithic date (R. Bradley pers comm). Numerous fragments of charcoal were retrieved from all sampled contexts. Charcoal was particularly abundant within the buried soil, including fragments *c.* 1 cm^3. Such large fragments strongly indicate localised burning activity. The composition of the lithic assemblage, in particular the presence of chips/ shatter within the buried soil, strongly suggests that humans were knapping *in-situ*. Of particular interest are three lithics from the buried soil/head, most probably derived from a dense black tuff (J. R.L. Allen pers comm) identical to material being worked at Goldcliff in the Mesolithic (Bell *et al* 2000). This suggests the possibility of chronological or actual links between the two sites.

CONCLUSIONS

Fieldwork at Llandevenny has produced a detailed picture of the sedimentary sequence across the wetland-dryland transition, including a potentially important archaeological site. The incidence of many *in situ* stratified lithics and charcoal in direct association with an environmental sequence offers the possibility to assess the potential evidence for human activity and impact from an integrated archaeological and palaeoenvironmental perspective. However, given the difference in OD heights between cores 01-09, the peats in the deepest cores may conceivably have begun forming well before those within the pollen pit. As a consequence, the buried soil itself may have remained exposed for a far longer period of time before eventually being sealed by peat, and as

such, contain a more complex history of use. This situation is further complicated by the presence of lithics and charcoal within the basal sedimentary unit.

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