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RECONSTRUCTING PAST WETLAND LANDSCAPES – TWO CASE STUDIES FROM THE HUMBER WETLANDS

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This paper considers the process of producing reconstruction drawings of two past wetland landscapes: the Ancholme valley at Brigg around 1000 cal BC and the Humber foreshore at Melton at c. *1400 cal BC. Despite the problems of integrating different strands of evidence and information, and especially in determining the contemporaneity of environmental and archaeological evidence, this paper argues that reconstruction drawings remain an attractive medium with which to convey the results of interdisciplinary research to a larger public.*

Introduction

Reconstructing past landscapes and sites on paper, through the artistic interpretation of the archaeological record, forms an important part of the archaeological research method. In Britain, its first use in a wetland context probably dates to 1910, when Forestier reconstructed scenes from the late Iron Age Glastonbury lake settlement in the *Illustrated London News*. Reconstructions are now regarded by many archaeologists as something of a necessary evil. On the one hand they are seen as unscientific and subjective but on the other as a very convenient tool that allows a larger public to appreciate many more aspects of past life than would be possible through the written or spoken word alone. Their popularity is undoubted (Davison 1997).

The interactive process between archaeologist and illustrator, or increasingly the computer operator, performs three important purposes in the archaeological research method.

The first is that to create a landscape, site or scene a large number of issues may be resolved, ranging from climate, the vegetation and fauna surrounding the archaeological site, to details of clothing, hair and body adornment of the people shown in the reconstruction. Especially where whole landscapes are reconstructed, for example in the form of a bird's eye view, the need for close integration of site and environment and appreciation for contemporaneity, results in a range of queries from the illustrator. These questions will rapidly reveal any gaps in the knowledge and understanding of the scene to be reconstructed, and will assist in the formulation of new research questions (and see Brunning this volume).

Secondly, paper-based reconstructions operate as experimental archaeology by proxy. Although not constituting the actual testing of archaeological hypotheses, buildings or scenes based on the archaeological record that are expressed in words can, up to a point, be validated or invalidated through reconstructions, in particular where architectural information is provided (cf. Reynolds 2000). More idiosyncratic scenes from the past, such as interpretations surrounding the large ritual monuments of the Neolithic, may also gain credibility or otherwise from reconstructions (e.g. Parker Pearson 1993).

The third way in which reconstructions form part of the archaeological research method is the (re)introduction of people into the past. This 'bringing back to life' of the past reminds the professionals that archaeology is about studying past people within their environment. Past people may not always have followed modern concepts of rationality and common sense, and our modern biases can be exposed through reconstructions. In preparation of this paper, I found my own bias embarrassingly exposed: in five reconstructions produced for the monographs in the Humber Wetlands Project, not a single women is to be seen!

The reconstructing of wetland landscapes, as opposed to drylands, offers both advantages and

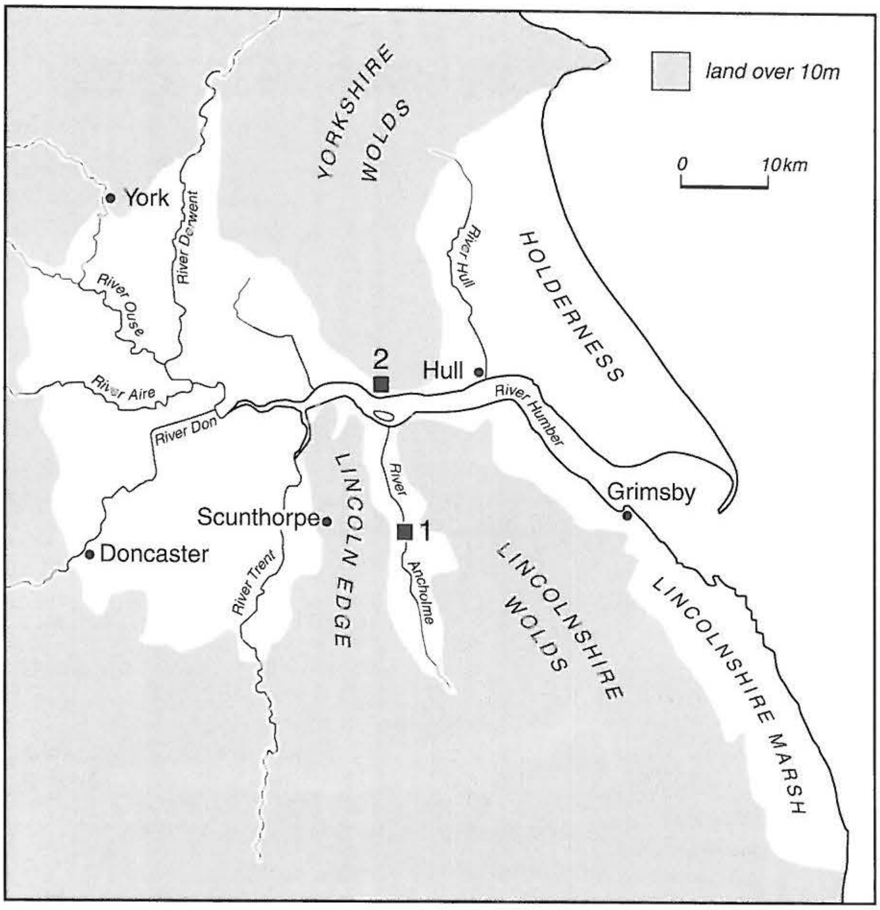

Figure 1: The Humber wetlands, with the location of Brigg in the Ancholme valley (1) and Melton on the Humber foreshore (2) indicated.

disadvantages. Research on wetlands produces a broad range of information on organic archaeological remains, including details of the context and environment of archaeological activity. However, wetlands are also naturally transient in character and the coexistence of sites and monuments can be more problematic than on the drylands, where the presence and importance of the accumulation of monuments over time is increasingly invoked as explaining past behaviour (e.g. Tilly 1994, Barrett 1994, Edmonds 1999).

In this paper, the reconstruction of two wetland landscapes is discussed. The work was undertaken in two areas researched by the Humber Wetlands Project in the 1990s. Both areas were found to exhibit a particularly high density of archaeological sites dating to the Bronze Age: the landscape around Brigg in the Ancholme valley (Chapman *et al.* 1998) and the Humber foreshore at Melton in the Vale of York (Fletcher *et al.* 1999) (Figure 1). Below, the Humber wetlands will be introduced, including a summary discussion of the research methodology. This is followed by a presentation of the archaeological and palaeoenvironmental records of the two landscapes and a discussion of the process that resulted in the reconstructions.

The Humber wetlands

The Humber Wetlands Project was one of four large-scale wetland surveys funded by English Heritage, or its predecessor within the Department of the Environment, since 1973. The basis for this programme of wetland surveys was the often extraordinary preservation of organic archaeological and palaeoenvironmental remains within the anoxic waterlogged ground, and the extensive threats to this resource in the form of drainage, land-reclamation, peat wastage and extraction, erosion and industrial and urban development (Coles 1984, Coles 1995, Coles and Coles 1996)

The Humber wetlands comprise a range of different wetland landscapes within the lowlands of the Humber basin and embrace some 330,000 ha of land in Yorkshire, Lincolnshire and Nottinghamshire. The Humber Wetlands Project started in 1992 with the production of a desk-based assessment of the area (Van de Noort and Davies 1993) and was followed by a series of annual programmes of field survey. Each programme was directed towards one or two of the physiographical regions of the Humber wetlands, and included the fieldwork, analysis of data, and production of reports (Van de Noort and Etté 1995).

The research in the Humber wetlands involved an integrated team of archaeologists and palaeo-environmentalists based at the University of Hull, supported by specialist staff from English Heritage's Ancient Monuments Laboratory for dating, geo-physical survey and palynology. The research was systematic but selective, meaning that within each physiographic region a number of areas measuring 4 x 5 km were selected for detailed analysis. This research included field walking, transect coring of wetlands, litho-, bio- and chronostratigraphic analysis of selected sediments, geophyiscal survey and excavation of selected archaeological sites, aerial photographic analysis and reassessment of previous research and archaeological finds (e.g. Dinnin 1997, Van de Noort and Fenwick 1997). The monograph series presenting the results of the survey is now complete (Van de Noort and Ellis 1995; 1997; 1998; 1999; 2000a; Ellis *et al.* 2001).

For the cover of each monograph, a reconstruction was commissioned from Les Turner, a painter and illustrator with extensive archaeological experience. The criteria for each of the scenes included the integration of archaeological sites within the wider environment, the presence of 'typical' wetland remains such as trackways, the opportunity it provided to depict past people and the importance of the 'story' told within the regional work. After 'close up' studies of the late Neolithic trackway at West Furze in Holderness (Van de Noort 1995) and the building of the Roman road at Scaftworth in the Humberhead Levels (Van de Noort *et al.* 1997), two bird's eye views were com-missioned in the subsequent studies of the Ancholme valley (Van de Noort and Ellis 1998) and the Vale of York (Van de Noort and Ellis 1999).

Archaeological background and research

The Ancholme valley

The River Ancholme in northern Lincolnshire has its source near West Frisby in the low hills between the Jurassic Lincoln Edge to the west and the Cretaceous Lincolnshire Wolds to the east. At Bishopbridge, it meets the River Rase and along the *c.* 40 km before it drains into the Humber, the River Ancholme drops only 4 m. During the Holocene, the river initially incised into drift geology, but from *c.* 6500 cal BC, a wide floodplain was created as a direct result of impeded run-off of freshwater and marine transgression, forming the Ancholme Levels. Alluvial sediments vary in depth, with up to 9 m of sands, silts, clay and peat accumulated in the palaeochannel of the Ancholme (Neumann 1998).

Drainage works in the Ancholme valley are documented by the later 13th century, but the cutting of the New Ancholme and the construction of the first tidal sluice at South Ferriby on the Humber estuary date to 17th century (Straw 1955). However, it was not until the introduction of pumps that could overcome the limitations of gravity drainage that the Ancholme Levels were effectively drained. In the 20th century, the Ancholme Levels have been transformed into an arable-dominated landscape, with under-field drains omnipresent (Van de Noort and Ellis 1998). The Ancholme Levels are up to 8 km wide but at Brigg (Danish for 'bridge'), halfway down the valley, there is a natural constriction of the floodplain to just *c.* 500 m wide. Research and discoveries preceding the Humber Wetlands Project in and around Brigg had produced three important archaeological discoveries: the Brigg 'raft', the Brigg logboat, and a substantial trackway.

The Brigg 'raft' was found during digging for clay for use in the Brigg Brickyard (Figure 2). After its original exposure (Thropp 1887), the craft was excavated in 1907/8 by the Rev. Alfred Hunt, who argued that the structure was a Viking raft or pontoon bridge. The structure was re-examined by McGrail (1981), who found that it comprises five oak planks sewn together and embracing the system of cleats with transverse timbers that provides strength and stiffness to the hull, also known from the sewn-plank boats from North Ferriby and Kilnsea in the Humber wetlands, and from Goldcliff and Caldicot on the Severn Estuary Levels (Wright 1990, Van de Noort *et al.* 1999, McGrail 1981, 1990, Bell 1993). The craft has been radiocarbon dated to 820-790 cal BC, and it is thought to have been a flat-bottomed boat only capable of ferrying the River Ancholme (McGrail 1981). Palaeoenvironmental research including palynology, plant macrofossil, diatom and insect analysis forming part of the Brigg excavation, determined that at Brigg, alder was the dominant tree on the higher grounds within the valley at the time of the use of the Brigg 'raft', and that the period just before *c.* 1000 cal BC, marine transgression created a wetter environment, with reedswamps replacing the alder carrs that had dominated the floodplain (see the specialist contributions by A.G. Smith, E.A.Brown, C.A.Green, G.C. Hillman, R. Ross and P.C. Buckland in McGrail 1981).

The Brigg logboat was also discovered during clay digging and excavated in 1886. It did not survive the 1943 bombardment of Hull, where it had been

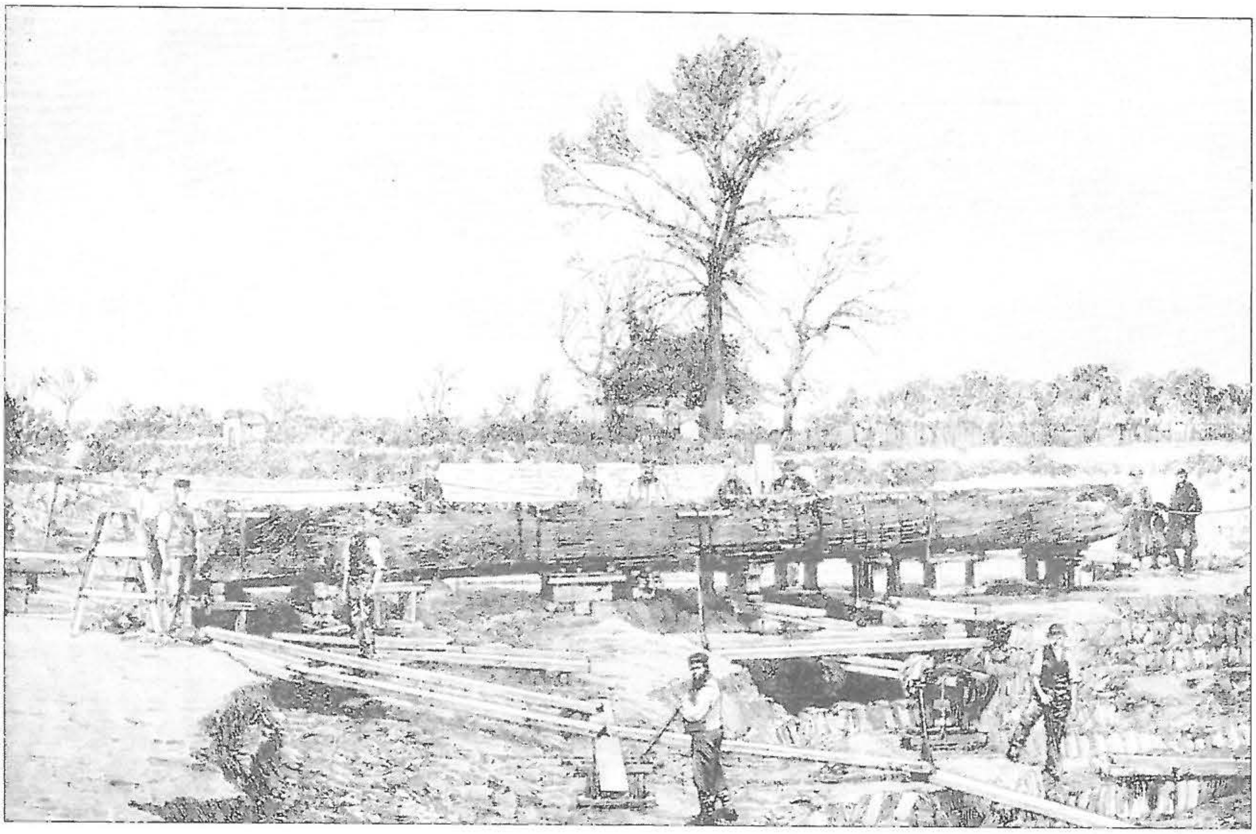

Figure 2: The Brigg logboat, as depicted in 1888.

displayed, but it has been described as a 14.8 m long and 1.5 m wide single log of oak (Atkinson 1887). An early radiocarbon date from a surviving fragment of the boat dates the craft to the Bronze Age (1260-800 cal BC, 2784±100 BP, Q-78), but as the sample location is not known, this date may be too old (McGrail 1981). The nearby trackway was first exposed in 1884, and consists of oak planks laid side by side transversely across the trackway (Wylie 1884, Atkinson 1887), and photographs taken from the exposure of parts of this corduroy road in the 1940s show that stakes through mortised holes held the planks in place. This very substantial structure has been dated to the later Bronze Age or Iron Age, again by a single and early radiocarbon determination (950-350 cal BC, 2552 ±120 BP, Q-77; McGrail 1981).

Additional archaeological finds from the region that predate the recent survey include an extensive collection of material ranging in date from the Mesolithic to the post-medieval period (summarised in Chapman *et al.* 1998). Evidently, the constriction at Brigg had been the focus of much activity throughout the past. The majority of finds were discovered during 'intrusive' activities, including the digging of clay for the local brickworks, digging and cleaning of ditches and the construction of buildings. Without these activities, few if any of the wetland finds would have been discovered.

The survey of the Humber Wetlands Project provided a context for these early discoveries. The Ancholme Levels are accessible to field walking, with *c.* 75% of the land under arable (Middleton 1998). The alluvial sediments mask large extents of the prehistoric landscape and without an extensive coring programme, it would have been impossible to gain an understanding of the extent and nature of this buried landscape. Fieldwalking, analysis of aerial photographs and the occasional geophysical survey were most successful on the wetland margins and the areas surrounding the wetlands. Here, ploughing had brought archaeological material to the surface, or crop marks were identifiable. In all, twelve sites or extensive find scatters were found, including eight containing material dated to the Bronze Age (also described in Chapman *et al.* 1998). On the west bank of the Ancholme valley, seven locations for Bronze Age activity were identified, and on the east bank, a small barrow cemetery was transcribed from aerial photograph collections (Chapman 1998). Only one flint scatter including Bronze Age material was found from alluvial sediments, presumably from a former island on the Ancholme Levels that is now partly being ploughed up.

The coring survey involved a total of 25 cores in two transects across the Ancholme valley. Pollen, diatom and radiocarbon analyses were undertaken on selected samples, providing an understanding of the time-transgressive nature of wetland development at Brigg. Detailed analysis was published by Heike Neumann (1998), and is summarised below. Wetland development outside the confines of the river channel was instigated by sea-level rise and marine transgression into the Ancholme valley. Overlying the marine sands is a peat, dated to 3990-3630 cal BC (4990±75 BP, OxA-7137), signaling an onset of wetland development in the floodplain. This eutrophic wetland was, as palynology indicates, dominated by a alder-hazel carr, with reeds fringing the course of the Old Ancholme, and grasses more prevalent towards the higher grounds. Pollen analysis on samples from one of the shallowest cores provided evidence for forest clearance or disturbance, dated to 2580-2330 cal BC (3940±45 BP, OxA-7091), or the early Bronze Age, some 700 years earlier than had been previously determined (Preece and Robinson 1984). Diatom analysis shows that in the middle or later part of the first millennium BC, new marine transgressions overtopped the floodplain vegetation, returning much of the valley to estuarine mudflats, saltmarsh and reedswamp conditions.

In short, around 1000 cal BC, marine transgressions extended the mudflats, saltmarshes and reedswamps on the Ancholme Levels. At Brigg, the macrofossil evidence suggests extensive reedswamps with stands of alder surviving on slightly raised grounds within the Levels. The wetland margins had been largely cleared of woodland, and in view of the absence of any direct evidence for arable landuse, pastoral activity dominated. Further afield, pollen evidence indicates that woodland survived on the higher grounds of the Lincoln Edge and the Lincolnshire Wolds.

The Humber estuary

The River Humber commences at the confluence of the Rivers Ouse and Trent at Trent Falls in the west, and flows into the North Sea between Spurn Point and Donna Hook, to the east. In its current form, the estuary includes about 30,000 ha of water, sandbanks, mudflats, some islands and an ever decreasing amount of saltmarsh, and so resembles the Severn estuary in its appearance and dynamics, if not in size. Through its many tributaries, including the Rivers Ancholme and Hull, about 20% of the landmass of England is drained through the Humber.

Before *c.* AD 1100, the Humber estuary was largely unconfined and the rivers, mires and the estuary formed a series of endless wetlands. From the early 12th century onwards, however, the Humber and its tributaries were increasingly embanked, and the reclaimed land used for agriculture (Sheppard 1966). Locally, for example in the Swinefleet and Whitgift area, parts of the old banks survive, with the strip fields dating back to the 14th century, as shown on the Inclesmoor map (Beresford 1986). The confinement of the estuary and the increased run-off of rainfall from the catchment through extensive systems of under-field drainage, drains and canals has resulted in an increased tidal range, now estimated at 7.2 m at Hull. This is responsible for increased and accelerating erosion (Van de Noort and Ellis 2000b), and whilst this provides on good days excellent opportunities for identifying archaeological remains, it also causes considerable damage to the abundant archaeological sites on the foreshore. This threat is nowhere more evident than at Melton, on the north bank of the Humber to the west of the Yorkshire Wolds.

Previous research in the Humber estuary includes the discovery of the Ferriby boats, from the foreshore at North Ferriby *c.* 2 km east of the Melton foreshore. These Bronze Age craft were sewn-plank boats, similar to the Brigg 'raft'. The Ferriby boats, however, are considerably earlier, dating to the early second Millennium BC (Wright *et al.* forthcoming). The site itself is considered to be a boat yard; the remains of Ferriby 3 were found dismantled on top of a series of alder roundwood poles, as if these were to be assembled or used in a repair (Wright 1990).

From the Melton foreshore itself, the presence of archaeological wood had been established before, although no excavations of any structures had taken place (Crowther 1987). The area is inhospitable, at the end of an industrial estate and the runway of British Aerospace at Brough, and with a near-permanent area of 'slop' making access to the prehistoric landscape unappealing. Approaching this landscape from the water is considerably easier, and in a few days surveying the foreshore, 32 sites were recorded, nearly all of wood and mostly of prehistoric date (Fletcher *et al.* 1999). The sites included stake alignments, several trackways, platforms, isolated stakes and a possible fishtrap.

Two hurdle trackways were partly excavated (Figure 3). Both trackways were found in saltmarsh sediments and were relatively short, one measuring *c.* 12 m, whilst the other is believed to be less than 10 m in length. The way that the trackways dipped,

Figure 3: The plan of one of the hurdle tracks at Melton, dated to c. 1400 cal BC. Illustration by William Fletcher (after Fletcher et al. *1999).*

and were held in place by long stakes (Fletcher *et al.* 1999), indicate that they crossed tidal creeks rather than the flat saltmarshes. Palaeoenvironmental research on the Melton foreshore was limited, but showed a deep minerogenic sediment indicative of saltmarsh environment overlying a thin basal peat, with further thin bands of peat similar to those recorded on the North Ferriby foreshore indicating the presence of palaeo-creeks (Buckland *et al.* 1990). The fact that the trackways run parallel with the estuary, rather than linking the dryland with the waterfront, indicates that these were constructed to enable access to areas of saltmarsh across the tidal creeks, in this case the predecessor of West Clough, a tidal creek recorded on 19th century maps. The recent find of cattle bones in similar deposits on the foreshore, offers tentative evidence that the saltmarsh was used as pasture. Within the lifetime of the farmer, Mr. Holtby of North Ferriby, saltmarshes in the Humber estuary were frequently used as feeding grounds for cattle (Van de Noort and Fletcher 2000). The excavated trackways were dated to the Middle Bronze Age 1530-1310 cal BC (3150±50 BP, GU-5765 and 5768) and to the middle or later Bronze Age (two dates that are statistically different: 1420-1120 cal BC; 3030±50 BP, GU-5710 and 1100-840 cal BC; 2810±50 BP, GU-5711).

The wider environmental context of the trackways at Melton can be ascertained from recent research by the Land Ocean Interaction Study (LOIS) project into the environmental history of the Humber estuary. The published palaeogeographical 'time-slices' of the Humber estuary in the Holocene, shows the development of 'eutrophic' wetlands alongside the Humber and its tributaries from *c.* 8000 cal BC, and the earliest estuarine activity in the region of Melton is dated to *c.* 5000 cal BC (Metcalfe *et al.* 2000). That study's concern for the consistency of the samples used for reconstructing the relative sea-level curve, that is using base of basal peat samples, has resulted in a reconstruction of the Humber wetlands that involved predominantly relative sea-level rise and marine transgressions (Shennan and Andrews 2000). Consequently, the palaeogeographical maps show a continued extension of the intertidal mudflats and saltmarshes at the expense of the eutrophic wetlands from 5000 to 1000 cal BC (Metcalfe *et al.* 2000). Previous studies, however, have suggested a more dynamic reconstructed curve of regional sea-level change, which includes significant periods of marine transgression and regression during the middle and later parts of the

Bronze Age (e.g. Gaunt and Tooley 1974, Dinnin and Lillie 1995). Work on the date and height of the peat exposures in the Humber estuary shows that the sediment sequence varies considerably from place to place (cf. Long *et al.* 1998, Lillie and Gearey 1999). This could be explained either in terms of a horizontal accumulation of sediments reflecting consecutive phases of marine trangression and regressions, or a mosaic landscape comprising saltmarshes with incising and aggrading tidal creeks and with isolated eutrophic wetland areas above the high-tide levels reflecting the dynamic nature of regional sea-level. Current research on high-resolution modeling of wetland development in the Humber wetlands suggests that the latter is the more likely scenario.

The production of the reconstruction drawings

Both case-studies presented here were undertaken by essentially the same group of people, with a comparable research agenda and remit. Nevertheless, the two reconstruction drawings shown here are the result of two different methods of research, adopted to suit the individual landscapes.

The Ancholme valley

The reconstruction of the Ancholme valley, looking south over the constriction at Brigg (Figure 4), has been set at *c.* 1000 cal BC. The production of this drawing involved the integration of data from various sources, including the antiquarian accounts, the more recent excavations report of the Brigg 'raft', in particular the detailed palaeoenvironmental work associated with the excavation rather than the slightly younger 'raft' itself (McGrail 1990), and the results of our own work (Van de Noort and Ellis 1998). How much of the content of this drawing did we know, and how much was 'artistic license'?

In terms of archaeological remains, the trackway and evidence of at least one logboat have been recorded, albeit their coexistence at around 1000 cal BC cannot be proven. No archaeological evidence exist for the round houses, but the extensive scatters of Bronze Age material found here suggest some sort of settlement. No evidence for field systems dated to the Bronze Age exist in the Humber wetlands, and this negative evidence is used in the drawing. Votive depositions of bronze weapons did take place in the Ancholme valley, both at Brigg and elsewhere (Davey 1973), but this occasional and exceptional activity has not been incorporated in the reconstruction drawing.

In terms of the natural landscape, we know from transect coring that the River Ancholme was a single-channel river. As discussed earlier, pollen analysis has shown that the earliest forest clearance in the Ancholme valley dated to the early Bronze Age and by *c.* 1000 cal BC these clearances were extensive, although higher grounds still maintained extensive woodlands (Preece and Robinson 1984; Neumann 1998). Palynology has also shown that at Brigg, alder was the dominant tree on the higher grounds within the valley (McGrail 1981). Around *c.* 1000 cal BC, marine transgression created a wetter environment, with reedswamps replacing the alder carrs (McGrail 1981).

Several questions were impossible to answer. For example, bone survival in these wetland conditions is poor, and without a bone assemblage, it remains unclear what animals were kept and hunted. In this case, we assume that the wetlands derived their greatest importance to Bronze Age people as grazing land for sheep, following the recent arguments put forward by Pryor (1996) for the Fengate area in the East Anglian Fens. We also have no evidence for the type of clothing that was worn by people; this matter was avoided by presenting the reconstruction drawing as a 'birds-eye view'.

The production of the reconstruction drawing highlights the main gaps in our knowledge. The most important of these is the matter of coexistence of features, activities and vegetation. None of the dating techniques, including dendrochronology, radio-carbon dating, or dating of objects by 'cultural' association, provides a resolution to inform whether the landscape was, at any given moment around 1000 cal BC, that empty, or indeed that full. The other gap in our knowledge comprises the archaeological remains and the human activity that has not been recorded. This includes remains buried beneath the alluvium and peat, and features that have been destroyed in the past without recording.

Few eutrophic wetlands survive in the Humber lowlands and certain characteristic elements of this type of wetland, for example stands of alder and hazel trees, are completely absent in the modern landscape. In preparation of the production of the reconstruction drawing, photographs from wetlands in Wales and of the Somerset Levels were taken to be used as modern analogies of the Bronze Age landscape in the Ancholme valley.

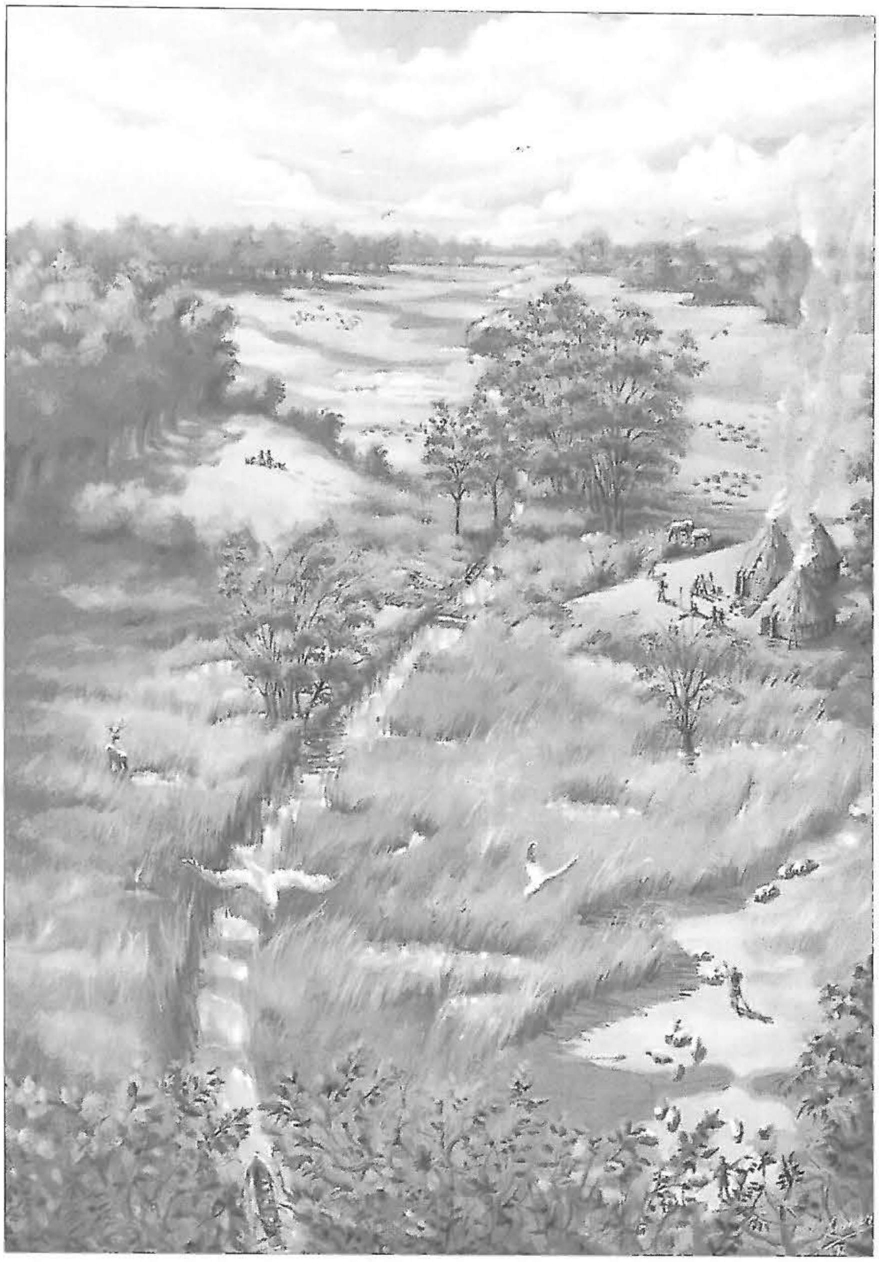

Figure 4: Reconstruction of the Ancholme valley at Brigg around 1000 cal BC. Illustration by Les Turner.

The Humber estuary

The production of the reconstruction drawing of the Humber estuary at Melton, looking southwest towards the Lincoln Edge (Figure 5), has been set at *c.* 1400 cal BC. The production of the reconstruction drawing of the Humber foreshore at Melton involved the integration of data from limited sources, mainly the results of our own work (Van de Noort and Ellis 1999), with the results of the LOIS project providing insight on the palaeoenvironment (Shennan and Andrews 2000). How much of the content of this drawing did we know, and how much was 'artistic license'?

In terms of archaeology, the only feature shown in the drawing is one of the trackways (Fletcher *et al.* 1999). Although the site-density on the Melton foreshore is very high, the 'temporality' or life span of the individual structures is thought to be very limited; the quality of preservation and absence of any damage to the trackways indicates that the hurdles were buried beneath estuarine alluvium soon after they had been placed on the foreshore. The small trackway is shown as enabling access across a tidal creek, reflecting the angle of the surface of the hurdle and the long stakes used to hold it in place. The hurdles were made from coppiced or managed hazel and alder, oak and poplar/willow. They were undoubtedly manufactured on the dryland before the finished products was brought onto the foreshore, and no trees are visible in the reconstruction drawing. The use of the saltmarsh as feeding ground for cattle is based on the find of cattle bones nearby, and recent

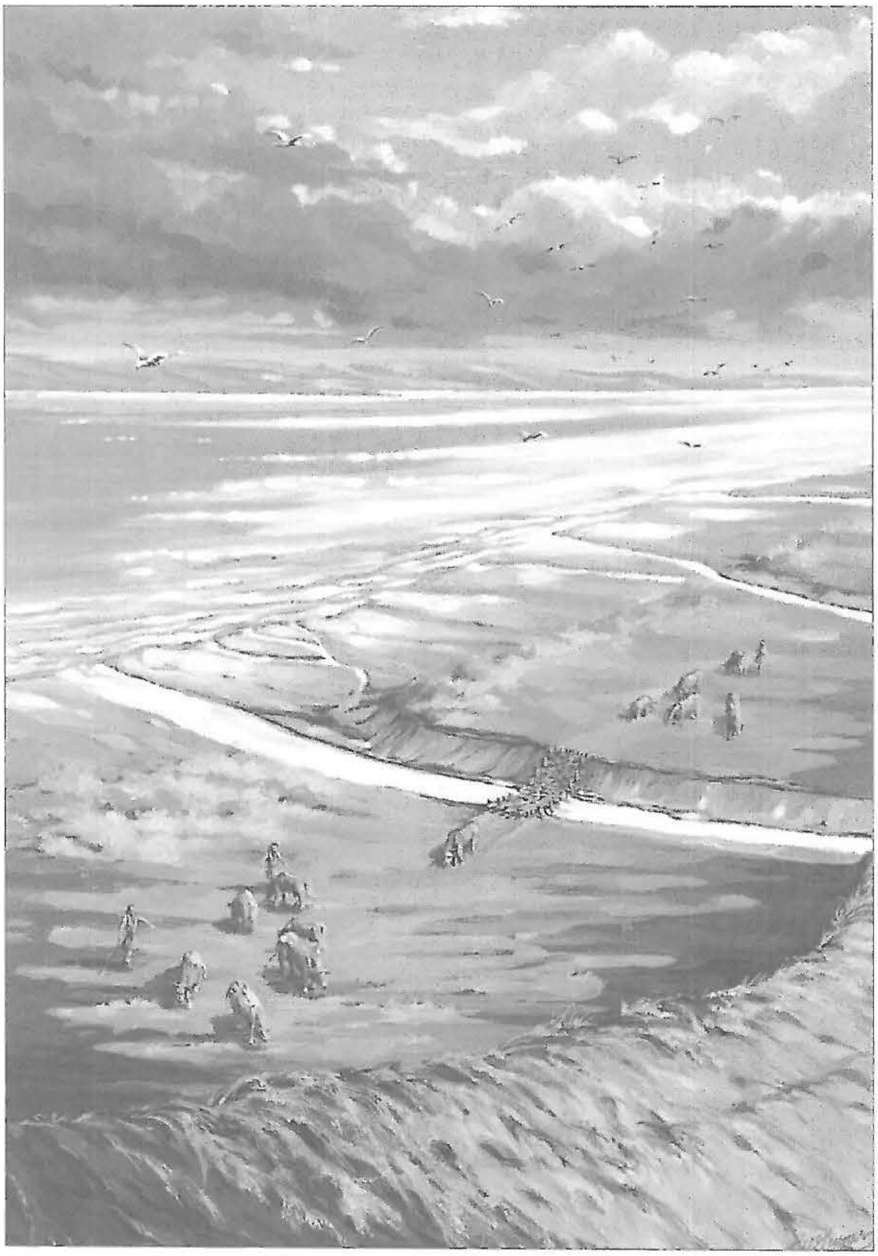

Figure 5: Reconstruction of the Humber foreshore at Melton around 1400 cal BC. Illustration by Les Turner.
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historical analogy (see above). Whether or not cattle actually used the trackway or whether it provided a secure footing for the people handling cattle across the creeks is not known, and therefore not illustrated. It was not determined whether the use of saltmarsh as feeding ground for cattle was seasonal or not.

In terms of the natural environment, the reconstruction drawing shows the Humber as a wide single-channeled estuary, fringed by mudflats and saltmarsh intersected by tidal creeks, as the recent models from the LOIS programme show (Shennan and Andrews 2000). In the foreground is higher ground, dominated by grasses; in contrast to the Severn estuary no evidence for raised mires are recorded for this area (cf. Bell *et al.* 2000).

Several questions were impossible to answer. We do not know for sure whether cattle grazed on the foreshore or not; this remains a hypothesis. If the hypothesis is correct, questions regarding the size of the herd cannot be answered. This is potentially one of the most interesting aspects of the innovative exploitation of foreshores and its impact on the socio-political and economic aspects of society must therefore remain unanswered. As was the case for the Ancholme valley, the temporality, or coexistence of sites, activities and vegetation on the Humber foreshore could not be established.

Possibly the most interesting gap in our knowledge is the actual character of the Humber estuary. It is currently perceived as a 'dynamic environment', where specific areas are eroding rapidly whilst other areas received large amounts of sediments. However, the Humber as a unconfined estuary may have been less erosive than it is today, and past peoples' perception of the estuary may have been very differed from its present one. Research on the Humber estuary has not provided the resolution to address this issue.

Conclusions

The reconstruction of archaeological wetland landscapes forms an important part of the research method in wetland archaeology. Two examples of the production of reconstruction drawings from the Humber wetlands, the diverse eutrophic wetland of the Ancholme valley at Brigg, and the estuarine foreshore of the Humber at Melton, provide an illustration of this.

The production of reconstruction drawings involved a constant dialogue between the illustrator and the members of the archaeological team, and between the archaeologists and palaeoenvironmental specialists. Certain aspects of the information provided in the reconstruction drawing are the result of specific questions asked, for example whether or not cattle will cross creeks using hurdle trackways, or whether sites dated by flint artefacts can be said to be contemporary to radiocarbon dated pollen samples. The dialogue was particularly important for the reconstruction of the natural landscapes. In the Humber wetlands, drainage, farming and development have destroyed virtually all natural wetland landscapes, and only the Humber foreshore provides something of its former glory, albeit constrained by concrete embankments. Photographs of wetlands used for the reconstruction drawing of the Ancholme valley, with examples of alder stands, were taken in the Somerset Levels.

The reconstruction drawings also function as experimental archaeology by proxy. Where this involves constructs, their proposed function can be, to a degree, validated or otherwise. The trackways offer examples of this. The Brigg trackway would have either been a jetty, providing access to the waterfront from where the River Ancholme could be crossed, or would have incorporated a bridge across the sluggish water of the Ancholme. Considering the large size and method of construction, the latter option was chosen as the most likely scenario. In the Humber, however, the refabricated hurdles used to construct the trackways convey the impression of impromptu solutions to land management issues in a dynamic environment.

The importance of reconstructions and reconstruction drawings in disseminating the results of research should not be undervalued. After all, wetland archaeology is rarely visible to the wider public and during excavations of wetland sites the contemporary context no longer survives. It is especially important to convey a message that is the result of extensive multidisciplinary research and to provide the opportunity for putting people back in the wetlands. Reconstructions of the natural environment are also significant. Most people living today in the Humber wetlands will need to visit managed nature reserves, for example Skipwith Common, to view a eutrophic wetland. To archaeologists, the disappearance of the wetlands not only deprives us of an understanding of wetlands as living landscapes but also of the source material, archaeological and palaeoenvironmental, that forms the basis of much of our work.

As most archaeologists, I recognize that the reconstruction drawings have their drawbacks, in that they tend to become used as evidence in their own right, without consideration of evidence or lack thereof in the archaeological record. In discussions with the artist, Les Turner, the idea to 'blur' parts of the painting for which little or no evidence existed was raised. Forestier, in his famous reconstruction drawings of the Glastonbury Lake Village, expressed no such concern and aspects of contemporaneity, activity, clothing, bodily adornments and the length and style of hair are all shown in detail, despite the absence of archaeological evidence. Nevertheless, the ability of 'images of the past' to raise the profile of archaeological research and to disseminate information to the wider public was as important in the 1910s, as it is today.

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