

FLAG FEN

A CONCISE
ARCHÆOGUIDE



TIME TEAM'S
FRANCIS PRYOR

Flag Fen: A Concise Archæoguide

Francis Pryor

Published by Boudicca Books, 2014.

Copyright

Cover photograph reproduced by kind courtesy of Vivacity.

First published in Great Britain by High-Res History in 2012.

This edition published July 2014 at Smashwords by Boudicca Books.

Francis Pryor asserts the moral right to be identified as the author of this work.

Copyright Francis Pryor 2012.

This edition copyright Francis Pryor. 2014

Smashwords Edition, License Notes

This ebook is licensed for your personal enjoyment only. This ebook may not be re-sold or given away to other people. If you would like to share this book with another person, please purchase an additional copy for each recipient. If you're reading this book and did not purchase it, or it was not purchased for your use only, then please return to your favorite ebook retailer and purchase your own copy. Thank you for respecting the hard work of this author.

CONTENTS

- [1. The Fens in a Nutshell](#)
- [2. Background: The Landscape of the Fens](#)
- [3. The Discovery of Flag Fen](#)
- [4. The Post Alignment](#)
- [5. The Platform](#)
- [6. The Finds](#)
- [7. The Religious Ceremonies](#)
- [8. Interpretation: What Does it all Mean?](#)
- [9. Wood, Wheels and Status](#)
- [10. The Sophistication of Ancient Technology](#)
- [11. Flag Fen and the Public](#)
- [12. Flag Fen Threatened](#)
- [13. Flag Fen: The Future](#)

[Notes](#)

1. The Fens in a Nutshell

The Fens are a large area (about a million acres or 405,000 ha) of low-lying land around the Wash. Today they occupy large parts of Lincolnshire and Cambridgeshire, with smaller areas in Norfolk and Suffolk. In the past they were marshy and usually flooded in winter; but the modern landscape is entirely drained. Drainage began in early medieval times, but rapidly gathered pace in the seventeenth and eighteenth centuries. [1] To the east, closer to the Wash (and mostly in southern Lincolnshire) the land that forms the Fens was laid-down by the sea, often in times of storm and flood. Driving across these landscapes today, the soil is pale, hence their name: the Silt Fens. This is some of the finest agricultural land in Britain which now grows huge acreages of flowers and vegetables. By contrast Flag Fen sits at the western edge of the Peat or Black Fens. Here the land has been formed by the growth of freshwater peats, a process that began from about 3000BC, when the rivers that drained into the Fenland basin would flood. [2] Usually this was in winter and spring. Flag Fen was a 'bay' of low-lying, waterlogged land immediately south-east of Peterborough. To the east and west the land gradually rises and becomes flood-free. The dry land to the east of the wet Flag Fen basin is known as Fengate, that to the west as Northey. Fengate lies at the edge of what one might think of as 'mainland' England; Northey is part of a large 'island' in the Fens, which includes the market town of Whittlesey.



2. Background: The Landscape of Flag Fen

The archaeological site known today as Flag Fen was completely unknown before its discovery in November 1982. Before that it had lain concealed beneath almost two metres of peat and river-borne flood clay, known as alluvium, which started to cover it up sometime in the later Iron Age, over 2000 years ago. But the discovery did not happen by chance. Like many archaeological finds, this one can be seen to light as the culmination of many years of patient and painstaking research.

The story began in 1970 when I happened to read in an archaeological magazine that Peterborough New Town was to be extended eastwards to cover the known archaeological site of Fengate. At the time I worked for the Royal Ontario Museum, in Toronto, Canada, and I was in England trying to find a suitable site for a future series of excavations. And Fengate looked very promising indeed. So I returned to Peterborough the following year with a small team of Canadian students and recruited an equal number from various British universities. That first season revealed what we now know to have been one of Britain's earliest Bronze Age field systems and the results were so good that our Canadian sponsors, together with the old Inspectorate of Ancient Monuments at what was to become the Department of the Environment (the forerunner of English Heritage), decided to back us for the next few years. By the end of the project, in 1979 we had revealed a remarkable story.

The first farmers arrived in the area sometime around 4000BC and clearance of trees and woodland from the landscape was well under way by 3000BC. That was when a series of Neolithic shrines and other features, which may have been arranged along an ancient route way were constructed. The finds included a rather tragic grave which held the bodies of a man and a woman and (possibly their two children. The man had been killed by a flint arrowhead which we found lodged between his eighth and ninth ribs. That burial is on display in Peterborough Museum. Some five centuries later, around 2500BC, at the start of the Bronze Age, the earlier farmed landscape was carefully divided-up into one of the first field systems in Britain. The fields were marked-out by ditches, banks and hedges and were laid out at right angles to the developing wetland. They were subdivided into blocks of land that were separated by double-ditched droveways (for livestock), which ran down to the wetland edge. The fields too were intended for the use of animals, mostly cattle and sheep. The farmers themselves lived in small, isolated single farmsteads dispersed through the fields. Much later, excavations in the 1990s and early 2000s revealed that there were closely similar landscapes of ditched fields further along the fen-edge towards the village of Eye and on the other side of the Flag Fen basin, on the edge of Whittlesey 'island', at Northey.

3. The Discovery of Flag Fen

By the start of 1979 our team had finished excavating at Fengate and work on the modern factories that now cover most of Fengate, or the Eastern Industrial Area as it is now known, could begin in earnest. By then I had moved back to England and for two years I immersed myself in the business of writing-up our results, which were published in four reports. [3] We then began a series of excavations in the Welland valley, some ten miles north of Peterborough. Towards the end of those excavations between 1982 and 1986 we began a series of research surveys in which we carefully examined the sides of newly machine-cleaned Fen drainage ditches, or dykes. [4]

Towards the end of the first season of dyke survey we discovered the timbers of an extraordinary Bronze Age site in a drainage dyke in the middle of Flag Fen. We made that discovery early in November and by Christmas we had revealed several hundred timbers which we found concealed within the sides of the dyke for a distance of about 80m. At one point they were overlain by a known Roman Road which was probably built in the mid-first century AD, and is known as the Fen Causeway. This was very useful as it told us that the road was later than the timbers beneath. But we also noticed there was about a metre of peats and alluvium separating the timbers from the road above them. Now we knew that pre-Roman fenland deposits in the area were being laid-down very roughly at the rate of about 1mm per annum, which would suggest that the timbers were approximately a millennium earlier than the Roman road. This was confirmed shortly after Christmas, when The British Museum rushed us through some radiocarbon dates, which confirmed that the timbers dated around 1000BC. [5]

The following summer we carried out an auger survey to determine how far the timbers extended back from the dyke. It was hard work, as in those days machine-powered augers were rare, so David Charles French and myself did the drilling by hand. In the end we proved that timber covered an area of about 150 by 150m arranged in a squashed oval. To our surprise, the dyke had only cut through a small part of the platform. We called it a platform, because no other explanation seemed to make sense. Even today we are far from certain about its original purposes.

The next big event in the discovery of Flag Fen took place in the summer of 1989 when the gas-fired power station, that still dominates the site to the east, was built. As part of their work the contractors funded an excavation which we carried out. Many people, some even in the archaeological world, thought it unnecessary as the construction was to take place some 800m east of the dyke where seven years earlier we had revealed the timbers. But we insisted, and to their great credit (and I wonder whether this would happen today?) the power station builders insisted that our work should go ahead - and they contributed generously towards it, too. It was a very hot, dry summer and hardly the best weather to dig waterlogged timbers, but at the end of it all we had discovered the Fengate landfall of a timber causeway which we could now trace right across Flag Fen from those posts we had found back in '82 on the platform, in the dykeside.



The highest level of timbers to one side of the post alignment

We had been carrying out detailed excavations around the posts in the dykeside because these were

the most threatened by drying-out and in the course of that work we had found a handful of finds: ~~few scrappy pieces of pottery, the odd flint, a bone or two – but that was all.~~ These were sufficient to tell us that the timbers indeed dated to the later Bronze Age – again, that was all. But the power station site changed everything. A detailed metal-detector survey, which was carried out in partnership with the local detectorists' club, revealed just short of 300 metal objects, the vast majority of which were Bronze Age. Almost everything from the Bronze Age metal-worker's repertoire was there: swords, daggers, rapiers, spearheads, brooches, bracelets, pins, axes, chisels, awls. And the date range was quite clear too: roughly 1300 to 900BC, with a few finds dating to the Iron Age and even into Roman times. These dates were subsequently confirmed by tree-ring studies.

So far two major reports have been published. The first gives details of our research following the site's discovery in 1982, up until 1995. [\[6\]](#) The second describes the smaller, mostly university training, excavations carried out between 1995 and 2007. [\[7\]](#)

4. The Post Alignment

We knew from our work in the '70s and '80s that the dry land on either side of the wetter, low-lying parts Flag Fen basin had been settled and farmed from at least 3000BC, when most of the natural tree cover had also been removed. The lowest areas began to flood shortly after that date, as a result of the warmer climate, and rising sea levels, that followed the end of the last ice age, some ten thousand years ago. It seems highly probable that the early Bronze Age inhabitants of the area had already laid out a route across the lowest land (which would probably have represented a flood hazard in times of heavy rainfall) even if the larger Fens had yet to start forming. Rainwater will always pond in flat, low-lying land, especially if the natural drainage is not too good. We found very slight evidence for such a route when we had removed the last of the posts at the power station site, in 1989. It consisted of a shallow ditch that more-or-less followed the line of the later posts.

The big event took place sometime around 1300BC when a double row of posts was set in the ground in a near-straight line running east-west from Fengate to Northey, across the narrowest stretch of wet ground they could find. These early posts were mainly of willow and alder, wet-loving trees that would have been growing locally. We're still not certain of the precise chronology of what happened next, but the first two rows (which we labeled Rows 1 and 3) were then augmented by another three, all of which can be seen in the Preservation Hall, on site. There can be no doubt at all that the posts were used to mark-out and stabilize a causeway over the wetland, because not only have we found dozens of carefully arranged planks, all of which had been pegged into place, but the wooden surface has been liberally dusted with sand and fine gravel, which can clearly be seen alongside the central post Row 3 and between rows 1 and 2. Traces of other paths, all running parallel with the posts, were observed during the excavations. We have analyzed the sand and gravel and can state positively that it was not washed there by water, but had either been spread on the ground, or had got there on people's feet. On the whole we think it was deliberately spread, as it includes some larger pebbles. Wet wood can be very slippery underfoot.



The Preservation Hall

At its Fengate landfall the causeway precisely lines up with a pre-existing ditched droveway. The Fengate Bronze Age landscape was parcelled-up into fields which were separated into individual farms or holding by tracks known in the Fens as droveways. Droveways became even more important in the Middle Ages when they were used to drive or drive large herds of cattle or sheep from remote farms out in the fen, to the main markets, at towns like Boston, March, Wisbech, Holbeach and Spalding. The Fengate droves were smaller in scale – none were longer than a kilometer – but they served much the same purpose: to take livestock safely from A to B, without having them wander onto another person's farm. We didn't find evidence for another droveway at the Northey end of the causeway, which argues that animals as such did not use it. Common sense suggests that cattle would soon damage their feet attempting to cross over on so much loose timber. Even though they are mountain animals, sheep, too, are very wary about walking over unstable surfaces. It would seem, then, that the Flag Fen causeway was used only by people, and that they were probably on foot.

Various Flag Fen publications describe the posts as being part of a 'post alignment' rather than a causeway. The reason for this is that the term causeway conjures up a relatively simple picture in the mind's eye. Modern causeways are fairly basic: they're a means of guiding people across wet or boggy land, sometimes (but not always) dry shod. But there was far more to the Flag Fen causeway than that. For a start it seems to have been built on an unnecessarily lavish scale, with no less than five rows of posts. The posts, too, are very large and many are made from oak, which must always have been a very expensive raw material, as it is by far and away the best (i.e. longest lasting and strongest) building material. We have also found one or two posts that either collapsed or were never used and these suggest that at least a proportion of posts could have been very high – and would have stood 12ft (over 3.5m) above the surrounding Fen. So they would have looked spectacular. There is also a problem with 'Row' 4, whose posts don't form a tight row, so much as a concentrated spread. This row resembles more a military palisade than a line of guiding markers.

The final problem with the simple 'causeway' explanation has been the discovery of hundreds of complete or recently broken objects around or close to the posts. These are not the sort of small, day-to-day objects one might expect to have fallen out of travellers' bags or pockets – the modern equivalents of Coke bottles, crisp packets and hamburger boxes. They are far more up-market and include about a dozen bronze swords and daggers, bronze spearheads, brooches, pins, rings, finished turned shale bracelets and complete pottery vessels. There are other strange finds too, including four almost unused corn grinding stones, or querns, together with a number of dog skulls. These finds strongly suggest that this over-elaborate, and possibly defended 'causeway' also served an important religious or ceremonial role. So we decided to use a new term to describe it: a post alignment.

Study of the growth-pattern of the tree rings of the oaks in the alignment gave us broad dates for the phases of activity, but we encountered problems when it came to the linking of these general episodes of building and rebuilding to the actual timbers themselves. This failure to provide a tightly dated structural sequence reflected the fact that most of the dated timbers were posts that had been driven down from the top. Further problems were caused by the fact that many of the posts had lost their bark and much of their sapwood, which made it impossible to arrive at actual dates, rather than date ranges. Even so, we were able to make a reasonably well-informed guess at the development of the post alignment between 1300 and 900BC. In short, after a slow start the structure grows in complexity and becomes a remarkable robust, corduroy-like, layer of timbers, known as the 'log layer' was laid down to act as a foundation that was not likely to sink. The layers above the 'log layer' were a succession of walkways, mostly on either side of Row 3. As we have seen, the scattering of posts known as Row 4 may actually have formed an irregular wall or palisade of posts. The post alignment reverted to a simple footpath in its latest phase, perhaps around 1000BC. There were also indications for an unexpected partitioning transverse element in at least one place where the post alignment crossed the platform. This may have been a structural necessity, but other explanations (which I will discuss in the next section) are also possible.



Row 3

It was not until we had completed most of the post-excavation analyses, by 1996, that we were able to plot the types of wood used at Flag Fen. The main conclusion was that fenland species, such as alder and willow, occurred most frequently in the earliest phases of the structure. It was not until later that oak began to be used at all frequently. This is not what one would have expected and may reflect the site's growing importance, because oak is a valuable structural timber, which could not have been grown in the wetland itself, and must have been transported to Flag Fen, either from the higher ground in the immediate vicinity, or from further afield. The preponderance of fenland species lower down the sequence doubtless reflects the fact that the alder carr woods around the edges of the Flag Fen basin had to be cleared, before construction of the post alignment and platform could begin.

The last timbers of the post alignment and platform were added shortly after 900BC, in the Late Bronze Age, but the site of the alignment, which would still have been visible during the drier months of the year, continued to be visited, and offerings were made there throughout the Iron Age.



An impression of the post alignment by Rob Fuller

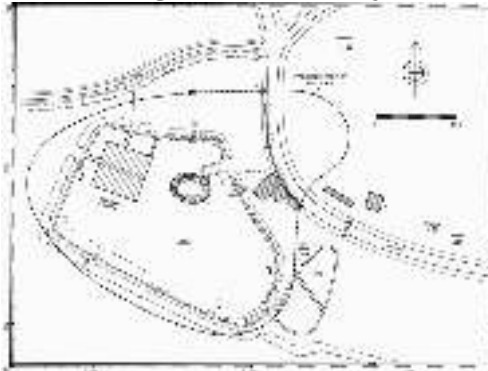
The Bronze Age fields at either end of the post alignment began to be abandoned from about 1400BC, and there was a shift southwards, towards slightly higher ground. At the same time it is now becoming increasingly clear that the wetter parts of the basin were also rapidly growing in importance. Sites around Must Farm, for example, show clear evidence for a growing population and increasing prosperity. But their focus is clearly towards the wetland and the emphasis seems to be more on fishing and wildfowling than on agriculture. By about 700-600BC the process of abandonment was largely complete. The livestock landscape of the Bronze Age was followed, in the Iron Age, by a landscape dominated by mixed farming of both cereals and livestock. By now the emphasis was shifting both towards the drier hinterland, as the presence of a single large farm droveway clearly demonstrates. The settlement pattern altered too: from about 600BC we see the appearance of the first nucleated, village-style settlements that replaced the isolated farmsteads of the Bronze Age.

The transition into Roman times appears to have been smooth and uneventful. Pottery found there shows that the substantial Iron Age farm near the Cat's Water in Fengate continued to be used into the third century AD. Finally, the area has not produced evidence for post-Roman nor Anglo-Saxon settlement, almost certainly because conditions were too wet underfoot. By now, it was an area reserved for seasonal pasture – hence the name Fengate, which means 'road to the fen'.

5. The Platform

Slightly nearer the Northey landfall to the west the posts crossed an artificial island or platform whose timbers we had revealed along the sides of the dyke, back in '82, where they extended for a distance of over 80m. Sadly, we still don't understand why the platform was built. But we do know it was built, because the wood used was felled and included planks and timber – there was very little brushwood or driftwood. Moreover it was fashioned from tens (even hundreds) of thousands of timbers which included areas of vertical posts – maybe the remnants of other causeways. We do know that the edges of the platform were very carefully constructed from logs and planks, so there can be no doubt at all that the platform itself was a built structure. It was also a large one, measuring 175m (N-S) by 155m (E-W), in a sort of squashed oval shape covering 2.71ha (6.69 acres).

The platform was positioned c.200m from the Northey landfall in a very wet and low-lying part of the fen. Just to the north our boreholes revealed part of a large lake with expanses of open water and areas of white and of yellow water lilies. With alder trees lining the edges of the lake it must have been a very beautiful place – rather like the large mere nearby in the Holme Fen Nature Reserve.



The known extent of the platform

So what was its purpose? Originally we believed it was a Fenland equivalent of a Swiss Lake Village, or of the famous marsh settlements at Glastonbury and Meare in Somerset. But we could find no evidence at all for houses or for habitation, and besides, the platform would have been far too wet. So that idea was rejected. I shall have a bit more to say about the platform later, but for now let's just conclude that it's still a mystery. However, I'm certain it's one that we can crack – and there's a positive side to this, too. So let's not forget: it will give future generations of archaeologists something really worthwhile and exciting to investigate. I wish them luck!

6. The Finds

Flag Fen has produced a remarkably diverse collection of finds which range from ordinary domestic pottery, to four complete and largely unused corn-grinding stones (known as querns) and over 300 examples of Bronze and Iron Age metalwork. In addition the excavations also revealed turned shale bracelets and a surprisingly large collection of animal bones, mostly from joints of meat but also from several Collie-sized dogs.

The largest number of finds came from excavations in 1989, ahead of the modern power station, on the Fengate (or eastern) landfall of the post alignment. Most of the metalwork from the power station was found using detectors, a technique which is largely unbiased. The distribution of metalwork revealed by the detectors is therefore a true reflection of its original spread in antiquity. The vast majority of metal finds were among, and to the south side of, the posts. Most of the items recovered were damaged (probably deliberately) and many had been carefully dropped or placed, rather than thrown, into the water. This suggests that much of the metalwork, had been deliberately removed from daily life by being ritually destroyed. Its deposition within the waters of Flag Fen was a symbolic way of marking its passage to another realm – perhaps that of the ancestors or the afterlife.

The majority of metal items were in bronze, an alloy, usually composed of about 10 % tin and 90 % copper (brass, introduced to Britain in Roman times, also contains zinc). In all, the power station excavation revealed just under 300 metal objects, of which the large majority were pins, rings and ornaments. The greatest weight of metal, however, was in weapons: swords, dirks, daggers and rapiers. Tools were relatively rare, apart from a collection of almost 20 tanged chisels, punches and awls which were found in the same area and probably represent an individual craftsman's tool kit.

Bronze swords were a characteristic find. The earliest swords date to the middle Bronze Age around 1300BC, and have long thrusting blades. They were bent and broken and rivets were detached (presumably as the hilt was smashed), before being placed in the water. By the Late Bronze Age around 1100BC, the style of swords had changed from thrusting rapiers to slashing weapons where the main weight of the leaf-shaped blade was towards the tip. These weapons had more in common with a cutlass or scimitar than a rapier. But they were broken, bent and damaged before being dropped in the water, and there is evidence, too, that their scabbards were also mistreated.



A selection of the bronze weaponry

Most of the metalwork can be dated to the Late Bronze Age and belong to a well-defined style group or 'industry' named after the Fenland village of Wilburton, a few miles north of Cambridge. Wilburton itself is on an old 'island', but the wet fen around it has produced large quantities of Late Bronze Age metalwork, in a very distinctive style – and nearly all of it, I am quite convinced, was put there on purpose. Two complete Wilburton swords were found at the power station, together with fragments of others, and broken pieces of scabbard fittings. There was also a complete, but broken, Early Iron Age sword (fourth and fifth centuries BC) and fragments from several others.

The collection of smaller blade weapons was extraordinary, ranging from a complete Middle Bronze Age rapier, via a selection of Late Bronze Age dirks and daggers to what can only be described as a miniature Wilburton sword. Late Bronze Age spears were less plentifully represented, but on

spearhead, although partially sharpened, was still unfinished, as the socket for its shaft was still filled with mould material; others still had pieces of wooden shaft in their sockets. The non-business end of many Bronze Age spear shafts were sometimes shod with a ferrule, rather like a walking stick. They are generally quite small, but one very unusual large, broken example was also found at the power station.

It has been suggested that many Late Bronze Age shields and weapons found in bogs, fens and rivers were not functional. Professor John Coles has convincingly shown that the shafts of large spearheads were often too small to be used, and the thin bronze of shields would simply buckle and roll if struck hard by a Bronze Age sword. The same must apply to sheet bronze helmets, too. Possibly fragments from one, and maybe two helmets were found and (if confirmed) these would be the first examples from Britain. Again, they were smashed, and this makes it difficult to be certain about their identification. The late Dr. David Coombs was more convinced when he first saw them in the field but seemed to change his mind in the metalwork chapter of the Flag Fen Basin Report. [8]

The most unusual find was a pair of sprung bronze shears in a carefully carved, fitted wooden box which had a little slot in the base for a sharpening stone. These shears are of Iron Age date and can be used for shearing or cutting many things, from human hair or wool to thin willow osiers. They were unique in bronze, until the recent (2004) discovery of a decorated example from Hamperden End, Essex. The decoration places the Essex shears to the later Iron Age, around 20BC–AD70. It's hard to be certain, but I would place the Flag Fen shears a century or two earlier, but still in the Iron Age.



The remarkable bronze shears

The power station excavations also revealed an array of broken Bronze Age pins, mostly of stick type and with disc heads, some of which were decorated. Various rings in bronze and tin could have been ornaments or harness fittings and are entirely characteristic of the Late Bronze Age Wilburton tradition of metalwork. Early Iron Age brooches, pins and ornaments were also bent, twisted or otherwise deliberately damaged. This would suggest that the rites surrounding their deposition in the water were the same as in Bronze Age times. They were also very high class objects, often with provision for inlaid decoration of tin, glass or coral – all of which, sadly, had been smashed out. It is perhaps worth noting that some of the Iron Age fine brooches are the type of item one would normally expect to find in a well-furnished, elite warrior grave.

Arguably the most remarkable ornament was again smashed. Being unique it is hard to date at this stage, other than to state that it is probably Bronze Age. It is a large bracelet or armlet (a bracelet worn on the upper arm) of shale, but deeply inlaid with lead, which has been applied in strips. The decoration in neat zigzag bands is very distinctly Bronze Age (by the Iron Age it would have been more curvy and swirling) and can best be paralleled by a remarkable inlaid shale bowl of probably Late Bronze Age date, from Caergwrlle, now in the National Museum of Wales. It is an exceptionally fine object.

Another extraordinary aspect of the power station discoveries was the fact that a surprisingly high proportion of the metal finds are made from pure metallic tin. This has not been noted before in Britain, but is probably due to the site's naturally waterlogged conditions (which impede corrosion) and the fact that most tin items are very small and are unlikely to be spotted with the naked eye. Other tiny finds included individual bronze rivets from swords and daggers. These again indicate a degree

deliberate smashing and their discovery amply justifies the use of metal-detectors.

A crucible fragment that had been used to melt pure tin, was found on the Iron Age Cat's Water drainage land settlement of Fengate, just south of the power station, in 1975. This could indicate that some of the power station finds were made locally, perhaps for the sole purpose of 'sacrifice' to the water. This suggestion might seem ridiculous were it not for the fact that many of the metal objects, such as the bronze swords, were clearly rather second-rate castings. We have already referred to the spearhead with mould material still in its socket, but at least two of the swords had been broken across major casting flaws and one must ask whether they could ever have been used in actual battle. Similarly the miniature Wilburton sword is too tiny to be an efficient fighting weapon. Could it be that much of the material was actually manufactured on site with deposition and ceremonial breakage in mind?



Crucible, shale bracelet, dagger blade, pin, and antler harness cheek-piece, from the post alignment within the platform

It would be a mistake to give the impression that metalwork was the only material found at the power station sub-site. There were many animal bones, often of dogs, and numerous pot sherds, too. Whether these were deposited in the water along with the metalwork remains to be seen, however.

Death was a recurrent theme. We have already mentioned a body, found on the north-eastern side of the posts, and two thigh bones of a fairly tall person were also found on that side, but some way away from the articulated bones. At one point an area of posts had been used to dispose of loose human bones; over three individuals are represented and with the bones we found a broken shale bracelet and a complete boar's tusk; these must surely be offerings of some sort and were probably associated with rites of passage to do with death.

One of the most remarkable aspects of Flag Fen is that metalwork continued to be deposited in and around the posts for several centuries after the last episode of rebuilding (around 900BC). This would suggest that even though we know that conditions in the Early Iron Age were growing wetter, the post alignment continues to be used as a causeway, presumably during the drier months of summer. Maybe, too, the site could have been visited by boat in the winter. Although most of the metalwork belongs to the Wilburton tradition of the Late Bronze Age, a significant amount of material, including such large items as swords, continued to be deposited in the subsequent Ewart Park (mid-tenth to eighth centuries BC) and Llyn Fawr (seventh century BC) phases of the Late Bronze Age. There are about twenty true Iron Age metal finds, including no less than two broken iron swords, the decorated bronze scabbard plate, an extraordinarily elaborate bronze plate brooch, numerous dress pins and the well-known shears in their wooden box. This is not a bad haul for a supposedly Bronze Age site!

7. The Religious Ceremonies

Religion and deeply-held beliefs are always difficult subjects to discuss. If you happen to be someone from the West, writing in modern times there are added difficulties. In modern Europe, for example, we carefully separate many aspects of our lives: religion is confined to Friday, Saturday or Sunday, depending on whether one happens to be Muslim, Jewish or Christian; the worship takes place in a special purpose-built building known as a Mosque, Synagogue or Church. Work also happens in a designated spot: a farm, factory or office. Domestic life happens at home, while education is at school or university. Even holidays and normal entertainment takes place somewhere appropriate: a pub, night club, holiday camp, hotel or tourist beach. But in prehistory the boundaries were far less strictly drawn. Yes, there were specialized monuments for burials and ceremonies, places like the great long barrows of the Neolithic and, of course, the henges of the Early Bronze Age, but by the start of the Middle Bronze Age, around 1500BC (that's just two centuries before the date we currently believe Flag Fen came into existence), these great sites fell into dis-use and were mostly abandoned. During the later Bronze Age and Iron Age, religious ceremonies very often took place out in the countryside, often, as at Flag Fen, within or close by bogs, rivers or lakes.

So when I am asked: what was the function of Flag Fen? I take a deep breath, because I know the reply won't be simple. In fact, that's why we chose to refer to the posts as an alignment. It's also why we didn't use a term like 'causeway'. Take another widely accepted archaeological name: 'hillfort'; to most people that word suggests just two things: a fort on a hill. And why not, you might ask. The trouble is, we now realize that hillforts were far more than mere forts on hills. Some were large settlements – almost towns – and nearly all of them also played a strong symbolic, if not actual religious, part in the lives of the communities who built and occupied them. The same can be said for Flag Fen.

The post alignment was undoubtedly used as a road and there must be several tons of sand and gravel still in-situ that was spread there in the Late Bronze Age to make the walkway's planks less slippery. But at certain other times the route was also used as a ceremonial centre. These ceremonies involved the deposition of probably thousands of metal, stone, shale, ceramic and other objects together with cuts of meat, food and other perishable items. These things were placed in the waters of Flag Fen, both within the timbers of the causeway and along its south-western, or 'inland', side.

The post alignment may have marked out the path of a long-lived road and as conditions grew wetter it became a causeway, but they also indicated the boundaries of an important religious area, maybe even a shrine. It was also probably an important boundary, because bronze objects were only found along its south side – and not on the open, fenward, northern side. Maybe that was another clan or tribe's territory? In modern terms, it's as if trains arrived at a cathedral built into the Berlin Wall. Everything seems hopelessly muddled-up to our neat, compartmentalized Western way of thinking.

There are also some slight indications that the post alignment in certain areas, such as when it crossed through the great platform (and now the railway station metaphor seems regrettable), was subdivided into shorter lengths, which may have been controlled or maintained by different families or other social sub-groups. This doesn't mean that the route across the fen was blocked – we have no evidence for that – but it may have been marked in some way – maybe with decorated posts or timber portals. Again, this suggests that the alignment was more than just a causeway. At this stage it seems probable that the rituals and ceremonies would have taken place at special occasions, maybe the Bronze Age equivalent of Christian Sundays, when deaths were commemorated by offering a dead man's sword to the waters. Sometimes the finds hint at more diverse ceremonies: a cache of miniature lead anvils and bronze engraving tools could indicate initiation rites at the conclusion of a metal worker's apprenticeship; a group of quernstones could represent marriage offerings; broken pins and brooches hint at other domestic ceremonies. Maybe those Collie dogs were helping their dead masters

find their way down the lanes and byways of the Afterlife?

8. Interpretation: What Does it all Mean?

My immediate reaction to that crucially important question is to throw my hands in the air, turn my back on the person who asked it, and say nothing. But these aren't the Middle Ages and I cannot pretend to be a mad hermit. So, let's have another go at that earlier question: what was the post alignment? First and foremost it was undoubtedly a causeway or trackway across the wetland that separated Fengate from Northey 'island'. But it was also a barrier that separated the Flag Fen basin from the open fen to the north and east. Flag Fen was a naturally enclosed basin, which was surrounded by the fields and settlements of Northey, Fengate and Must Farm/Bradley Fen – a recently discovered new Bronze Age settlement complex on the northern side of Whittlesey 'island'. All were within clear sight of the Flag Fen post alignment and platform. The wetland basin would have 'belonged to' and have been controlled by these people. It was a vitally important resource that had to be protected: a source of winter protein, summer grazing, peat, reeds, firewood and salt. Plainly they did not want people from outside to have access to it. This might help to explain the mass of posts used in the northern part of the post alignment (especially Row 4). But the posts also seem to have had another, less practical, role – which is what I will consider next.

Common sense, if nothing else, suggests that the deposition of so much metalwork, not to mention complete pots, smashed shale bracelets and unused quernstones, must have been deliberate. And the only explanation for such seemingly impractical, senseless destruction or waste of valuable resources has to be something to do with religion, ceremonial or ritual. Moreover, these 'offerings' were also taking place on a large scale: Flag Fen must have been more than a purely local shrine. So if it is accepted that Flag Fen and the power station were parts of a religious centre of some sort, we must next consider what might have been happening there. In other words, what did these religious rituals comprise?

The metalwork at the power station is principally composed of weapons and ornaments. Further east, out in the basin proper at Flag Fen we have so far found one Iron Age brooch, a late Iron Age sword scabbard plate, a Late Bronze Age sword scabbard chape (or tip), a Late Bronze Age stick pin, a Late or Middle Bronze Age dagger, a so-called 'flesh-hook' and two leaf-shaped bronze spearheads. We have also found evidence either for the reuse of parts of vehicles, or for their dismantling and deliberate incorporation into the post alignment as offerings. So far we have found part of a tripartite wooden wheel, in the lower levels (and therefore dating to shortly after 1300BC) and two axles, also from different vehicles. Our most recent excavations on the extreme edge of the Northey shore have revealed rings, like those found at the power station, and a bronze harness-fitting, or slide for a strap, which can be closely paralleled in a hoard of Late Bronze Age metal objects found at Parc-y-Meirch, Denbighshire.

As at the power station, these finds were amongst the posts or on their south-western side. The other distinctive items common to the two areas are smashed shale bracelets. At Flag Fen, too, we have evidence for careful deposition of pottery.

It has been suggested that there are fewer metalwork finds at Flag Fen than at the power station, but in fact the former has produced slightly more on average, per square metre, than the latter. As at the power station the Flag Fen metalwork consists of weaponry and ornaments, most of it broken. The balance of probability now indicates that the whole of the post alignment, including the section across Flag Fen, which could be 1km (0.75miles) in total length, is likely to be a huge religious monument.

Excavation during the long, hot summer of 1990 produced solid evidence that Flag Fen and the Fengate power station are all part of the same site. First, work with tree-rings demonstrated that a high proportion of the timbers from each area were growing at the same time. Second, as we excavated down to the lowest timbers at the main Flag Fen excavation we came across a bronze stick-pin of unusual continental type; a large socketed spearhead; and, most excitingly, the lower part of a sword

scabbard, known as a chape. Like the power station finds of 1989, these were Late Bronze Age weapons or ornaments. There was nothing useful or utilitarian in this collection of metal objects. Each item had been deliberately broken, and the spearhead had been carefully hidden beneath a large, axed log.

Archaeologists have long been aware of the deliberate, 'ritual' deposition of Bronze Age metalwork in wetlands. Of course we cannot be certain that all of the many thousands of Bronze Age metalwork finds from the Fens got there during religious or sacrificial rituals, some might simply represent casual loss, others might have been hidden there for safety, but the sheer quantity of complete and deliberately damaged items found in the Fens is too enormous to support the idea that Bronze Age people were either absurdly forgetful or too lazy to keep track of their valuables. There is also a problem in deciding what parts of the Fen were indeed truly wet in the Bronze Age – many areas, for example, may well have been small dry islands. It is very easy when studying a region such as Fenland from outside, to treat it as all the same, whereas in reality, as we have seen, the apparently flat featureless modern countryside hides a wealth of complex and highly diverse ancient landscapes.

So, having itemised reasons to be cautious, we are left with a core of unusual, apparently inexplicable, finds that must owe their existence in the Fen to religious or other rituals. The main group of such ritual finds is surely the weapons, many of which show clear signs of deliberate destruction. The huge quantities and high quality of Later Bronze Age metalwork recovered from the Fens and certain rivers of southern Britain (particularly the Thames) has led archaeologists recently to draw comparisons with the rich barrow burials of the preceding Neolithic and Early Bronze Age. Maybe, it is argued, we are seeing here symbolic, if not actual burial of important people in the waters of rivers and fens. It should also be pointed out that this is not a phenomenon restricted to Britain alone, as Bronze Age metalwork is known from wetland situations over large areas of northern and Atlantic Europe – although nowhere are the quantities as great as in southern Britain.

Although the general nature of the depositional rites in later Bronze and Iron Age Britain is similar and often involves weaponry, causeways and water, no two sites are ever identical. I will discuss the nearby site at Fiskerton shortly, but here all I need to note is that the items found there include large numbers of practical, workmanlike tools, such as axes, rasps and so forth. These seem to be largely absent at Flag Fen and suggest either that rituals changed between the Bronze and Iron Ages or, more probably, that people living in the two regions had their own ideas about religion – ideas that had developed over millennia.

The 'funerary' argument has much to recommend it, and at Flag Fen and the power station we can, I believe, argue that death featured prominently. I am sure that the smashed black shale bracelets and armlets might well have had some funerary significance. On the other hand I also think there was more to what went on at Flag Fen than merely the disposal or remembrance of the dead. For a start, thanks to metal detectors we have, for the first time, an idea of the enormous variety of metalwork that was deposited in the waters. This surely must indicate both a range of people and a range of activities.

There are magnificent items doubtless worth the modern equivalent of large sums of money and there are humbler items, maybe worth much less. The key to understanding what might have been going on lies in the broken state of so many objects. Prior to the Middle Bronze Age, grave goods in barrows often included weapons and ornaments, but they are rarely, if ever, deliberately smashed. That is something new. It may well have an underlying economic purpose. Professor Richard Bradley, for example, has suggested that some metal was being withdrawn from circulation to keep prices high, but this was probably not in the forefront of people's minds at the time. Furthermore, the destruction of something valuable in the naturally open surroundings of water is essentially a public act, and one which could be interpreted as a display of wealth and prestige.

Maybe similar ideas are applicable to Flag Fen. Perhaps the public destruction of valuable items such as the swords, was indeed a display of wealth, power and prestige, but the vast majority of offerings were very much smaller in scale and were probably about more private rites, such as the commemoration of an ordinary family member who had recently died, been married, had given birth or had reached adulthood. These are some of the usual rites of passage, many of which could have been celebrated at Flag Fen.

I have suggested that many of the rites celebrated along the post alignment would have been small scale, perhaps family affairs, and I drew attention to the symbols of family life represented by, among other things, the four unused or only lightly used quernstones. It just so happened that these were found directly below one of the transverse 'partitions' that might possibly have subdivided the post alignment into a series of 5-6m long segments when it was first constructed. If these segments do indeed exist, they continued to be respected well into the Iron Age, because a finely decorated sword scabbard plate was found on a partition line, long after the final replacement of the last timber. Maybe all of this is coincidence, but I wonder whether the occurrence of 'offerings' on the boundaries between different segments may not be a similar process to the deposition of significant items, such as complete pots or human skulls at the butt-ends, or terminals, of the segmented ditches of very much earlier (3000BC) Neolithic sites, known as causewayed enclosures?

My team excavated a nearby causewayed enclosure at Etton, in the Welland Valley, about ten miles north of Flag Fen, in the mid-1980s. We recovered a wealth of evidence there for ritual and ceremony and much of it seems to anticipate what we were later to find at Flag Fen. [9] Now I'm not suggesting continuity with a site like Etton, which after all is about two millennia earlier than Flag Fen, but rather the re-emergence or 'convergent evolution' of a set of broadly similar ideas. At Etton I have suggested that each ditch segment may have represented, symbolised or 'stood for' a family or lineage group. The item in the butt-end, at the causeway separating the ditch segment from that alongside it, would have expressed the identity of the kin group that practised their rituals there. Maybe the human skulls placed at the ditch ends, facing out towards the causeways, were indeed the heads of important ancestors? Maybe at Flag Fen the elaborately decorated scabbard plate belonged to a significant warrior who had left his mark on the family? We can only speculate, but if I am correct, it does suggest that ritual and ceremony were built into the post alignment from its very inception.

Since we discovered the site in 1982 a number of other 'Flag Fens' have been found in Britain including examples from near Eastbourne on the south coast, at Caldicote in South Wales, one in the Trent valley and, closest of all, a number in the Witham valley, just east of Lincoln. It now seems probable that there are several post-built timber causeways in the Witham valley, including at least one of the Late Bronze Age, near the village of Washingborough; but the Witham valley site which most closely resembles Flag Fen is actually Iron Age in date and is located near the village of Fiskerton. It was first investigated by Naomi Field in the 1980s and has recently been comprehensively written up by Naomi and Mike Parker Pearson. [10]

Fiskerton, like Flag Fen, was indeed a causeway and like Flag Fen it ran from a mainland across an 'island'. Along its course were deposited all sorts of valuable items, including the hilt of what is possibly the most lavishly decorated sword known from Iron Age Britain. There is also good evidence to suggest that the causeway was repaired in years when the moon went into total eclipse. Unlike Flag Fen (which does not seem to have favoured lunar eclipse years), the 'offerings' at Fiskerton were not smashed and included many tools and implements, as well as weapons and ornaments. So the two sites are by no means carbon copies. Having said that, they both possess important common themes, to do with water, journeys and the Afterlife. What I am saying is that we are not looking here at an emerging religion or 'water cult', but rather at a series of commonly held concepts to do with identity and cosmology (or view of the world). These people were doubtless in close communication with or

another, and with other communities much further away. They plainly had much in common, but they still expressed their beliefs in ways which fitted with their own identities. Orthodoxy, be it Druidic or whatever, had yet to make its presence felt in the Fens.

I distrust simple explanations in a subject as complex and challenging as archaeology. Whenever I hear it said that some event was 'caused' by a volcanic eruption, increased rainfall, sea-level rise, or whatever, I find myself asking the simple question: yes, fine, but those people must have been aware that the nearby volcano could blow its top, or that rain could be severe, or that storms could cause huge waves. Put another way, ancient people weren't stupid. And unlike many of us today, they actually experienced the world around them at first hand. They didn't have the excuse of living at times in virtual realities. So why did they put themselves in a position where such disasters could strike? The answer has to be that they were prepared to take the risk. They could accept potential problems because they knew that living in certain areas was worth it, because of what the area had to offer: like, for example, highly fertile volcanic soils. In the Fens, the richest pickings are to be made nearest the waters' edge. That's where the grass grows greenest and crops seem to leap out of the soil. It's also where you can net fish, trap wildfowl or extract salt from dilute seawater. We know that in the Bronze Age protein was hard to come by in winter – so inexhaustible supplies of eels, fish and wildfowl (especially in the lean months of winter) would have been most welcome – and of course salt could be used to preserve that meat for the future – or for trade inland. So the margins, islands and drier parts of the Fens would have been very attractive places in which to settle. Very few people – perhaps a few herdsmen, fishermen and hunters – would actually have lived for any length of time out in the wetter peat lands. Their families would have stayed on safer, drier ground.

As we have already seen, one major mystery remains to be solved: why was the platform built and what took place there? All we can say at this stage is that the platform did undoubtedly exist. We found a continuous spread of timber along the dykeside in our original investigations in 1982 and '83. Then we proved its extent both with the borehole surveys on either side of the Mustdyke and with the construction of the Mere in 1987. More recently one or two trial trenches have confirmed its existence, but none of these have penetrated below the uppermost timbers. Dendrochronology suggests that the platform and the post alignment are both precisely contemporary and were constructed together, as part of the same vast structure, but what was it built to achieve?

Let's take an obvious idea first: could it simply have served a practical purpose to consolidate a particularly wet area? Perhaps, but why make it so large and go to the trouble of providing a perimeter 'boardwalk'? My current 'best bet' is that the platform may possibly represent a miniature symbol of dry land within a wetland – in effect, a 'tamed' area intended for, set aside and used exclusively for ritual purposes. If that seems a huge amount of effort to achieve something that was functionally useless, I can only point to Silbury Hill, Stonehenge or indeed Buckingham Palace or Westminster Abbey.

Another thought has struck me: could the platform at Flag Fen be an equivalent to that immense but enigmatic Iron Age road at Corlea, in southern Ireland? The Corlea road was a prehistoric white elephant. It was built of massive oak planks which almost immediately began to sink into the surrounding bog. [\[11\]](#) Some have suggested that this was an example of incompetence, but I don't share that view. Surely those Iron Age Irish wetlanders understood only too well how to construct a sound roadway. No, I believe they built the Corlea road in the certain knowledge that it would shortly vanish below those dark peaty waters. Put another way, the road itself had taken a journey – perhaps to the realms of the ancestors. Who knows, but maybe the Flag Fen platform was seen as something similar, something impermanent, transitory and probably rather mysterious and magical? We mustn't shy away from such things – archaeologists, especially academic archaeologists, tend sometimes to over-analyse. It's as if they were scared of using their imaginations. And if ever a great site demanded

imagination is surely Flag Fen: we know so much, yet at the same time, so little, about it.

~~Before I leave this section on the meaning of Flag Fen, I must point out that research is still~~ continuing, both at Flag Fen itself, and in the immediate area, known as the Flag Fen basin. The recent discovery of eight dug-out Bronze Age boats at nearby Must Farm (which would normally be clearly visible were it not for the railway embankment and the flood bank of the River Nene) has caused national sensation. [\[12\]](#) The Cambridge University Archaeological Unit has done some amazing work in the area, including a splendid summary and reassessment of my original site and excavations at Fengate. This important updating also includes a large number of new excavations. [\[13\]](#) I think it probably fair to say that in their quiet way, the archaeologists now actively working in the Flag Fen basin are revolutionising our understanding of British later prehistory.

9. Flag Fen: Wood, Wheels and Status

Flag Fen is known internationally because of its wood and timber. Generally speaking this falls in two quite distinct categories: lightweight coppice products, such as wattwork, hurdles and even basketry (I'm thinking here of the fish traps from Must Farm); and heavy-duty items, such as posts and planks, which I'll discuss in the next section. But there is another, and far rarer group of finds which one might label fine carpentry and crafts. This group includes axe hafts, bowls, buckets and perhaps most intricate of all: wheels. Indeed, I'm in little doubt that as early as the later Bronze Age wheels were fashioned by specialist wheelwrights, who possessed detailed knowledge of the different native British trees and their properties.

At Flag Fen the story of this very specialised branch of carpentry begins back in Fengate in 1973 when at the very end of the final season an Iron Age well was discovered. We didn't know it then, but this well was positioned about 100m from the easterly landfall of the post alignment. We'd discovered prehistoric wells and watering-holes previously, but this one was different because its wattle lining (of woven hazel and willow rods) was held in position by a number of small stakes, which included a split-down piece from a larger wooden object. I suspect it had been split-down in a hurry, using an old wood which happened to have been lying around in the yard. But what made this re-used stake remarkable was a dovetail housing joint, or socket, half-way along its length. It was this piece of wood, and its then unique dovetail joint, which persuaded the now well-known wood specialist Maisie Taylor to continue with the woodworking studies, she had begun as an undergraduate, a few years earlier. At the time, she didn't know what it had come from, but she did know the dovetail had been very carefully cut. We must now roll the story forward some twenty years to the discovery of part of a wooden tripartite (three-part) wheel at Flag Fen. [\[14\]](#) This wheel was made from three split planks of alder wood which were held together by laths of oak sapwood. The laths were housed in carefully cut dovetail slots, identical in size and profile to the one in the fragment of wood we'd found in the well at Fengate almost twenty years previously. I can't resist it: the wheel had turned full circle.



One third of the tripartite wheel

But this story has a final twist. In 1997 I was directing excavations at a site known as Welland Bar Quarry just north of Peterborough, near Market Deeping (in southern Lincolnshire). It had been a hot dry season, but there had been a sudden thundery shower while we had been eating our midday meal at the site hut. After lunch we were walking back to the trenches as the ground was drying out and I was immediately alerted: these were ideal conditions for spotting very ephemeral traces in the ground. And I was right (or lucky, or both), because there, in a patch of silty ground we could clearly see dark lines. They were vanishing in the hot sunshine, even as we watched. I fitted a fine rose to a watering can, and sprinkled the ground. Then we all watched, as the marks slowly reappeared. But this time we were ready, and as soon as they were visible, we scratched around out their edges with our trowels.

The plans we then drew showed that a wheeled vehicle had made two passes through the silt patch and in one spot it had reversed. [\[15\]](#) We could trace them for just under 20m so were able to get a reasonable impression. As the course followed had been curved in one place we could clearly see that the vehicle had just two wheels. They were 1.10m apart and both were almost exactly as thick as the very slightly earlier wheel from Flag Fen. So this was a relatively light vehicle, and not the sort of heavy farm cart we had expected. I'm in little doubt that it was the late Bronze Age (in this instance

600-800BC) equivalent of a Victorian gig – in other words it was a light, single-person transport. ~~I have resisted the temptation to call it a chariot, as the tabloid press would go mad, and besides, we~~ have absolutely no evidence to think it was a military vehicle of any sort. No, the most sensible suggestion is that it would have belonged to somebody of importance. Perhaps it's worth recalling that the first cars were bought and used by the richer members of Victorian and Edwardian society; they were status symbols. The Model T Ford, which famously brought 'motoring to the masses', did not appear until sometime later.

I don't believe that the discovery of the wheel, with an axle nearby, was a casual find. I am convinced it was placed in the ground deliberately, perhaps during the same rites that saw the deposition of other possessions of wealthy people, such as the swords, daggers and rapiers. In other words, it was a symbol of power and prestige – the Bronze Age equivalent if not of a Rolls Royce then a Mercedes Benz, or a Range Rover.

10. Flag Fen and the Sophistication of Ancient Technology

As a practical person I have always been fascinated by ancient technology, often known today in academic circles as 'primtec', which is short for 'primitive technology'. That term makes me very annoyed, because it sums up certain attitudes to past practices which are, to say the very least, patronising. I would imagine most academics, if sent back to the Old Stone Age, say fifty thousand years ago, would find it very challenging to produce the simplest of flint tools, yet that is what ordinary people did, and routinely. Today there are just 3 or 4 skilled flint-workers in Britain who possess the skills needed to produce such items – so to label these skills as 'primitive' is plainly absurd. So my annoyance aside, why is Flag Fen such a good place to study early technology?

The answer to that question is quite simple: it's all about preservation. Waterlogging not only preserves wood, it can be very kind to other materials, too. If flint tools fall into soft muds they tend to be very well conserved: for example, the microscopic damage done to their cutting edges often remains intact and this allows certain specialists to examine what has become known as 'edge wear' very closely. When we were excavating the Fengate sites back in the 1970s we published one of the first edge wear reports in British archaeology. [16] This revealed that flint tools were used for a huge variety of tasks ranging from scraping bone, to de-fleshing leather and cutting softer materials. The cutting tools tended to be longer and thinner than those used for scraping which were generally shorter and more squat, and often showed the edge-reworking that is so characteristic of scrapers.

While flint tools, pottery and metalwork are all well-preserved, perhaps the most important of our experimental research has been with wood. As a general rule, wood survives very rarely at archaeological sites, but it must always have been the most important building material of all, and especially in the days before sophisticated masonry. Indeed, with the rare exception of what are called jawbones in places like Iceland, it's almost impossible to conceive of a roofing support that does not involve wooden rafters.

The first challenge to any modern person faced with the task of replicating Bronze Age carpentry is simple: saws didn't yet exist in Britain. The earliest saws known here come from the famous Iron Age 'lake village' settlement at Glastonbury and were, in effect, pruning saws: they were small and the teeth were angled back, towards the haft, so they cut on the pull, rather than the push. Clearly axes couldn't be used for producing something as long as a plank, so the only other available technique was splitting. Now most people have probably had a go at splitting logs for the fire. On the whole it's quite easy and that's largely because the logs are quite short, dry and brittle; but even so, knots can cause big problems and the wood generally splits where it has developed drying-out cracks, which may not be where you want. To do accurate splitting you must work with 'green', freshly felled wood, and not with dry, or seasoned, wood, which is very much harder. Indeed, seasoned oak heartwood is so hard it can barely be cut by even the sharpest of bronze axes.

Much of the initial splitting was probably done out in the woods and forests where the trees were growing. And here I must confess that before I began actually doing ancient woodworking, I didn't realise how important it was to select the right trees. They must be straight, and without the sort of twists to the trunk that develop on exposed and windy sites. Having spent time with an experienced forester I have learned how to spot the tell-tale traces of hidden heartwood rot and how to see where old branches have been trimmed off and the bark grown over. All of these things can make subsequent splitting very much harder. Bronze Age carpenters must surely have known how to spot these tell-tale signs – and probably many others besides.

Once the timber has been felled, the next step is to cut off the branches of the crown, to leave just the trunk. We'll see in a moment that there are two types of splits, but you have first to divide the trunk cleanly in half to achieve either of them. When I was first shown how to do it by the renowned experimental woodworker Richard Darrah, I couldn't believe my eyes. I'd arrived in the wood with

sample content of Flag Fen: A Concise Archæoguide

- [download Introduction to Logic \(2nd Edition\) for free](#)
- [read A Thousand Hills: Rwanda's Rebirth and the Man Who Dreamed It](#)
- [download SAS and R: Data Management, Statistical Analysis, and Graphics \(2nd Edition\)](#)
- [read A History of the Wife](#)

- <http://fitnessfatale.com/freebooks/Introduction-to-Logic--2nd-Edition-.pdf>
- <http://qolorea.com/library/Eating-Disorders.pdf>
- <http://twilightblogs.com/library/The-Paradox-of-Liberation--Secular-Revolutions-and-Religious-Counterrevolutions.pdf>
- <http://sidenoter.com/?ebooks/Invitation-to-Sociology--A-Humanistic-Perspective.pdf>