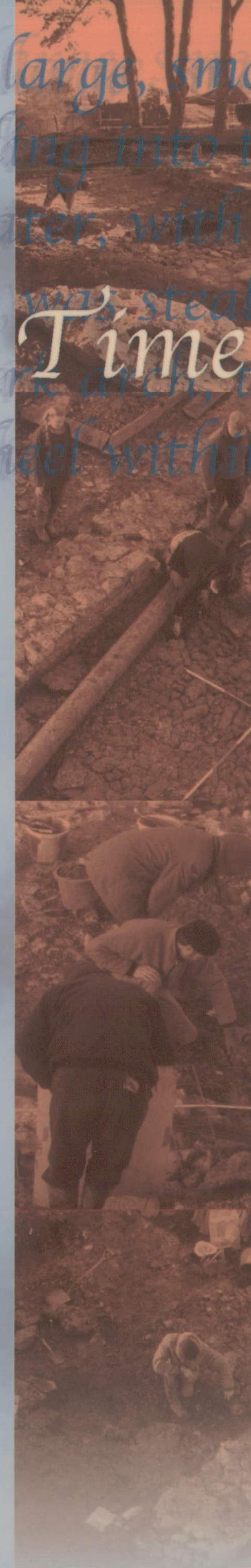
Immediately before her was the large, smooth millpond, over-full, and intruding into the hedge and into the road. The water, with its flowing leaves and spots of froth, was stealing away, like Time, under the dark arch, to tumble over the great slimy wheel within.

Stealing away, like Time...

Archaeology and the River Jordan, Sutton Poyntz



by Andrew B. Powell

Immediately before her was the large, smooth millpond, over-full, and intruding into the hedge and into the road. The water, with its flowing leaves and spots of froth, was stealing away like Time, under the dark arch, to tumble over the great slimy wheel within.

from *The Trumpet Major* by Thomas Hardy

Text by Andrew B. Powell
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Graphics (except where stated), design and layout by Rob Goller

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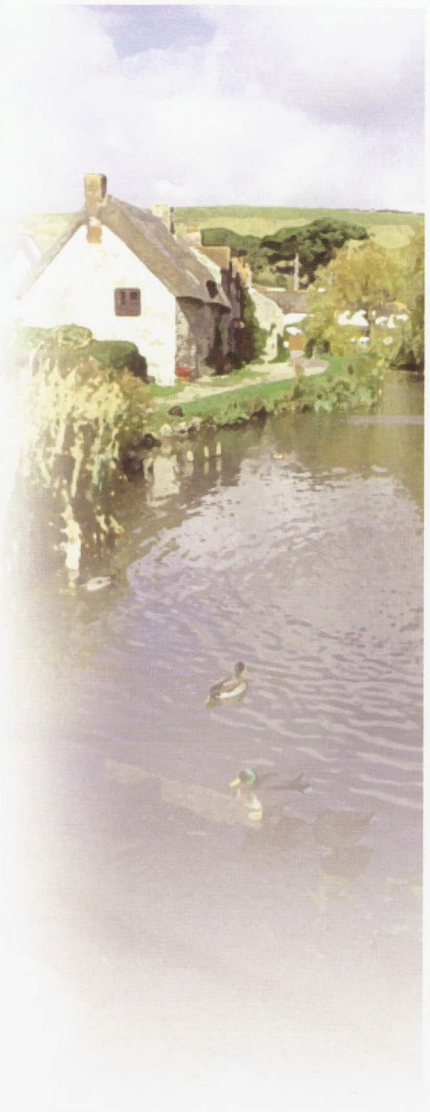
Introduction



The water that wells up from the springhead above Sutton Poyntz has only a brief journey to make before it flows into the sea at Bowleaze Cove. Yet over the millennia, since people first came to this secluded Dorset valley, the River Jordan has been the one constant running through the lives of the local population. In addition, and more by accident, it has given the area a wider reputation – in the fields of archaeology, literature and even maritime history.

The springwater, having filtered through the chalk of the downs, emerges through a geological fault-line at the base of the steep scarp of the South Dorset Ridgeway, and flows through the village of Sutton Poyntz, which nestles at the centre of a horseshoe of hills – Jordan Hill, Rimbury Hill and Chalbury to the south and west, West Hill, East Hill and Whitehorse Hill on the Ridgeway to the north and east, and Osmington Hill to the south-east. The complex geology of the area has created an ecological diversity between the downs and the sea that has been exploited from prehistory to the present.

Wessex Water's decision to build a new water treatment works at Sutton Poyntz provided an opportunity, in 1993–4, for archaeologists from Wessex Archaeology to find out how people had lived, worked and worshipped in the landscape fed by this short river. The archaeological site, on the west side of the river, lay immediately north of the water pumping station at the northern end of the village. This is the story of the archaeological investigations that preceded construction of the new works, and of the river's influence on the people, the place and the landscape.

Hunters and gatherers

The earliest objects found during the excavation were eight deliberately shaped flint tools. Although these could not be dated precisely, they belong to the *Palaeolithic* period (meaning Old Stone Age), i.e. from before the end of the last Ice Age around 10,000 BC. Other Palaeolithic tools, including handaxes – a form dating from as far back as 500,000 BC – have been found nearby at Bincombe Hill and Jordan Hill. The sharp edges created by flaking flint (the raw material for the Sutton Poyntz flints probably coming from gravel cobbles) made it a versatile material for use by the area's earliest inhabitants who lived by hunting game such as reindeer and elk, trapping wildfowl, gathering plant foods and catching fish.

This page
Below: Typical Palaeolithic handaxe
Facing page
Bottom: assorted mesolithic microliths

This hunter-gatherer way of life, involving cycles of movement through the landscape to take advantage of its varied and seasonal resources, continued after the Ice Age, when warmer temperatures melted the northern icecaps and raised sea levels in the English Channel, eventually cutting Britain off from continental Europe. Flints of this *Mesolithic* (Middle Stone Age) period were also found during the excavation, including 61 pieces found together, indicating where someone had sat and 'knapped' the stone. Many of the pieces were narrow 'blades', one having a serrated edge for cutting. There was also a 'microburin', a by-product of making microliths, which are small triangular pieces that were mounted into wood or bone to make barbs for arrows and harpoons. More Mesolithic flints have been found further down the river, and there are many other findspots in the region, particularly on the Isle of Purbeck and around Weymouth, as well as on the downs to the north-west.

The local environment around Sutton Poyntz would have changed markedly during the Mesolithic. The rising sea level brought the advancing coastline, with its own range of valuable food resources, in towards the foot of the hills. Inland, cold glacial *tundra* vegetation of grass and shrubs was replaced first by birch and pine trees, then by a mixed deciduous woodland, mainly of oak, elm and hazel. Reindeer and elk migrated northwards to cooler regions and were replaced by woodland animals – red deer, roe deer, boar and aurochs (wild cattle). Although the Palaeolithic and Mesolithic finds from the excavation were few in number, their discovery so close to the river points to an appreciation from the earliest date of the importance of this reliable source of water. Animals, like people, are attracted to the water's edge, so aiding hunting, and the breaks in the woodland canopy along the river would have encouraged the growth of food-bearing plants, such as hazelnuts. By about 5000 BC the environs of the site, including the downs, the Jordan valley and the coast, may have allowed people to have enjoyed a relative abundance of varied foods and other materials all within a few hours' walk, permitting an increasingly stable pattern of settlement.

Neolithic and Bronze Age farmers

Three monuments on the downs just above Sutton Poyntz point to the fundamental changes in society that accompanied the introduction of farming in the *Neolithic* (New Stone Age). The *long barrows* at Bincombe and Whitcombe, and the 180m long Broadmayne *bank barrow* are typical examples of Neolithic burial mounds, signifying a new relationship between people and the land, expressed perhaps in terms of the permanence and longevity of ancestral rights to territory. Their location reflects the importance of the chalk downland for the cultivation of wheat, barley and oats and the raising of cattle, sheep and pig. They also overlooked the surrounding coombes and valleys, and the coastline to the south.

This page
Below: Hembury style bowl, based on an original drawing by A. L. Pope
Bottom left: Maumbury Rings engraving taken from Charles Knight's 'Old England' 1845
Facing page
Top right :Beaker pottery
Bottom left: Middle Bronze Age Pottery from the Rimbury Hill Urnfield, photograph courtesy Dorset County Museum

Although the local evidence for Neolithic settlement is sparse, such as a pit on West Hill that contained a so-called 'Hembury-style' pottery bowl and worked flints, the single sherd of Neolithic pottery that was found at the Sutton Poyntz excavation was made of a Cornish clay, showing that the local population was tied into social networks through which objects, products and perhaps even marriage partners could be exchanged over long distances.

Such exchanges may have been negotiated during gatherings at communal sites like the Maiden Castle *causewayed enclosure* just six kilometres to the north-west. This large gathering place, enclosed by a double ring of segmented ditches, was the first of a series of monuments built in and around Dorchester during the Neolithic. These included an enclosure at Flagstones, a large timber circle at Greyhound Yard and *henges* at Mount Pleasant and Maumbury Rings, all likely to have been used for social, religious and ceremonial activities.

Around 2400 BC, however, these large monuments declined in importance, and the dominant feature of the skyline above Sutton Poyntz – the line of round barrow burial mounds strung in an arc along the crest of the scarp between West Hill and East Hill – reflects the emergence of a new social order. Now it was the status and wealth of individuals that was important, with exotic and valuable items, some made from newly available materials such as gold, amber and bronze, being placed in the graves of both men and women. A burial on Rimbury Hill, dated to around 2000 BC, for instance, was accompanied by two highly decorated pottery vessels of a type known as *Beakers* and a small bronze awl (a pointed tool for piercing wood or leather).

There is still little evidence for the settlements in which these Early Bronze Age (2000–1500 BC) people lived – only three sherds of pottery tentatively dated to this time were found at Sutton Poyntz – but it is known that there was extensive grassland on the downs supporting a largely pastoral economy based on cattle and sheep.

The Rimbury Hill burial, discovered in 1979, was professionally excavated, in contrast to events earlier in the century when nearly 100 cremation burials, as well as several skeletons, had been discovered during the construction of a reservoir. Many of the cremation burials had been placed in large upright urns covered with flat stones, but most of these were either destroyed by the workmen or disintegrated upon excavation, and no records have been left. Despite this, the Rimbury Hill burial ground (or 'urnfield') has become the archetypical *Middle Bronze Age* (1500–1100 BC) cemetery for the region and has given its name to one of the major social and cultural groupings of the Bronze Age in southern England – the Deverel-Rimbury culture (the Deverel barrow, 20 kilometres to the north-west, was excavated in 1824 and had produced similar pottery). It is during this period that we find the first consistent evidence of settlements, houses and fields. The field systems recorded on East Hill immediately above Sutton Poyntz, and to the west on Bincombe Hill, have not been dated, but on the basis of the evidence from nearby settlement sites at Middle Farm and Poundbury in Dorchester, they were probably laid out in the later Bronze Age.

The Iron Age

Pottery found beneath the rampart of Chalbury Camp, immediately north of Rimbury Hill, may indicate settlement associated with the urnfield, in which case it would be a precursor to the enclosed and defended settlement established there in the Early Iron Age. Chalbury Camp hillfort had a defensive rampart faced inside and out with limestone walling and an external ditch. Inside were circular hut-platforms up to 10m in diameter with stone footings. The hillfort entrance on the south-east side provided access down onto the Rimbury Hill ridge and the Jordan valley below, and the hillfort's strategic location here, on a prominent knoll, gave it a sphere of influence over both the downs and the coastal zone.

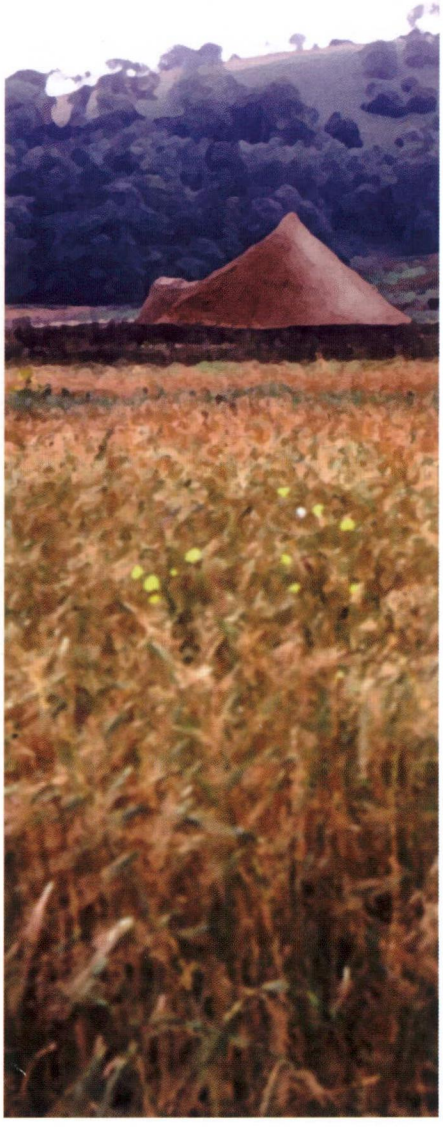
Pottery from the hillfort dates to *c.* 700–400 BC – largely contemporary, therefore, with an Early Iron Age settlement revealed during the excavations at Sutton Poyntz, one kilometre to the east. There, parts of two round-houses were uncovered, one of them represented by a 8–9m diameter curved gully that had held a stone wall-footing, with an arc of evenly spaced postholes inside, and one in the centre of a cobbled floor of limestone and flint. The house had been repaired on a number of occasions, and large quantities of dumped burnt debris indicate continued activity after it had fallen out of use.

Excavation also revealed many postholes, shallow pits, and deep deposits, which produced over 9 kg of Iron Age pottery, indicating that this was a substantial settlement. Other finds include a bronze finger ring and objects of worked bone and antler, including a pin, a gouge and two handles. Nearby investigations have found settlement remains extending north of the site towards the springhead, and eastwards along the Osmington water pipeline.

Above: Bronze finger ring
Below: Chalbury Camp Iron Age hillfort

There were also four parallel ditches (one of them containing the skeleton of a cow) that may have been used for drainage, the ground to their north being permanently waterlogged during the excavation. Most of the animal bones found were from sheep, with a few pigs, while barley and wheat (including varieties known as emmer and spelt) and field beans were grown in the fields. Charred weeds characteristic of both grazed and cultivated ground were found, as was wood charcoal. The charcoal included dogwood, that is generally associated with chalkland; oak, ash and hazel, probably from woodland on the steeper valley sides and the lower lying vales; hawthorn and blackthorn from woodland margins, and poplar and willow, which prefer damper ground including river banks.

Left: Field beans
Right: Iron Age roundhouse



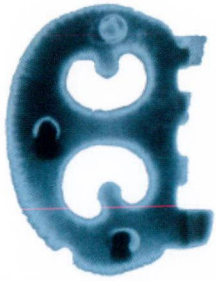
The river would have been an important factor in determining the location of the settlement and there were probably several such farmsteads dispersed around Chalbury Camp. During the 4th century BC the hillfort was abandoned, just as political power was becoming increasingly centralised at the ever-more elaborate and impressive hillfort at Maiden Castle. There were also changes at Sutton Poyntz, where the settlement may have shifted upstream to where pottery dating between 400 BC and AD 43 has been found. The grave of a large man was also found on the edge of the river channel. There was nothing in the grave that could provide a date but such burials are typical of later prehistory (2400 BC–AD 43), and are often associated with watercourses.


Dorchester
Maiden castle
South Dorset Ridgeway
Broadmayne
Bank
Barrow
Broadmayne
Bincombe Hill
West Hill
East Hill
Whitehorse Hill
South Dorset Ridgeway
A354
Chalbury
Springhead
Rimbury Hill
Broadway
Boiling Rock (Coombewell)
'Urnfield' cemetery
'Overcombe Mill'
Sutton Poyntz
Osmington
Roman villa
(site of)
Osmington Hill
River
Jordan
Jordan Hill Roman
cemetery & Temple (site of)
Preston
Bowleaze Cove
To Weymouth
A353

The Roman period

It is clear that the attractions of the site continued to be recognised in the Roman period. In the 1st–2nd century AD a pair of ditches was dug, running north-east to south-west across the slope. An extensive gravel deposit was then laid down, probably to level the ground and prevent waterlogging. Later, a well constructed stone and ditch boundary was built in the same area, probably defining fields to the north and housing on the flat ground below, where dark soil containing settlement debris was found. Deposits of silty soil, washed down from the fields, built up behind the bank which was reinforced and heightened at least once, but fell out of use and was replaced by new ditches in the 3rd–4th century.

The nature of this settlement, however, is unclear as no evidence of buildings or associated structures or pits was found. Two babies had been buried here, which may indicate that the excavation area lay towards the edge of the settlement – a location frequently used for infant burials at this time. Further signs of occupation were identified to the north, towards the springhead, as well as east of the river and from the site of the pumping station immediately to the south.



This page
X-ray of Roman Buckle found during excavation
Facing page
Reconstruction of the Jordan Hill Temple, artist unknown

In 1843 traces of a 3rd–4th century AD substantial house or *villa* building, including a mosaic floor, bathhouse and furnace, were discovered just over one kilometre to the south, at Preston. This suggests that Sutton Poyntz was part of an estate, extending from the downs to the sea. Fourth century occupation and the piles of a possible Roman landing stage have been found at Bowleaze Cove. The water from the Sutton Poyntz springhead would have been an invaluable resource within such a villa-based agricultural estate. Given the water engineering skills displayed by the construction of the nine kilometre long aqueduct supplying water to Roman Dorchester, it is possible that some of the ditches and banks excavated at Sutton Poyntz were designed for water management and irrigation, rather than just for drainage.

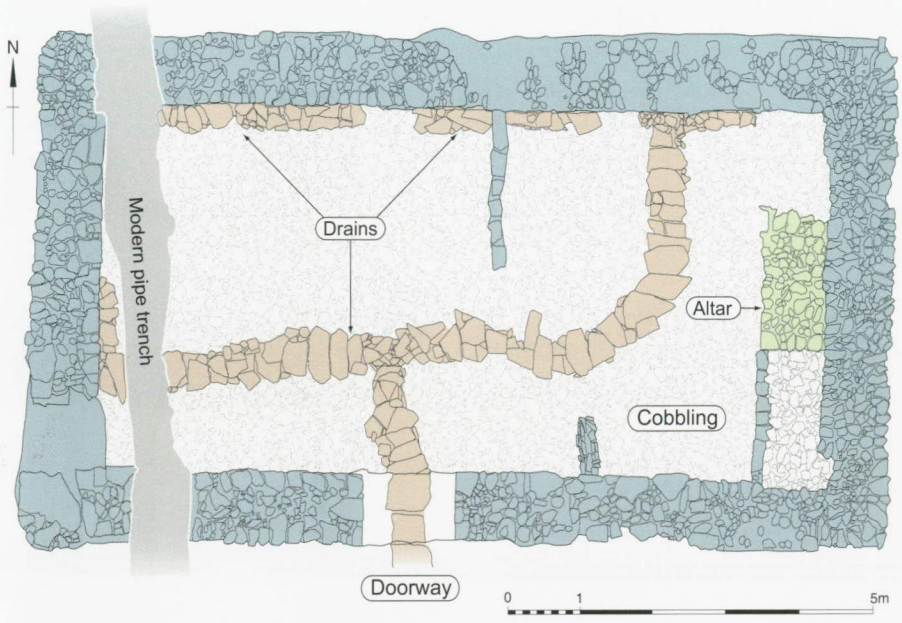
Further Roman burials have been found east of the pumping station, and along Plaisters Lane, north-west of the village. There was also a large Roman cemetery at Jordan Hill containing over 80 burials, most dating from the later part of the 1st century AD. This site was excavated in the mid-19th century and, again, no records remain – most of the objects were auctioned off. Some of the burials lay within well-defined plots surrounded by low walls and the whole cemetery may have been bounded by a wall. Close to the cemetery was an enclosure containing a square building interpreted as a temple, with a 5m deep shaft dug in its south-east corner. The shaft was filled with a series of votive deposits, including bird bones – buzzard, raven, starling or crow – and there were stone cists half-way down and at the base containing weapons and pots. Numerous coins from the temple enclosure indicated that it was used most intensively in the 4th and early 5th centuries.

Medieval and Post-medieval

Following the end of the Roman period there was another break in the occupation of the site. *Sutton* is first recorded in a Saxon charter of AD 891, its name, meaning 'southern settlement', referring to its position in relation to Dorchester with which it was included in the 1086 *Domesday Book*. The excavation revealed a group of medieval stone buildings, a network of shallow ditches indicating some form of land division, and a substantial pond possibly linked to a system of water management in connection with industrial activities.

The most important building was 10m long and 6m wide internally, and aligned east–west. Its walls, which were 0.9m thick and survived to a height of 0.6m, were faced inside and out with mortared, roughly hewn limestone blocks, with painted wall plaster on the inside. There was a door on the south side, and a small stone platform in the centre of the east wall; later on the doorway was moved to the west end and the building was divided across the centre. Beneath the cobbled floor, gullies capped with limestone slabs drained water away from the walls into a large circular stone-filled soakaway. The building was eventually pulled down. Pieces of architectural stonework, mostly door and/or window jambs, and roof tiles were found in the demolition rubble.

This page
Top left: conjectural photo of the chapel
Left: the chapel foundations excavated
Below: antler chesspiece
Facing page
Top: plan of excavated foundations
Bottom right: 'reconstructed' French medieval jug



The building was probably a chapel. The platform at the east end would have held the altar and a large chamfered slab of Purbeck Marble found in the demolition rubble was possibly its top. The only potentially religious item found was a book clasp, possibly from the bindings of a manuscript or devotional work. The building was erected in the mid 13th century, and altered soon after. Documentary sources refer to a medieval chapel at Sutton Poyntz at least as early as 1397, possibly as early as 1228, probably identified as the chapel of St Mary Magdalene. It still existed in 1483 but had gone by 1650.

The site produced some high quality finds, including fine glazed pottery jugs made in the Poole Harbour area and others imported from France, types rarely found on small rural settlements. There were also three iron military or hunting arrowheads, and an antler chess piece – either the King or the Queen. A significant proportion of the food remains were high class foods such as birds, fish and young animals. The character of these finds suggest that the site may have formed part of a manorial settlement, held by the Poyntz family, although known later to be centred at Preston

Two watermills - the Upper Mill and what is now known as Sutton Mill - were established when Hugo Poyntz held the manor. A series of upstream modifications were made to the river, including an earthern dam with a stone core, which diverted water to a higher elevation west of the original watercourse. The re-routing of the stream would have enabled the 'substantial pond' (referred to earlier) to be fed on higher ground. At a later date, towards the end of the 18th century, the stream was moved to still higher ground, this time by constructing a channel from higher upstream. The channel was to serve as a leat, which would provide a stronger head of water to power the conversion of the mill from undershot to the more efficient overshot type waterwheel. The present Upper Mill building dates from *c.* 1780 and the waterwheel pit still exists to the rear of the turbine house.

'Overcombe Mill'

The next clear episode of activity at the site was in 1856 when the springs were developed by the Weymouth Waterworks Company to be Weymouth's public water supply. The working part of the Upper Mill was demolished and an engine house of Portland stone was built in its place. Inside was installed a turbine driven ram pump made by D. Cook of Glasgow. At the same time a dam was built at Springhead to impound water from the springs to drive the turbine.

The next year a second turbine was added. This one continued to be used to pump water to a reservoir at Rimbury until 1958. The pump is now a Scheduled Monument.

To compensate the owners of the other two mills on the River Jordan against over-abstraction of water for supply, meters were fitted to the pumps and a daily register was kept. This has provided a record of pumping and spring-flow spanning a century and a half, which is something rare in the history of groundwater flows.

The register also records that, on 14th April 1858 the 'Dam gave way', following which a replacement, designed by Thomas Hawksley (consultant engineer to the company), was built in the spring of 1860.

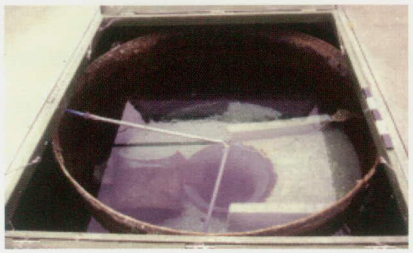
This page
Left: based on an engraving by John Collier of Overcombe Mill
Above: ram pump
Facing page
Top: the home of the waterworks superintendent

The story of the River Jordan does not end there, however, as it was a combination of the Upper, Sutton and Upwey Mills that formed the basis of 'Overcombe Mill', the focus of Thomas Hardy's 1880 novel *The Trumpet Major*. It was in this mill, owned in the story by Miller Loveday, that the local beauty Anne Garland lived with her widowed mother and was wooed by the miller's two sons and the nephew of the local squire. The novel, set against the backdrop of the Napoleonic Wars, contrasted the historical uncertainties of a time when there were real fears of a French invasion along the south coast, with the apparently unchanging cycles of rural agrarian life, as symbolised by the steady flow of the river and the constant turning of the mill wheel.

Hardy was only 16 years old when the working part of the Upper Mill was demolished, so he may not have actually seen the complete mill. He would have been well aware of the building's history though since, in 1869 at the age of 29, he had been employed as a trainee architect by George Crickmay, the waterworks manager. Hardy's description of 'Overcombe Mill' is based in part on the house that had been attached to the mill and which was, at the time he was writing, the home of the waterworks 1st engineer. 'Overcombe Mill', he wrote in the novel, 'presented at one end the appearance of a hard-working house slipping into the river, and at the other of an idle, genteel place, half-cloaked with creepers at this time of the year, and having no connection with flour'. There are clear similarities between the house, which still stands today, and the drawing of the mill, by John Collier, that appeared in the initial, serial version of the novel.

As well as his description of the mill, the river and the village, Hardy includes in the story other elements of the surrounding landscape, such as the bubbling spring at the head of the river and round barrows on the downs, from one of which Anne Garland and her party viewed the royal review of troops encamped along the Ridgeway. The review was attended by King George III during one of his visits to Weymouth. The events are commemorated in the 75m high depiction of the king astride his horse carved in 1807 on the chalk scarp of White Horse Hill.

A *postscript*

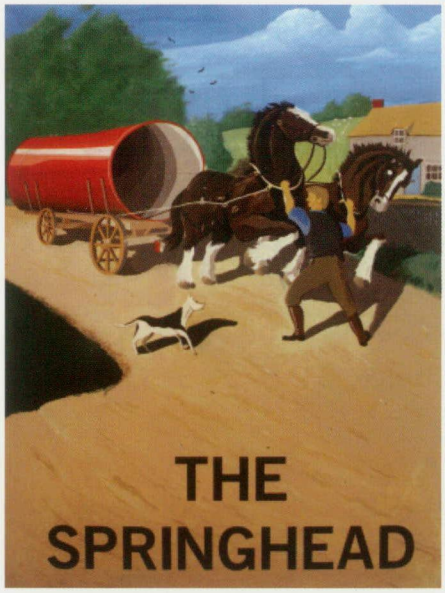


From 1860 to 2003, the springwater, after flowing out of the hillside above Sutton Poyntz, passed through a perforated cylinder, 2.2m in diameter, made of ½ inch (13mm) thick wrought iron plate, that acted as a crude strainer. It was made, however, with a very different purpose in mind.

Left: the funnel as a strainer
Below: the pub sign
Below left: the explosion on board the Great Eastern
copyright National Maritime Museum London

When Brunel designed his revolutionary iron paddle steam ship, the *Great Eastern*, he imagined that she would be his engineering masterpiece, able to carry 4000 passengers in style to the Far East and Australia without the need to refuel, her double hull making her unsinkable. At over 200m she was twice as long as any previous ship and was not equalled in size for another 40 years, but she failed as a passenger liner having been dogged by a series of mishaps. In September 1859 during sea trials off Hastings, there was an explosion in the forward funnel, during which six stokers died, and following the ship's arrival at Portland Harbour a coroner's inquest was held in Weymouth.

As an upper section of the funnel was relatively undamaged by the explosion, it was salvaged and taken to the Sutton Poyntz waterworks where it was installed during the construction of the new dam. *The Springhead* pub in Sutton Poyntz has a sign showing a team of horses hauling behind them the *Great Eastern's* funnel on a long wagon. As for Brunel – he had not been on board during the explosion having suffered a stroke; six days later, after hearing the news, he died.



Today the Victorian pumping station, built near the site of a mill dating back to the medieval period, and before that a Roman and Iron Age settlement, is still Weymouth's principal water supply and also houses the Water Supply Museum. As well as exhibiting equipment from the early years of the station's history, it also displays some of the archaeological finds unearthed during the excavations – objects, including those earliest Palaeolithic flint tools, that have been used by people attracted, through the ages, to this constant source of fresh running water.

Acknowledgements:

Many thanks to John Willows, consultant curator of Wessex Water's Water Supply Museum for all his assistance, and the late Bob Millard, Project Manager, Wessex Water.

Hembury style bowl based on an original drawing by A. L. Pope in *The Proceedings of the Dorset Natural History and Archaeological Society*, volume 79 (1957) p.112
Rimbury urns taken from the collections of Charles Warne DCM 1885.16.26/23/24/28/29 and on display in the Archaeology Gallery in the Dorset County Museum. Courtesy of the Dorset Natural History and Archaeological Society at the Dorset County Museum.
The Jordan Hill Temple from an original by an unknown artist
Overcombe Mill by John Collier from the serial version of the Trumpet Major
Pub sign by an unknown Artist
The Great Eastern courtesy of the National Maritme Museum. ID PY0309.© NMM London
The upper border on each page is based on the tile design on the walls of the two pump rooms at Sutton Poyntz Pumping Station. Designed and supplied by Carter & Co., Poole, the tiling was completed in 1934.

Wessex Water's decision to build a new water treatment works at Sutton Poyntz provided an opportunity, in 1993-4, for archaeologists from Wessex Archaeology to find out how people had lived, worked and worshipped in the landscape around the River Jordan.

This is the story of the archaeological investigations that preceeded construction of the new works, and of the river's influence on the people, the place and the landscape.

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