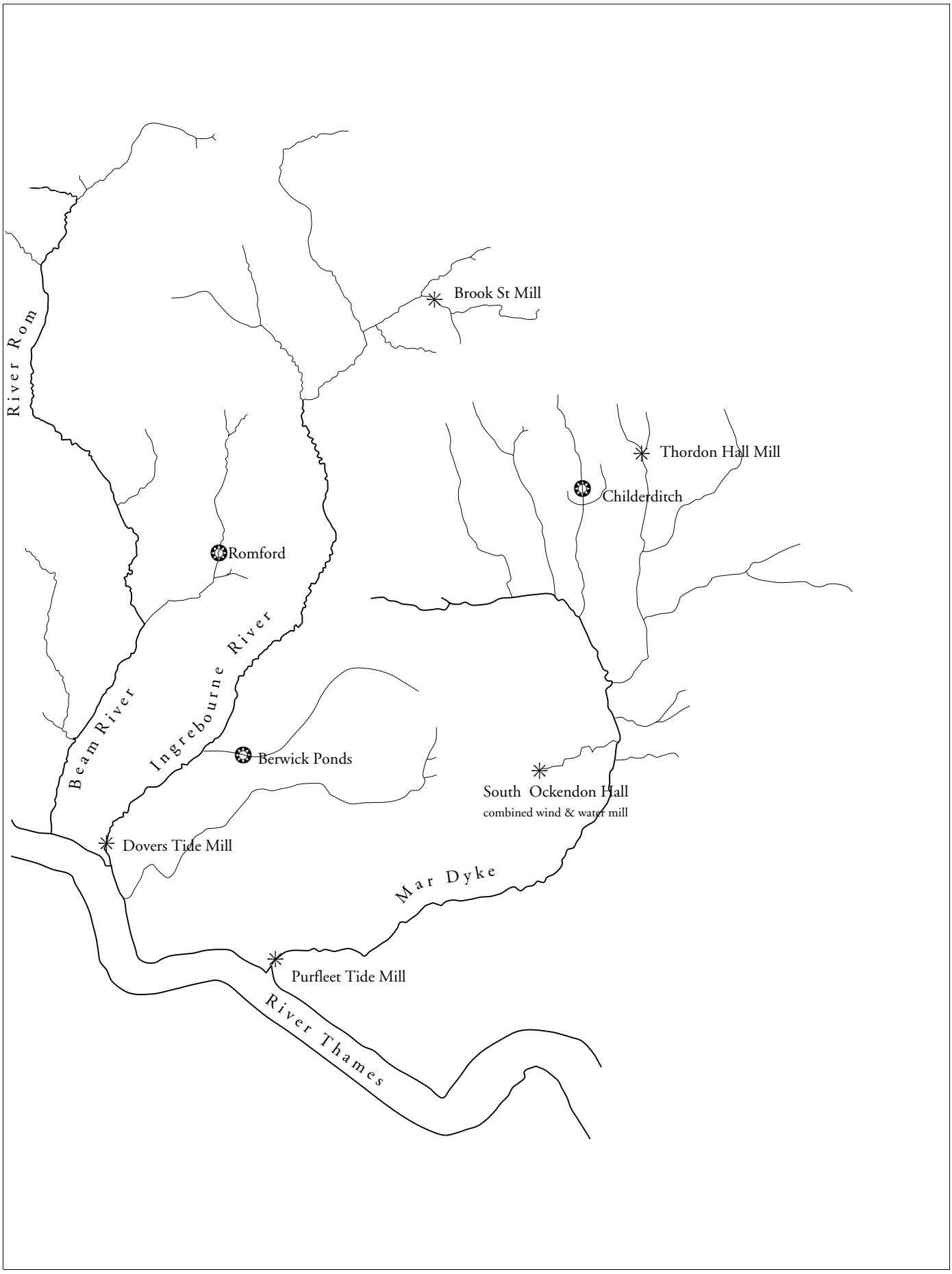
WATER MILLS ON THE LESSER TRIBUTARIES OF THE RIVER THAMES



RIVER INGREBORNE

South Weald. Brook Street mill.

In 1533 Thomas Roper quitclaimed to Robert Wreight, John Howe, John Green and William Payne, one messuage, one water mill, land and 12/- rent in South Weald for £80 [1]. Henry Roper in 1614 let Moat house, lands and a mill [2]. The water mill is recorded on Andre and Chapman's map of Essex in 1775.
The mill was advertised for rent in 1777:

To be let & entered upon immediatly. A small water mill with the dwelling house and stable and garden. Situated in Brook Street Brentwood, Essex. For further particulars inquire at the said mill [3].

The mill had probably gone by 1800. The stream now bridged was originaly divided in to two and crossed the highway as a ford, pedestrians were provided with a little bridge in the middle of the road by which they could cross dryshod [4]. Brook street bridge was widened on both sides in 1860, the stream was said to sometimes dry up in summer [5]. The stream is feed by springs and shortage of water may have been the reason for closure of the water mill.

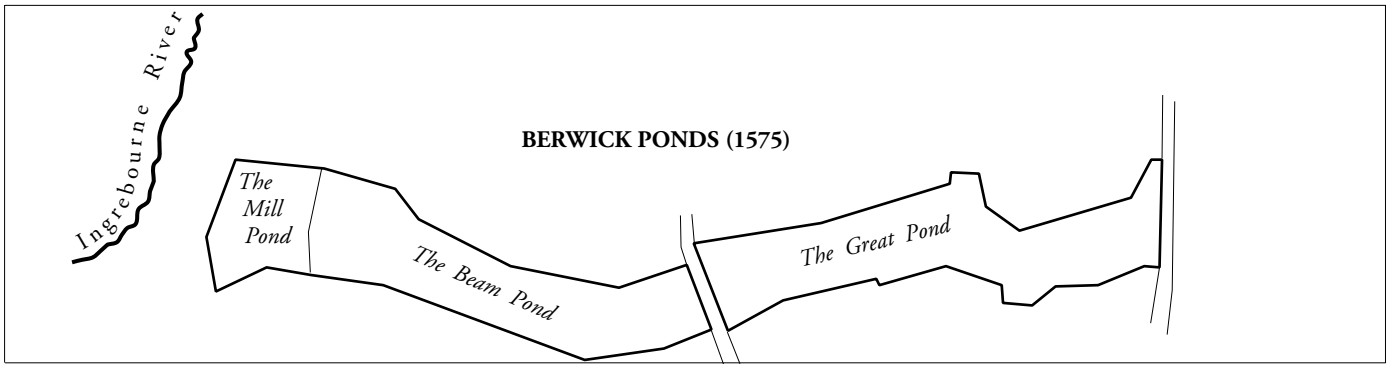
The London to Brentwood road crosses the Ingrebourne at Putwell Bridge, recorded as Dellbregge in 1276. The name Dell was derived from the nearby manor ot Dagenhams, in Noak Hill. A mill on the manor is mentioned in 1222 and 1256. A dellmelne and dellmelle was recorded in 1323 and dellmellelond in 1403. A windmill was recorded on the manor in C1355 and 1420. Possibly the windmill was built to replace an earlier water mill which stood at or near Putwell Bridge
NOTES.
1] Feet of Fines for Essex.
2] Morant vi, pp 121.
3] Chelmsford Cronicle: Friday 5th Sept 1777.
4] Essex Review. v32, p199.
5] E.R.O Q/ABp 41

Rainham

1) pond feed mill at Berwick Ponds .....
2) possible mill on the manor of South Hall.

1) The Manor of Bewick possed a water mill in 1315 [1]. A Map dated 1575 marks three ponds called the Mill Pond, the Beame Pond and the Great Pond but shows no mill building. [2]. The tith award for Rainham [3], shows that by 1839, only one now remained, the mill pond having become Oziers Cottage Wood, the Beam pond was now called The Ponds and the Great Pond had been sub-divided in to four fields named Road Mead, Pond Mead, Pond Three Acres and Pond Two Acres. An examination of the 2nd ed 25 inch map shows Abby Wood (Oziers cottage wood) divided from Bewick ponds (the Beam pond) by an embankment that carried a track from Abby cottage south to Parsonage Farm; a sluice is marked in the dam which allowed water from the ponds to flow in to the Ingrebourn river. It would seem possible that the embankment could have formed the mill dam with the mill positioned on or near the sluice. The ponds are feed by a small stream that flows from Corbet Tey.

2) Manor of South Hall, a Water mill recorded on the manor in 1270. [4]. St Catherines Hospital



(Lond) had a water mill in Rainham in 1335 [5]. South Hall stood near a small stream that originates near Okendon and flowes in the Thames near Little Coldharbour. The tith award map markes fields called Pentstock piece (No.47) and Sluice piece.
(No.45) at Little Cold Harbour, TL800 516 [6].
Rainham CHURCH was given , either by K. Henry II or Richard de Lucy the founder, to the Abbey of Lesnes, Kent. An agreement, concerning tiths, dated 1219 between Brother Hugh de Alneto, Prior to the House of the Hospital of Jerusalem in England, and Mark, Abbot of Lesnes; makes mention of the mill of Renham [7].

NOTES.
1] V.H.E vol 7 pp135
2] E.R.O T/M 145
3] E.R.O D/CT 289
4] ibid 1
5] ibid 1
6] E.R.O D/CT 280/1
7] Feet of Fines for Essex

Hornchurch

Tide mill on the Manor of Dovers.

In 1086 there was in *Haueringas* (Havering) On the lands of the King, (held before by Harold), now one mill.
In 1221 Richard de Walda granted to John de Renham one mill and appurts in Havering, as well as ponds, aqueducts, walls and pasture, to be held for the sum of thirty five shillings a year. In the reign of Henry III, Alace, wife of Richard de Dover, had one virgate of land, and one water mill, in frank marriage, in the vill of Havering, of the gift of Hamon Passelewe. In 1235 Richard de Dover held of Adam le Moningne 1 mill with appurts in Havering and in 1236 Richard de Walda quitclaimed to Richard de Dover 1 mill with appurts in Haveringes [1]. On the Manor of Dovers which is in the southern part of the Liberty of Havering, John de Dover held on his death in 1299 lands, a fishery of a two fleets and a water mill in the manor *La Neuwehalle* in Havering. On his death in 1335 Philip de Dover held lands a fishery of two fleets and a water mill. In 1376 Ralph Tyle was granted several lands in fee in Havering, and a water mill, with the fruits and services of the whole town of Havering, and 16 acres in Havering marsh; and Le Markditch, and Haveringheth, and two fleets of water. The two fleets could be the Beam River and the Ingrebourn River. In 1409 the manor of Dovers consisted of 1 messuage 1 mill 190 acres of land, 62 acres of meadow, 90 acres of pasture, 3 acres of wood, 2 fleets of water in Havering and Reynham [2]. The water mill was presumable a small building with only one pair of stones since it is described as "one water mill" in 1597.
The mill may have dissapeared shortly afterwards when a map of Rainham Creek dated 1600 markes on the west side of the creek fields named Mill hopes with a Mill lane and mill marsh [3]. Another map dated 1610 also marks a field called Mill marsh on west side of Rainham Creek [4]. In 1649 Mill Hopes is shown as belowing to the manor of Dovers [5]. Geo Millett of Dovers, Hornchurch, owned a piece of land called Mill or Milne marsh in Havering marsh in 1670 [6].

NOTES.
1] Essex feet of Fines.
2] Morant v1, pp60: Feet of Fines for Essex.
3] E.R.O D/DV 172
4] E.R.O D/DU 162/1
5] E.R.O D/DU 186/1
6] E.R.O D/DU 26/18

BEAM RIVER

Romford

A map of Havering dated 1610 markes a *mill water* between Giddy Hall Park and Stewards Park on the north side of Main Road, whether this name was associated with a nearby post windmill or possibly a water mill is not clear [1]. In 1642 there was a water mill in Stewards Park but had gone by 1696 [2]. Presentments made at court leet of Havering atte Bower, in April 1670 included reference to the failer of Romford surveyor to repair path and bridge at the water mill towards Hornchurch [3].
Blacks bridge which carries Main Road across the stream flowing from the the lake in Raphael park was marked as Watermill bridge on a map of 1728 and as Watermans bridge by André and Chapman in 1775 [4].
The present lake in Raphael Park was created by Richard Benyon of Gidea Hall in the mid 18th century, known by the name of Black's Canal it was formed by a bridge, of three elliptical arches of red stock bricks, acting as a dam to the stream, the bridge replaced an earlier one that may have been associated with a mill [5].
NOTES.
1] E.R.O D/DU 162/1
2] Inq post Mort: V.H.E v7, pp75
3] E.R.O D/DMs O36
4] E.R.O T/M 128.
5] Essex Review. Vol 39 pp105.

THE MAR DYKE

Childerditch

In a survey of the manor taken in 1295, by Coggeshal Abby, The manor included one windmill and one watermill [1]. Coggeshall Abby aquired Childerditch in 1251 in a grant from the Hovel family, in 1257 the abby further added land from Henry of Thorndon and in 1377 aquired Tillingham Hall, both manors remaining with the Abby until they were suurendered to the King in 1538.

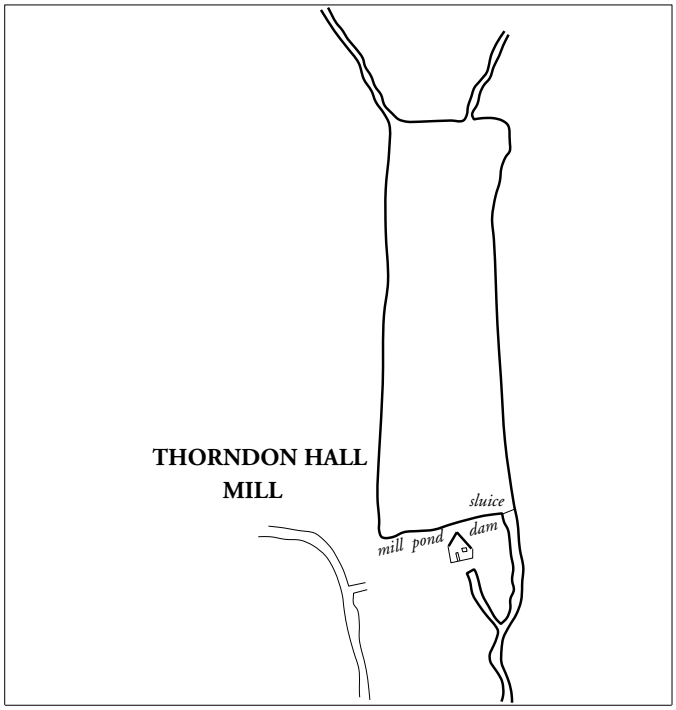
A map drawn in 1720 [2] shows two ponds called The Little Pond and the Great Pond with a post mill, named High Mill, standing on higher ground. The shape of the ponds would seem to indicate damms on the down stream ends. The ponds were well stocked in 1641 when fish to the value of £10 were stolen. The ponds are now (1989) greatly silted up, and are formed by dams built across a small valley which hold back the waters of a small stream. The upper dam is approx six feet high but not very broad whilst the lower dam is about twelve feet in height, in the middle, and is in bredth sufficiently wide to carry a track way across the valley. The age of the earthworks is unknown but may originally have served the dual purpose of forming a mill pond and fish ponds for the Abby.

NOTES.
1] P.R.O DL 41/10/7
2] E.R.O D/DP P19/1,2

West Horndon

A water mill was built by John Petre on his Thorndon Hall estate by damming a small stream in a valley near the Hall and appears to have been intended to replaced a horse mill. Building of the mill commenced in the autumn of 1580 and was completed by the summer of 1581. The earth works were constructed by John Robertson, a pond maker from Gilston in Hertfordshire, who contracted to do the work for the sum of £16. In October Robinson received an adavance payement of £4 and by November he had finished the pond head , for the extra sum of £4 he agreed to ram the penstock, this work was finished by the middle of the December. At the beginning of November Griffith David and John Mudge, carpenter, were at work constructing the sluice using planks cut by sawer Luke Middleton and iron work made by Richard Richard, smith. In December old Robert Gill was paid for cutting down bushes and trees on the site of the mill pond. No furtherwork was done at the mill site until February when the estate book [1] records that William Baker assisted by Richard Lynddy, of Childerditch, were paid for three days work " for ground work where the water-mill shall stand at the great pond". In March two of the pond makers men Richard Martyns and Cristopher Mossol, assisted by John Gray and William Sawkins of Childerditch were at work digging the foundations of the mill building, this work was completed that month as John Robinson received payment for ramming the foundations of the mill, Robinson and his men left the site on the 22nd of May. The mill machinery was built by William Cakebread, millwright from Writtle, who agreed in February to make and set up a water mill at the Great pond, West Horndon for the sum of £12, he was to be provided with timber, iron work, mill stones and ramming work with "meat, drinks and lodgings for him and his folks". At the beginning of March Cakebread went up to London to purchase mill stones.

Timber for the mill came from the estate and was sawn by by Luke Middleton and was carted from the saw pit yard to the carpenters working on the mill by Thomas Fote, who was paid by the day. Middleton was paid by the foot of timber cut, on the 17th of April he was paid for 13 days sawing the sum of 1/9d, for 21 foot of timber for the floodgates at 1d per foot. Work on the mill house must have started in late March as on the 5th of April payments were made to Griffith David, carpenter for work about the framing of a house for the watermill. The mill house must have been partly of brick as Edward and Robert Alboed and Richard Springfield were paid for the laying of bricks in wall of



Childerditch The Great Pond (lower pond)

Earth bank (R.S 1988)

Thorndon Hall Mill

Below : Mill pond and dam

Right : Mill dam, modern spillway

(R.S 2004)

water mill house. Richard Dable, labourer was paid for clearing the water ways at the water mill and also for making of the morter for the walls at the water mill. Griffith David was back working on the mill in April when he was paid for 13 days, he finished work in time for the roofing tiles to be delivered in May. These were supplied by Walter Gay of Great Warley who supplied 7000 tiles at 7/6s per thousand from his kiln at Heron Green. The tiling and plastering was undertaken by the Foster brothers of Doddinghurst. Lime came from Avely supplied by John Bayley at 14/- a load. There must have been a problem with the earth works in April, since in May extra payments were made for "ramming up of the brack at the great pond head", the work being paid for by the day. Cakebread was back at the pond head in April, and on the 13th Richard Richards, the smith, supplied Robinson with 21d worth of nayles and other iron work.

William Cakebread received his final payment in June. The iron work was supplied by Richard Richards, smith, who was paid for his work by weight. In march Richards supplied 4 new mill bills, well steeled at both ends at 8d each; 2 gudgeons, 2 little bolts for them and two houps for the water wheel weighing 68lbs at 4d per pound; dove tails for the water wheel and 4 bolts for the coggwheel weighing 55lbs at 4d the pound, also one spindle and ring for the mill stones weighing 72lbs at a cost of 24/-. In June Richards was paid for 2 bands of iron for the trundle of the new water wheel and he also supplied iron fittings for the windows and doors. Some idea of the shape of the mill building can be got from an estate map drawn in 1598 by John Walker [2] Although the estate books only list the payments made during the construction of the mill, the list of materials supplied seem to indicate a single wheel driving a single pair of stones. The tunn was evidently circular as this was supplied by a cooper, Thomas Stevens of Ingatstone, who was paid 12/- in July for "a myll bynne that standethh about the water mill stones," also in July Thomas Scott recieved 5/- for a stock lock for the mill door.

The water mill seems to have been leased with a slaughter house, grannery and malt house, all previously let with a horse mill [3] which in March and July 1581 was out of repair and needed the attention of Richard Richards. An inventory was taken in the October of 1592 at the leaving of William Moll and the delivery into the charge of Peter Bradwyn [4]. Bradwyn left in 1595 when Robert Pigg tookover [5]. Pigg stayed until 1608 when Robert Aboroll took over. Another inventory was taken in 1611 but this gives no names. [6]. In 1595 there was a new spare stone lying by in the house however this seems to have been used by 1608. Other intems include the 2 mill bills made by Richards the smith, a rope and winch to wind up sacks, a stock lock and a key to the door with a ring on the outside, the penstock had an iron bolt going through it with a hanging lock and a key there to.

The water mill stood near Old Thorndon Hall which was pulled down around 1760, the great pond was at some latter date landscaped and as the overall shape of the pond as shown on modern maps is different from that drawn on Walkers map, it may be that the old mill dam was raised and strengthened. The only memory of the watermill is now in the name of Mill Wood lying below the dam.

The pond now is much frequented by anglers and it would seem that has always been well stocked with fish. In 1641 Thos Reave, Wm Madelay, John Witham and Wm Mott were acused of pulling up the sluice in the pond, at West Horndon, and stealing 500 carp and other fish to the value of £20 and doing likewise at the ponds on Childerditch common and stealing fish to the value of £10 [7]. The water mill may have gone out of use by this date.

NOTES
1] E.R.O D/DP A19
2] E.R.O D/DP P5.
3] E.R.O D/DP E2/5
4] E.R.O D/DP E2/18.
5] E.R.O D/DP E2/13
6] E.R.O D/DP E2/5
7] E.R.O D/DP L36/26

South Ockendon

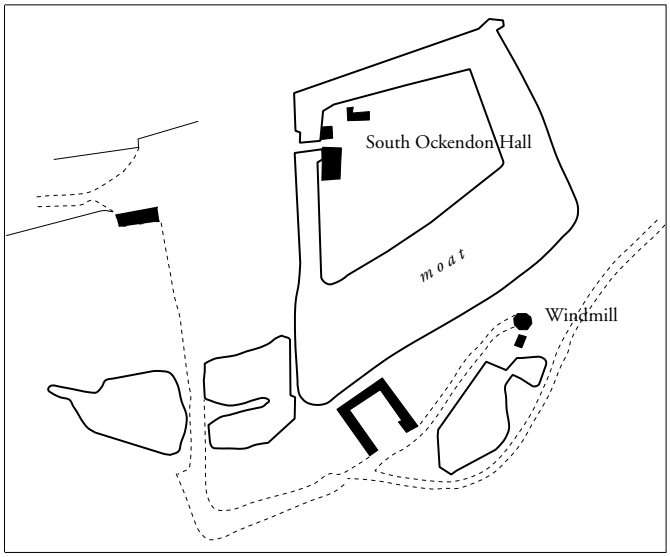
A combined wind and water mill feed from the moat of South Ockendon Hall. TQ 604831

In 1086 there was in *Wochaduna* on the lands of Geoffrey de Mandeville, (held before by Fridebert, a thane, freely as a manor), now one mill. South Ockendon Hall was held in 1295 by Philip de la Rockele and included one wind mill.

The 1 inch O.S map of 1805 does not show a mill but Greenwoods map of Essex of 1825 markes a wind mill. The evidence for water power comes in 1845 when South Ockendon Hall was put up for sale. the estate included a Windmill with fan sails and water power, with undershot water wheel, which drove 4pr of stones and the machinery and going gear and connections necessary for the manufacturing of flour and grinding of all kinds of grain. The whole machinery was said to be under one roof [1]. The tith award map of 1840 marks the mill standing on the edge of the moat [2]. It seems that at some later date the water powered

South Ockendon Wind mill

photographed around 1905
no evidence of water powered machinery



machinery was removed and the mill continued in use with wind power only until about 1920.

NOTES.
1] E.R.O B 1531
2] E.R.O D/CT 261

Averly and Greys Thurrock

Purfleet mill, a tide mill on the outfall of the Mar Dyk into the Thames.

Greys Thurrock In 1228 Richard de Grey had a mill which evidently stood next to a bridge in Thurrock, and was the subject of a complaint brought against him by the Prior of the Hospital of Jeruselem over the bearthing of boats next to the mill [1]. A watermill is recorded on the manor in 1308 and 1335 [2].

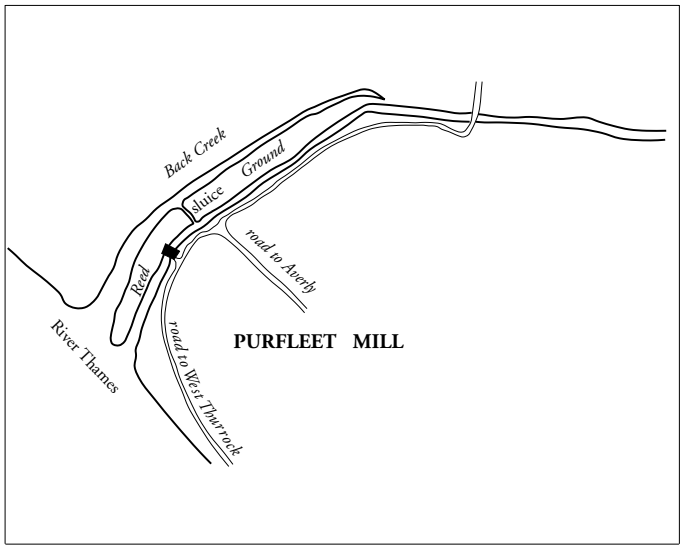
Averly. There was a water mill on the manor in 1286 which in 1316 was ruinous and in danger of falling down. In 1360 and later in 1374 it was said to be worthless because of flooding and the lack of mill stones. [3]. In 1318 a mill in Alvythele was owned by Mathew Underwood who granted it with land to William de Bumpstead who was still in possesion in 1341 [4].

Purfleet. In 1324 a mill was recorded in Purfleet [5]. The water mill often gave landowner owners adjacent to the Mardyke problems by causing flooding. In 1563 the Crown, Elizebeth being lord of the manor of Purfleet, paid £400 to repair the mill and seawalls, the sluice gates were repaired in 1573 and 1575 [6]. A John Easton was recorded in 1563 as holding the mill by lease. [7].

A survey of manor of "Avethley" taken in 1578 placed "Purflete Myll" on the boundry of the manor. [8]. A map of the manor of Avethley dated 1593 marked the water mill with a wind mill which was in Thurock [9]. Both the windmill and water mill were part of the manor of West Hall, West Thurrock. The wind mill stood on Vinyard Hill, and is recorded from 1555 to 1608 when a lease was granted for 21 years at £10 per annum [10]. In 1574 Cicely Long widow of Robt Long owned the manor of West Hall including Purfleet water mill [11]. In 1666 John Micklewaite sold to Benj Gouden Purfleet mills and land for the sum of £950 [12]. When in 1673 Benj Gouden, clothworker, sold the mills to Henry Fausett, brewer of Dartford for the sum of £700 the mill was described as 3 water mills called Purfleet mills [13]. The water mill is shown in detail on a map surveyed in 1744 [14]. By 1757 when the mills were in the ownership of Bryan Fausett there were 5 water corn mills [15].

In 1754 proposals were laid before parliament to take down the gun powder magazine situated near Greenwich, in the county of Kent, and erect a new magazine near Purfleet, the act being passed in 1759 [16]. The act enabled the purchase of "those water corn mills commonly called Purfleet mills", and it was stipulated in the act that:

And whereas the mills commonly called the Purfleet mills by keeping back the fresh water, and admitting the salt water out of the Thames into the fleet or cut called Mar Ditch, have been found very detrimental to the adjacent lands, as well as to the health of the country in general, and may prove pernicious to the garrison intended to guard the said magazine; be it further enacted by the Authority aforesaid, that as soon as the commissioner shall be in actual possession and seisin of the said mills called Purfleet mills the Master General of his Majesty's Ordinance for the time being, or the Lieutenant General and principal officers of his Majesty's ordinance for the time being, or any three of them, shall effectually take down the said mills and no mills shall



thereafter, on any account, be built either at the mouth of the fleet or cut called the Mar ditch, or in any other part thereof that shall, by virtue of this act, be vested in the said commissioners before mentioned; but that that the said fleet or cut shall be left free and open according to the directions here in after mentioned; any thing in this act to the contrary thereof in any wise not'withstanding.
And be it further enacted by the authority aforesaid that the Master general of his Majesty's for the time being, or the Lieutentant General and his principle officers of his majesty's Ordinance for the time being or any three or more of them, shall, when the said mills shall have been taken down fix such proper flood gates not less than 14ft in width to be laid at least 3 ft lower than the mill water way now is as shall effectually keep the sea water out of the said fleet and permit fresh water to go off with the ebb tides and shall from time to time clear the silt from the mouth of the said fleet and cause such works to be erected as may be sufficient for the said purpose aforesaid.

In 1760 the site of the mills and some 25 acres of surrounding land was purchased by the Board of Ordinance. Purfleet Mills & mill house & malt house wharfs, reed land etc. were purchased from Rev Bryan Fawsett and his holding was valued at £2530 [17]. The water mills, three inns and several cottages were demolished, new and larger sluice gates replaced those of the water mill.
In 1760 a report was made by John Grundy, Engineer of Spalding, "of the state of the valley near Avely with Schemes proposed for the Draining and preserving the same" [18].

John Grundy's report:

Minutes and observations made and levels taken on the main drain or sewer called Maw Ditch near Avely in Essex and lands contiguous compared with its outfall into the river Thames at Purfleet or Poor Fleet. The place proposed for erecting a Powder Magazine for the use of the goverment done by order of the Right Honable Lord Dacre by John Grundy of Spalding in Lincolnshire Engineer, 17960.
Fryday Dec the 28th, 1759
Set out from Spalding and came to Avely Park on Monday Dec the 31st.
Tuesday Jan the 1st, 1760.
Went with Mr Maugham steward to the said Lord Dacre to Purfleet mill which is fixed on the mouth of a main drain or sewer called the Maw Ditch adjoining to the river Thames the outfall of the said main Drain. This mill is worked by taking the tydes in to the said Maw (mark) ditch through a fall door fixed for that purpose under the water way of the said mill and at high tide the said fall door shutting itself keep back the said water until about 3 hours ebb at which time there becomes a sufficient fall for the for the water retained above to work the mill until 2 hours after the flood; that they can work five hours; that is three hours in the ebb and two hours after the flood.
I am informed that spring tides in the Thames rise at the mill about 16 feet and neap tides about 10 feet. It floods about 7 hours and refloods about 5 hours. I am also informed that the tide flows 5 hours in the Thames before it stops the mill from working which shews there is a considerable fall betwix it and low water, some of the workmen there say they think it to be about 8 feet.
Above this mill the said Maw Ditch extends itself in a very meandering cource through a valley lending on an average in a north and by east direction about ten miles upinto the country. This valley is in some places not more than 100 yards and in others near a quarter of a mile broad and as I am informed contains about 600 acres of low ground subject to to be drowned which lands lye in the several parishes of West Thurrock, Avely, Stifford, South Ockendon and Bulfen.
At the lower end of this drain begining at the said mill and parrallel to it is an old creek called back creek which runs upwards near a quarter of a mile is very large and open at the lower end to the Thames and receives a great quantity of tyde waters which I think might be rendered useful to the said mill.
In the bank which divides the back creek from the main ditch is a draw door or slaker which as I am informed serves to let of the excess of fresh water in floods and as a gage to the said mills.
Went from Purfleet mills upwards by the said main drain or sewer called Maw Ditch and by the way viewed the state of the adjoining grounds or meads which I found to be even at this time very wet; I also found that the several fence, ditches, drains and gripples through which the drainage of these meads should be made into the main drain were very imperfect and in a manner landed up so that whatever waters fall thereon have no proper courses to get into the said main drain.
At about two miles above Purfleet mill is a main road leading from Avely to Grays and a bridge called Aveley Bridge across this Maw ditch.
It was observed that the tide flowed for about 2 hours before it stopped the mill from working and during this time the tide rose 7 feet. The tide was taken in by a fall door of 5 foot waterway and flowed near 5 miles up the Maw ditch. The water was let out through the water wheel through water ways of about 4 feet, the slaker gate into the back creek was 4 feet wide. It was found that the operation of the tide mill meant that the water in the Mar Dyke was held back some six hours in every twenty four longer than it would have been had the mill not been there this meant that the surrounding land was not very well drained and subject to flooding.
The tides which are taken in at Purfleet mill flow all the way up the valley in the May drain as well as ditch,small drains and creeks for about a mile above Stifford bridge which is about 5 miles up the country side and are a great injury to the drainage of this valley not only by their unbounded flow and obstructed flow through the connected gage at the said mills but also by the great quantity of land and sediment brought up thereby which soils up and obstructs the said Maw dithes

and gutters.
Nb. the tyde water into the valley at Purfleet mills are kept for the use there off means 3 hours in 12 more then they otherwise would be.

John Gundy's report contains details of the levels easured from low water in the Thames to the mill and from the mill upto Stifford bridge. To the top of the "baulk" over the mill waterway was 18 feet 3 ins. from low water mark. A meadow near Aveley bridge was 15 feet 4.7 inches above low water and Palmers Mead near Stifford bridge was 16 feet 5 inches.

NOTES.
1] Feet of Fines for Essex
2] V.H.E
3] ibid 2
4] ibid 1
5] E.R.O D/DAc 325
6] ibid 2
7] E.R.O D/SH 7, ff105
8] E.R.O D/DTh M17
9] E.R.O D/DTh M18
10] E.R.O. D/DAc 285,286,287,288,289; D/DWh 2,11,43; D/DAl 254.
11] E.R.O D/DAc 250
12] E.R.O D/DWh 148 13; D/DWh 150
14] E.R.O T/M 301
15] E.R.O D/DWh 155
16] E.R.O D/DL O27
17] E.R.O T/A 235
18] E.R.O D/DL O26.

