Flour Milling in Lyncombe and Widcombe

Introduction

One does not immediately associate Lyncombe and Widcombe with the milling of flour and grist, but in 1086, the Domesday Book recorded two small water powered mills in Lincvme (Lyncombe), both held by Bath Abbey (see Annex A). In the eighteenth century, three mills were operating in the district, the Lower Widcombe Mill on Claverton Street. the Upper Widcombe Mill on Ralph Allen Drive and Gibbs Mill, just below the lower entrance to Prior Park Gardens. The watermills were powered, not by the River Avon, but by two small brooks, the Lyn Brook and the Widcombe Brook. The location of the Anglo-Saxon mills is not known, but it is postulated that the sites were the later Lower and Upper Widcombe Mills. The water-powered mills were superseded in the late eighteenth century by a steam powered flour mill, Camden Mill on the Lower Bristol Road. Camden Mill closed in the 1950s, ending a period of over 900 years of milling. This paper describes a walk from Quays Bridge to Prior Park, tracing the locations of the mills and the watercourses that powered them.

The Walk

The walk was approx. 2.5 miles long (Figure 1), starting on Quays Bridge, the modern 65m bridge (opened 2022) which links Green Park Road with Bath Quays and the Newark Works. The route is also marked on the 1883 OS Map (Figure 2) to provide a comparison of the modern street plan with that of the late eighteenth century. Looking upstream from Quays Bridge, on the south (Widcombe) bank, a series of former industrial buildings can be seen: the offices of BMT, formerly Bayer's Corset Factory; the offices of Burro-Happold, formerly Camden Flour Mill; an early nineteenth century malt house and an early twentieth century grain silo, both now domestic flats. The first flour mill on the walk is Camden Mill.

Camden Mill

Camden Mill (Figure 3) was built in 1880[i] on the site of a former Oil Cake[1] mill. The oil cake mill burnt down in 1879 and the present mill was built soon after to a design of Henry Williams, of Bristol, and extended in 1892 by F W Gardiner. The mill illustrates the impact of the industrial revolution on flour milling: waterpower being replaced by steam power, enabling an increase in scale and efficiency of the milling operation. Camden Mill is six storeys high and eleven bays wide with windows on both the river and street fronts of the building – giving a potential for 132 workstations. The mill was powered by a steam engine, sited in what is now Burro-Happold's car park, seen in the late nineteenth century photograph at Figure 4. The scars left by the engine drive and lean-to roof can still be seen on the building today. The mill contained a series of roller mills (Figure 5), being cylindrical rollers used to crush and grind the grain, as opposed to the older mills which used two or three horizontally mounted stones driven by a vertical shaft.

Camden Mil is constructed from coursed squared limestone, tightly jointed, under a Welsh slate roof. The interior structure is timber beams supported on cast iron columns, with some brick fireproofing, reflecting the high risk of fire in a mill producing finely ground flour. The first floor has a fireproof ceiling of vaulted brick in the two easternmost bays; the remaining floors are of boards over timber joists. On the street front, the first and fifth bays each have five taking-in doors, bays eight and nine each have two, and bay ten has three, all set in openings with segmental heads. The overhanging hoists are of timber. The river front has similar treatment to the street front, with gabled timber hoists to bays seven and eleven, with taking-in doors to work from barges in bays one, two, seven and eleven. Windows, doors and detailing are like those to the main elevation and have the same detailing. Throughout all the elevations, the internal floors are marked externally by cast iron bosses secured through the ends of the floor beams.

[1] Oil Cake: coarse residue obtained after oil is is removed from various oilseeds, rich in protein and minerals, used as animal and poultry feed.

Camden Mill is listed Grade II, Historic England's citation stating that it is a good example of an increasingly rare survival, a large-scale flour mill dating from 1879-80, designed by a recognised regional architect of industrial buildings (Henry Williams of Bristol). The mill is one of the few remaining buildings which demonstrate the importance that river traffic had for Bath, beginning with the opening of the Avon Improvement in 1727. It is a valuable reminder of Bath's former importance as the centre of an agricultural area. Camden Mill has good group value with nearby Camden Malthouse and Grain Silo.

Steam flour mills have also passed into history, Camden Mill ceasing operation in the 1950s, ending flour milling in Bath after over 900 years of milling. The building was converted to office use in 1974-5 and is now occupied by the engineering consultancy Burro Happold.

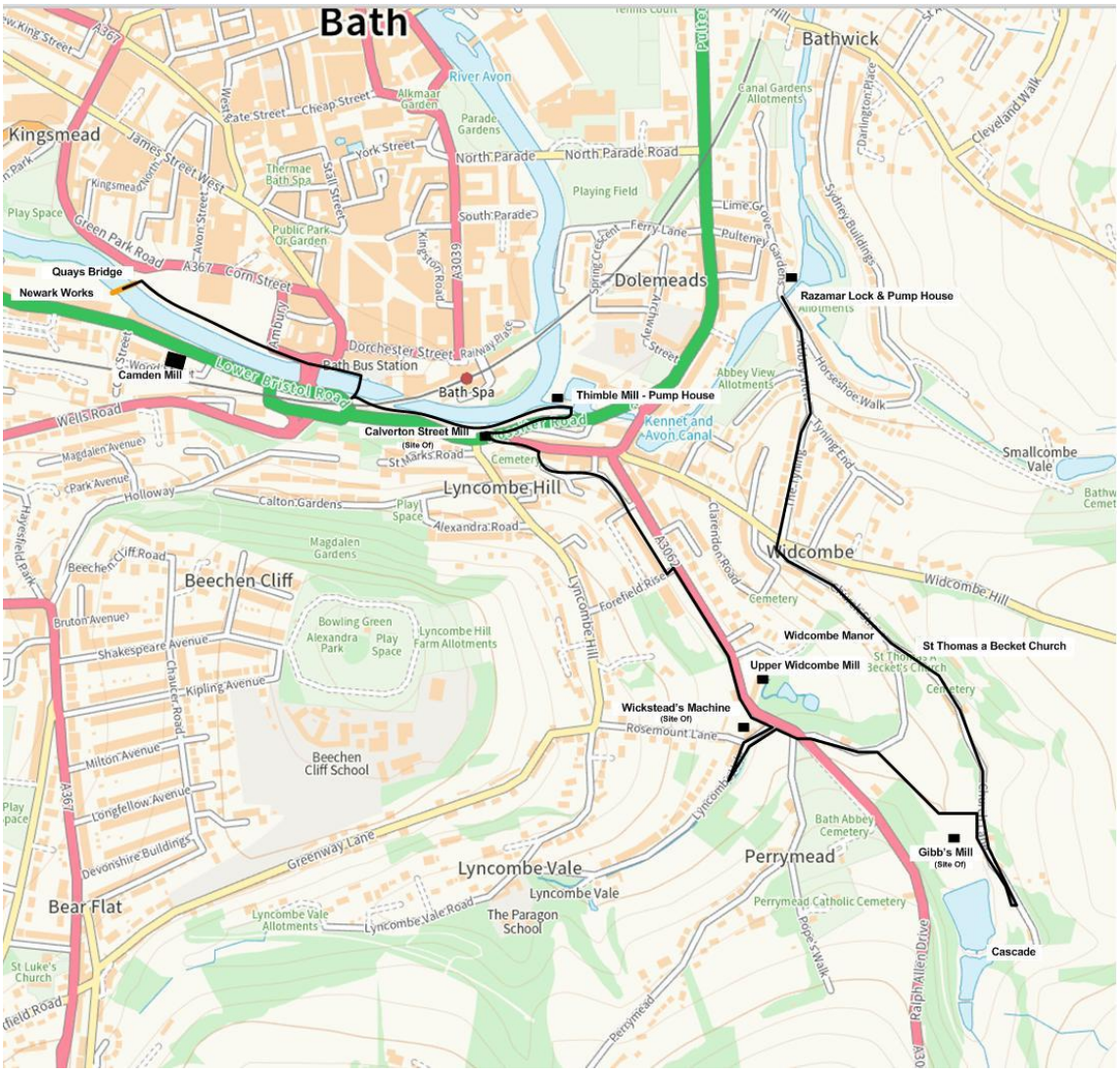


Figure 1. The Walk - Route

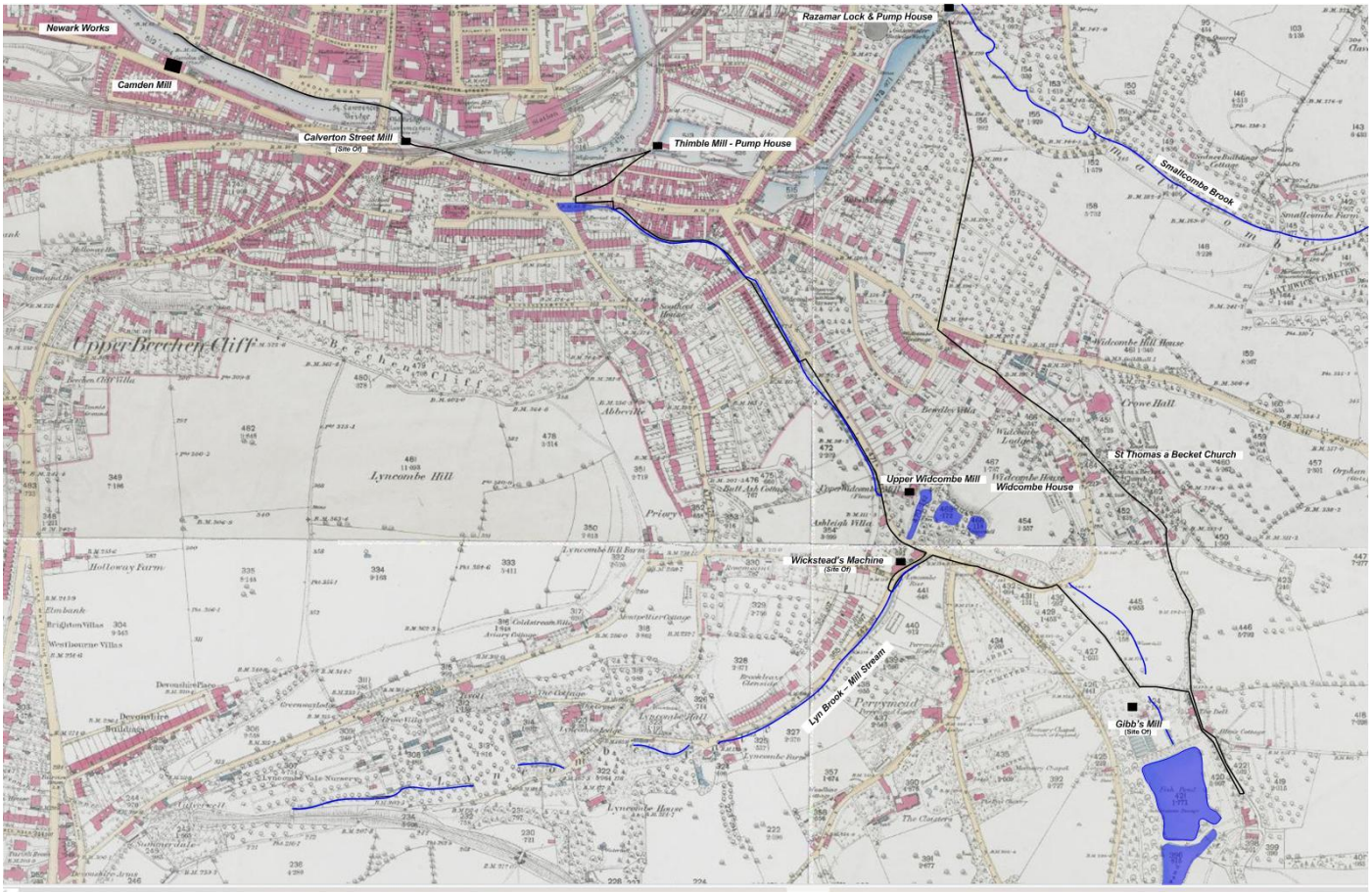
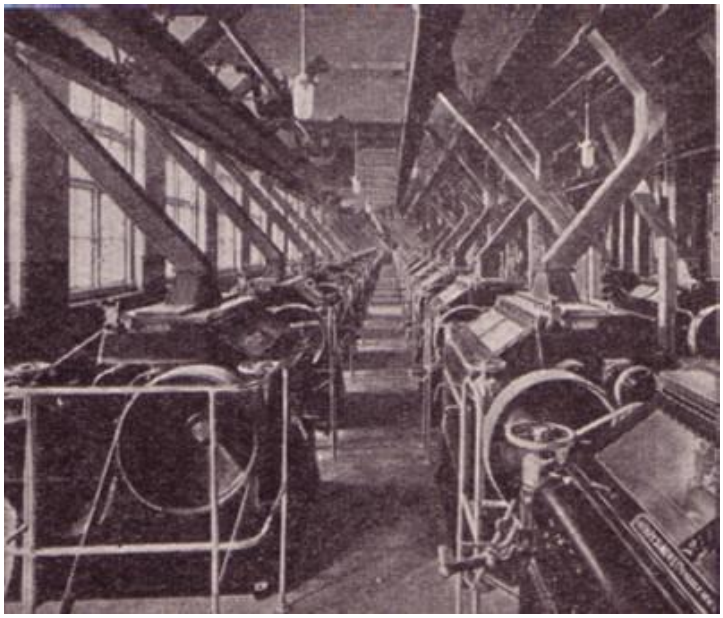


Figure 2. Lyncombe and Widcombe - 1883

Figure 3. Camden Mill - 2022

Figure 4. Camden Mill. c.1900



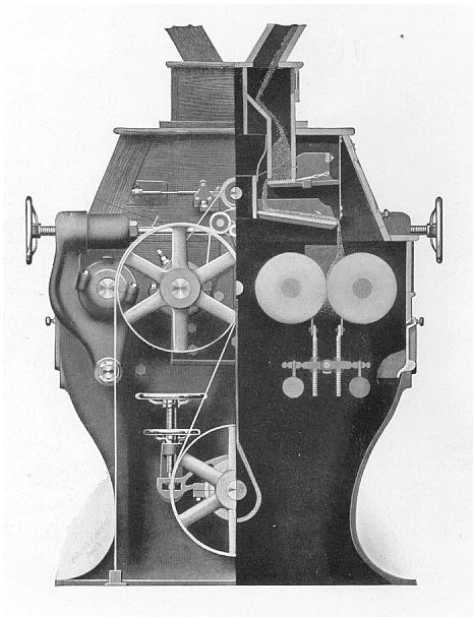


Figure 5. Roller Mill

The walk followed the Riverside Footpath, formerly the New Quay and Broad Quay, on the north (Bath) side of the river, passing Camden Mill, the malt mill, grain silo and the former site of the Old Bath Bridge, from which the photograph at Figure 4 was taken. The walk crossed the river to the Widcombe bank via Churchill Footbridge, noting the former site of Dorchester Street electricity generating station, now the bus station, the Skew Bridge carrying the Great Western Railway over the river, and Brunel's railway viaduct crossing the Wells Way. The walk followed the towpath on the south bank of the river, passing under the Skew Bridge and stopping momentarily under the Halfpenny Bridge. It was noted that the deck of the Halfpenny Bridge was level with Rossiter Street (formerly Claverton Street) but crossed approx. eighteen feet above the river (Figure 6). This was the site of the Claverton Street Mill, for which the fall of land was significant. The topography of the site would be addressed later in the walk.

Thimble Mill

The walk continued along the towpath to the junction of the Kennet and Avon Canal and River Avon, Thimble Mill being observed, alongside the canal Lower Lock. The Thimble Mill was not in fact a mill but a pump house for raising

water from the river to the Wash House Lock behind Caroline Buildings on Pulteney Road. The pump was one of two built in the 1830s which worked in tandem to raise water from the river to the Top Lock and Nine-Mile-Pound of the canal[2]. The pumps were beam engines, akin to the engines at Crofton pumping station and remained in operation until 1855. The remains of the second pump house would be observed later in the walk.

The walk joined Rossiter Road and turned right towards the Halfpenny Bridge and Toll House.

Claverton Street Mill

A water-powered flour mill stood on Claverton Street (Figure 6), now the A36 Rossiter Road, close to the Halfpenny Bridge. Its location can be pinpointed by comparison to the surviving toll house. The mill stood on the site now occupied by the island between the two carriageways of the A36. It ceased operation in 1882, shortly after Camden Steam Flour Mill opened. The building was subsequently sold, when it was styled 'Widcombe Old Mill'. The shell of the mill and adjacent mill owners house were repurposed and continued to be used until the late 1960s, it being one of the last buildings to be demolished when Claverton Street was redeveloped to enable construction of the improved traffic scheme. The building was photographed in 1967 and drawn by Peter Coard in 1969, shortly before its demolition.

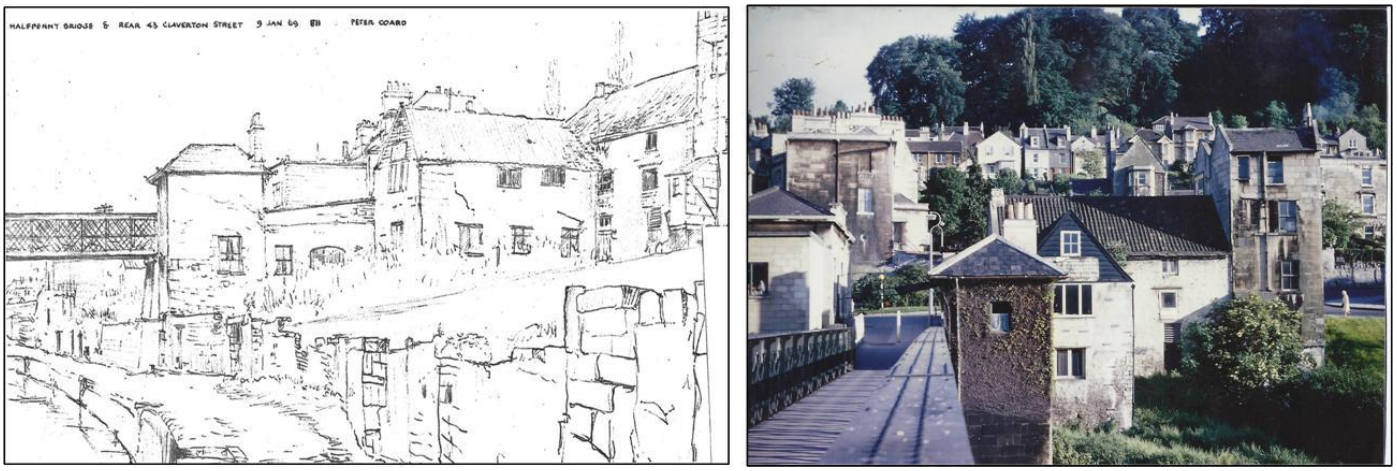


Figure 6. Claverton Street Mill

The earliest reference to the Claverton Street Mill dates to 1327 when Ricardo the miller is mentioned in a deed. Claverton Street is also referred to as Mulle Street[ii] which has been interpreted as Mill Street. The Gibbs family operated the mill in the 1600s, the 1607 Lyncombe and Widcombe Parish Register recorded the death of Thomas Gibbs of the Mill[iii]. His widow continued to operate the mill, who in 1615 was accused of working the mill on Sundays by puritan elements in Bath. The mill was let in 1628 to Thomas Gibbs, presumed son of Thomas senior, for an annual rent of £6[iv]. Thomas died in 1672, his will containing an inventory of the mill[v]. A series of millers are subsequently recorded in the eighteenth and nineteenth centuries:

1733: R Brick.
1750: R Broad and Mr White.
1799: Henry Hancock, Miller. William Gay Baker[vi]
1807: Hancock's Nill. Owner. Trustees of Mr Merrit (dec'd). Miller: Mr Usborne[vii].
1828: George Dowse. Baker & Flour Dealer.
1841: A.E. Saunders & Son, Millers of Town Walls by Parade[viii].
1882: Closure of Claverton Street Mill
1893: Auction sale of Widcombe Old mill[ix]. Occupier, A Gough, Cabinet & furniture maker.
1903: Auction sale of Widcombe Old mill

[2] The stretch of canal from the Widcombe Top Lock to Bradford-on-Avon was known by the canal engineers as the 'Nine Mile Pound', being s level stretch of canal without locks and hence a water pound nine miles long.

The mill was built into the riverbank meaning that from the road front, it appeared to be a single-story building but from the river front it can be seen to be a three-story building, the Claverton Street entrance being on the second floor of the mill. The taller building next to the mill is the mill owner's house. Examination of the 1883 OS map and the internal walls of the two buildings shows that they were one structure, not two adjacent structures.

A plan of Claverton Street Mill has not survived but the layout of a contemporary mill - Stratford Mill - exists (Figure 7), which is indicative of the likely layout of the three water powered mills in Widcombe. Stratford Mill was on the River Chew (ST 5676 5875), near West Harptree. The site was flooded when Chew Valley Reservoir was created in the 1950s, but the mill was dismantled and re-erected at Blaise Castle in Bristol (ST 5614 7839) as a monument to the lost structures. The drawing is from the survey of the mill prior to its removal[x].

The ground floor housed the mill's gearing. A waterwheel, external to the mill, was mounted on a common horizontal axle with a pit-wheel (A) inside the mill. The pit-wheel engaged with a wallower (B), mounted on the main vertical shaft (C). As the waterwheel turned about its horizontal axis, the main shaft rotated about a vertical axis. A great spur wheel (D) was mounted on the main shaft, above the wallower, which engaged with smaller stone nuts (K). The gear ratio was such that with the waterwheel turning at approx. 15 rpm, the stone nuts turned at approx. 120 rpm. The stone nuts drove the upper stone of a pair of millstones (G) on the milling floor above. The first floor was the milling floor, a mill typically housing two or three sets of stones. At the top of the main shaft was a crown wheel which engaged with small gear mounted on a lay shaft which drove a sack hoist via a belt drive on the third floor or attic. The sack hoist was used to raise grain to the third-floor warehouse. When milling was in operation, grain was poured into a bin which delivered the grain into a receiving hopper on top of the millstones, feeding the stones by gravity.

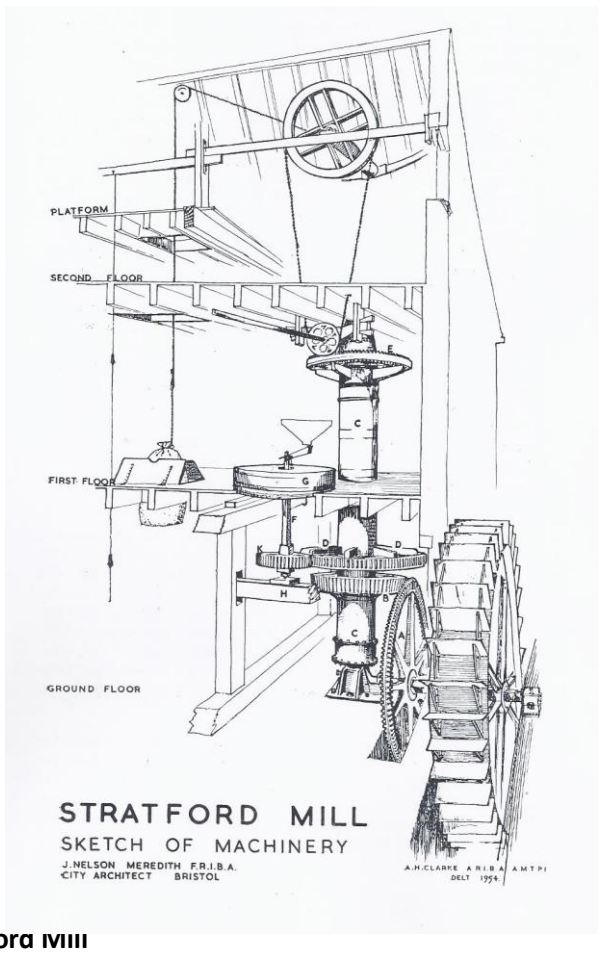


Figure 7. Stratford Mill

Whereas Stratford Mill was powered by an undershot waterwheel, Claverton Street Mill was powered by either an overshot or backshot waterwheel (see Annex B), supplied by water from a millpond on the Lyncombe Hill side of A36 Rossiter Road, the supply to the mill passing through a culvert under the road. The site was clearly selected to take advantage of its topography, recalling the 18-foot fall observed when passing beneath the Halfpenny Bridge; hence a higher efficiency wheel could be employed. Today, there is a small commercial property on the site of the millpond,

but tracing the site back through the OS maps, the site was variously a lavatory (1950), a urinal (1921) and a millpond (1883). The supply to the pond was a millstream which is clearly seen on the 1883 OS map (Figure 8). The millstream flowed in a man-made leat[3] behind Claverton Street and Ralph Allen's Cottages, then alongside Ralph Allen Drive. following a contour down the valley to the pond.

Figure 8. Lower Widcombe Mill Stream

The walk following the millstream's course upstream from the pond (Figure 9). Walking east along Claverton Street, for approx. 10 yards, the walk turned right up a set of steps to the lane behind the buildings on Claverton Street, which was the millstream's course. The millstream is now dry, but its course can still be clearly followed, its presence being reflected in the names of the paths Millbrook Place and Millbrook Lane, behind Ralp Allen's Cottages. The stream was also crossed by a footbridge at the top of Millbrook Place to gain access to the school (now domestic flats).

[3] A leat is the name, common in the south and west of England and in Wales, for an artificial watercourse or aqueduct dug into the ground, especially one supplying water to a watermill or its mill pond.

Figure 9. Millstream Course behind Claverton Street and Ralph Allen Cottages

Today, the mill stream enters a drain at the junction of Ralph Allen's Cottages and Prior Park Buildings, but the 1883 OS map shows how it crossed the Prior Park Cottages Lane to feed the mill-brook. It was observed that at this point, the leat is approx. 10 feet above the road (Figure 10), highlighting the gain in height achieved by digging a contour hugging leat, the stream having originally flowed along the bottom of the valley.

Figure 10. Prior Park Buildings - 2025

The walk continued along the canalised leat in front of Prior Park Buildings. The terrace was built in 1822 and required a realignment of the millstream (Figure 11). The left-hand plan shows the site before construction of the houses, showing the stream following the contour, which contrasts with right hand image which shows the canalised stream we see today. Water rights were all important, and the owner of the Claverton Street Mill had to give his

approval for the stream to be straightened to ensure that the flow was not impinged by the alteration. A document dated 31 August 1822 signed by a Mr Carpenter, the owner of the water corn mill in Claverton Street, states that the millstream can be straightened but a channel must be maintained 9 feet wide and at least 18 inches deep. The leat passed under Forefield Rise in a culvert.

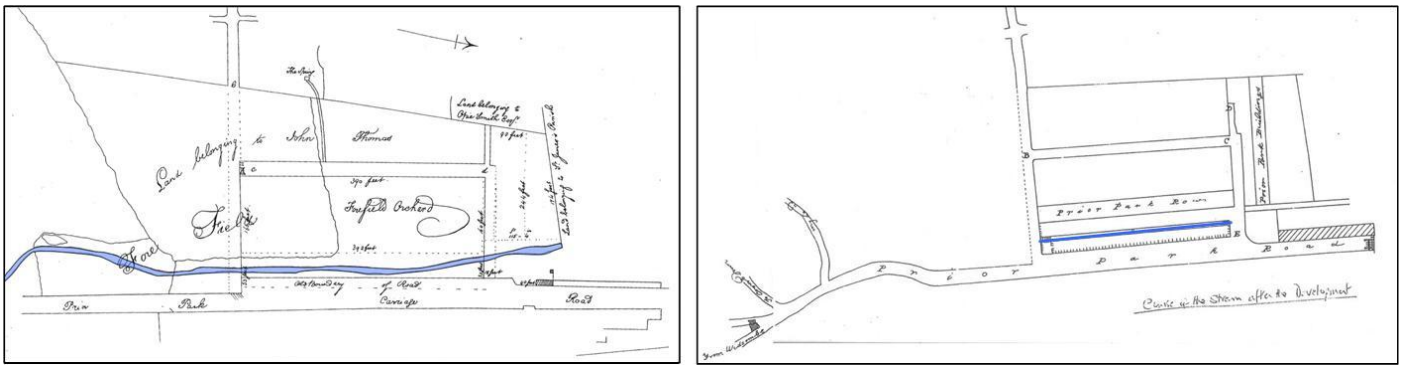


Figure 11. Prior Park Buildings - 1822

The walk continued up Ralph Allen Drive, with the leat flowing on the righthand side of the pavement in front of the Prior Park Garden Centre. The walk halted in front of the car show room, formerly the Upper Widcombe Mill.

Upper Widcombe Mill

Upper Widcombe Mill (Figure 12) was the last working water mill in the district, closing in 1927. An inventory of the mill indicates that its layout was akin to Stratford Mill. The building was four stories high containing on the ground floor, gearing apparatus, on the first floor, a grinding mill, housing three millstones with wood casings, on the second floor a warehouse, and on the third floor, a warehouse and power-driven hoist. The mill was powered by a waterwheel, 8 ft diameter x 6 ft wide (2.4m x 1.8m), a water turbine, described as nearly new, installed in an annex to the mill in 1924, and a gas engine, housed in a shed in front of the mill, to enable operation of the mill when water levels were low. The waterwheel was most likely backshot or overshot wheel, supplied by water from a pond behind the 'Great Wall'. The pond was fed by the Widcombe Brook and probably supplemented by the Lyn Brook. The mill and brooks are clearly shown on the 1883 OS Map (Figure 13). Two ponds in the grounds of Widcombe Manor drained into the mill pond, which in turn were fed by the Widcombe Brook which rises in Prior Park. The overflow from the ponds is now culverted in a large bore pipe laid behind the mill/garage turning at Ralph Allen Drive to follow the road down to a drain.

The mill pond was also likely fed by the Lyn Brook, which rises at the bottom of entry hill (ST 74729 63305) and flows down Lyncombe Vale in a raised leat, recorded on the 1883 OS map as a 'mill stream' following a contour along Lyncombe Vale. The brook now sinks into a drain at the bottom of Lyncombe vale. To feed the upper mill pond it would have passed through a culvert under Ralph Allen Drive.

Figure 12. Upper Widcombe Mill

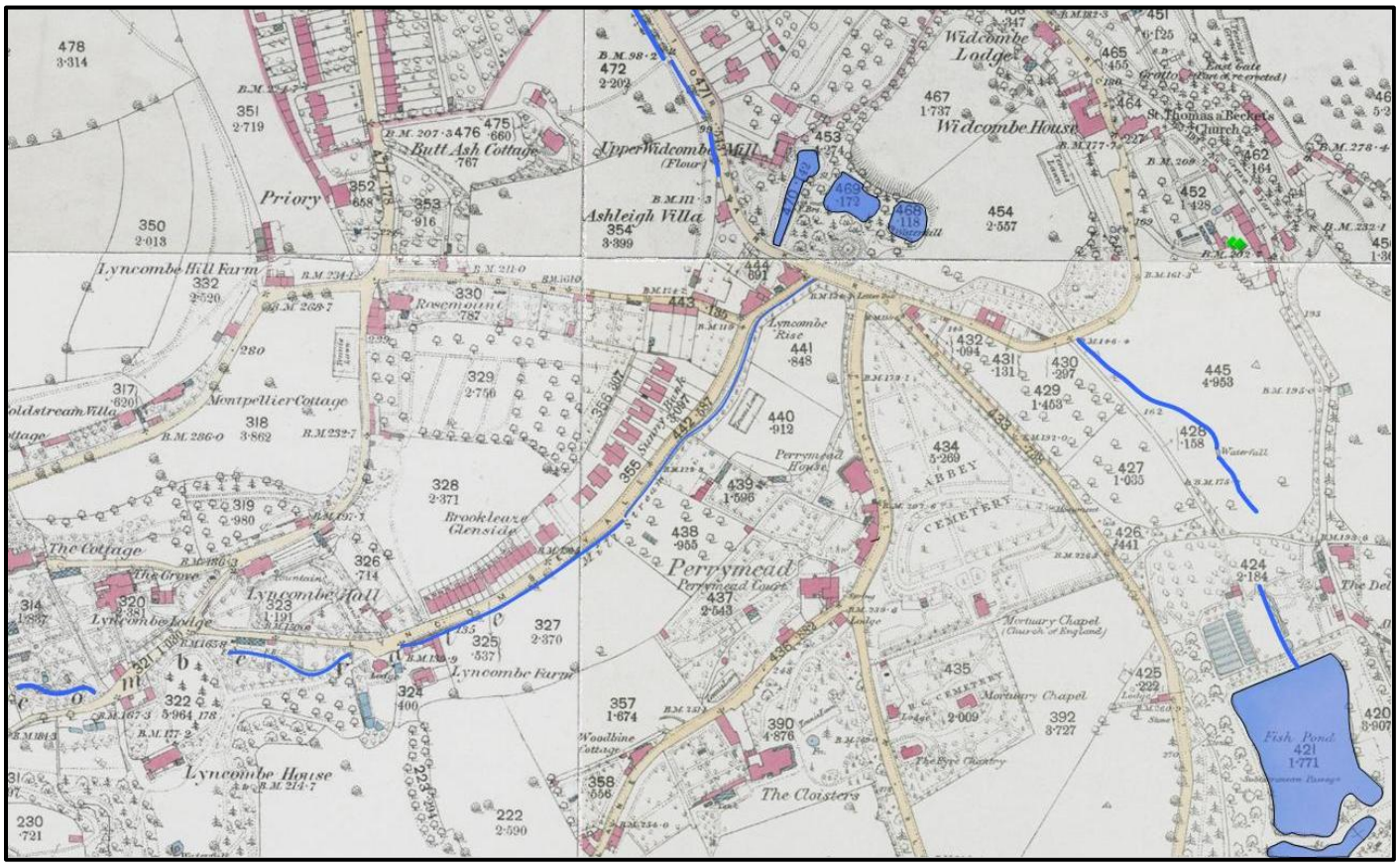


Figure 13. Ordnance Survey Map – 1883

The mill was part of the Widcombe House estate, noting that Widcombe House did not attain its grander title of Widcombe Manor until the early 20th century; the first record of the house being referred to as Widcombe Manor being in a directory of 1904. Throughout the 19th century, the mill was owned by the Widcombe House estate who let the mill to tenanted millers. The names of the millers are recorded in the Census records:

1891 – S Millard
1881 – John Elston
1861 – Richard Greenhill
1851 – Charles Hart

In 1886, there was a major fire which put the miller, John Elston, out of business. The mill was then owned by Mrs Tate of Widcombe House who re-leased the mill and by 1891 the mill was restored and back in operation, the new miller being S Millard. The fire emphasises the hazardous nature of milling. Finely ground flour is highly combustible, mis-adjustment of the grinding wheels can create heat by friction should the two wheels touch and much of operating gear was flammable wood.

The Widcombe House estate and mill was sold by auction in 1839[xi]. The auction catalogue includes a plan of the estate (Figure 14) which shows the mill and the mill pond, which then stretched from behind the mill to Ralph Allen Drive.

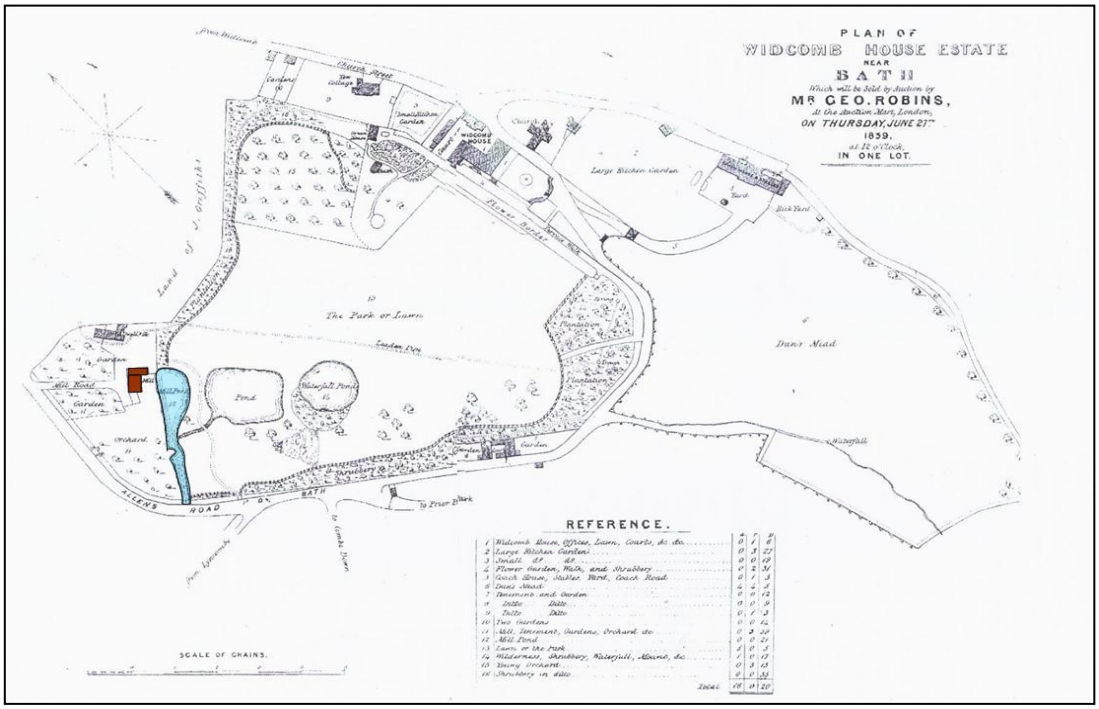


Figure 14. Widcombe House Estate. 1839

In 1838, the mill had been let to William Veal on a 7-year lease from the owner, William Chapman of Widcombe House. Veal's predecessor was Edward Beak, who leased the mill in 1831, and whose predecessor was Mr Bendall, who held the lease from at least 1819.

The mill dam was a large structure, much of which still exists behind the Ralph Allen Drive garage. Until recent times, the garage boasted a sign "The Great Wall" (Figure 12), recalling the dam behind that bounds the site. In 1828, the wall gave way under pressure arising from an extreme flow of water along the two brooks during a storm. The failure resulted in a cataract which flowed down Prior Park Road, causing severe damage to properties and claiming two lives in Sussex Place. The event was reported by the Chronicle:

ALARMING AND DESTRUCTIVE STORM THREE LIVES LOST

> *On Tuesday July the 8th 1828, this city and its neighbourhood was visited by a thunderstorm unprecedented in violence and continuance in the memory of any of its inhabitants. The storm started at 8:30 p.m. and lasted until 3 a.m. the following morning. Streets in all districts were flooded to a great depth and sewers were not capacious enough to take influx of water and overflowed. Trees at Beechen Cliff were uprooted and earth fell in road at Holloway. In the course of the night an immense body of water at Least-10 feet deep, collected in valley on Captain Wrench's ground, behind Mr Bendall's Mill at ·Widcombe. The inhabitants of Widcombe Mill had to seek upper stories of the house when the force of the water made an artificial bank give way and the flood water resembling a mighty cataract poured along Prior Park Buildings scattering dismay and destruction in its progress. Pavements were torn up and ornamental gardens destroyed. Trees were also torn up and the gardens of Mr Webber the Florist, and Mr Cross of toe White Hart at the bottom of Widcombe Hill were seriously damaged by water.*

After washing down a wall at Mr Cross's, the water rose as high as the parlour window out of which it continued to pour, and several outhouses were destroyed. The torrent c6ntinued across the road where it flooded an underground bedroom in Sussex Place to the ceiling, and a poor man and his ife, Mr and Mrs Janes Moody, were drowned. They were aged 60 and 70. A rent was made in the canal bank 6 feet deep.

Post the flood, the mill is recorded as being empty, in the ownership of the Widcombe Manor estate. The great wall was evidently rebuilt and the mill continued to operate for a further 99 years.

The history of the mill then leads us to the ownership of the Bennet's. In 1807, the mill is recorded as being owned by Phillip Bennet but leased to Hamlyn and Cook. In 1737, the mill was leased to William Hunt who was still in business in 1750.

There were significant developments around the Upper Widcombe Mill in the 1730s. Construction of the Palladian Bridge in Prior Park was still in the future, being completed in 1755. Construction of Ralph Allen's railway commenced in 1730. To provide access to the river from his Prior Park estate, Ralph Allen purchased land from Phillip Bennet, including part of the upper mill ground. In exchange, Phillip Bennet bought land from Ralph Allen to extend Church Street to provide a grander approach to Widcombe House from the south. The cottages at the bottom of Ralph Allen Drive were constructed between 1728 and 1740[xii], being designed by John Wood the elder for Ralph Allen with the objective of demonstrating the potential for Bath Stone. Upper Widcombe Mill contains a fine Palladian window (Figure 12), the Historic England entry for the building[xiii] describing it as a "former mill associated with John Wood's Lower Town built for Ralph Allen". It would therefore seem likely that the mill was considerable enhanced at in the 1730s at which time the Palladian widow was installed, contributing to Ralph Allen's marketing to show the potential for Bath stone.

The Bennet's claim on the Widcombe House estate and mill came through marriages with the Chapman and Fisher families, one Robert Fisher, an alderman of Bath, being granted the estate by Hugh Sexey's Hospital at Bruton. Hugh Sexey bought the manor of Lyncombe and Widcombe from the Crown following the surrender of Bath Priory and its estates in 1539. It is therefore evident that Upper Widcombe Mill was functioning before the Reformation as part of the Priory of Bath's estate.

The walk proceeded a short way up Lyncombe Vale to observe the raised leat.

Figure 15. Raised Leat, Lyncombe Vale

A major piece of evidence in the interpretation of the Widcombe and Lyncombe Vales is Thorp's 1742 Map of 5-Miles Around Bath (Figure 16). Comparing the 1742 and 1883 OS maps, attention is drawn to several changes. In 1742, the Lyn Brook is shown following its natural course along the bottom of Lyncombe Vale, passing through the lowest point of Rosemount Lane flowing below the house now known as Bagatelle House, formerly Lyncombe Rise. Mr Bennet's Estate and Ralph Allen's Way are identified. At this time the Upper Mill was fed by the Widcombe Brook

only, the Lyn Brook feeding a second Mill, labelled Wicksteed's Machine. The Lyn Brook was evidently diverted into the artificial watercourse (leat), sometime after 1742, which followed a contour along Lyncombe Vale to create a head of water at the junction with Rosemount, the raised watercourse still being very much in evidence today.

Figure 16. Map of 5-Miles Around Bath. 1742

Wicksteed's Machine

The walk retraced its steps back to the bottom of Rosemount Lane to observe the probable site of Wickstead's Machine. John Wicksteed was an engraver of stone seals who operated a 'water-machine' on Ralph Allen Drive[xiv]. His business was established in 1732 and in 1737 he rented ¾ of an acre from Phillip Bennet. Based upon the 1742 map, the machine was at the bottom of Rosemount Lane. A map of 1762 records Wicksteed's house and garden, bounded by Ralph Allen Drive, Lyncombe Vale and Rosemount Lane[xv], the ground now being occupied be Bagatelle House, Welton Lodge and Ashley Lodge. The machine became part of a larger 'pleasure garden' enterprise, and when the business closed in 1774 it comprised a porticoed welcoming house, a lake (the mill pond), a pleasure boat, a 60-yard-long canal advertised as a men's bathing pool, a 'luminary cascade', and a cold-water mineral spring.

We know little about the machine itself, but a description of the watercourses has survived. The lake was created by damming the stream flowing through the valley (the Lyn Brook). The lake was large enough for the pleasure boat and the overflow passed over a 'luminary cascade', probably like the one seen today in Prior Park between the upper and lower lakes. 'Luminary' probably refers to the cascade being lit by flaming torches at night as an attraction. The gardens lay on both sides of Prior Park Road with a tunnel under the road connecting the two parts, with the lower garden running down to the corn mill – The Upper Widcombe Mill. The machine was distinct and separate from the flour mill, but the connecting tunnel suggests that the two sites could have been later linked. The machine was also referred to as a jeweling mill and it is speculated that it was a water-powered saw for cutting semi-precious stones and a grinding machine for polishing the stones in preparation for engraving to be later inlaid into a ring or stamp.

Oslakesmule

Thus far, we have considered water-powered flour and grist mills. In the thirteenth century, a second type of mill appeared in the district: the fulling mill. Fulling, also known as tucking, is a step in the production of woollen cloth in which woven cloth is scoured to remove lanolin, oils and dirt, and milled (pounded) to felt the fibres to produce a smooth, tightly finished, water resilient fabric with good insulation properties. The broadcloth, which typified the materials produced in Bath in the late medieval period, was felted woollen cloth. Fulling was originally a manual process involving pounding of the cloth with a club, or the fuller's feet or hands, but from the thirteenth century water powered trip hammers were employed (Figure 17).

There are references to fulling in Widcombe. In 1291, a grant was made to Adam the fuller, and his wife. The mill in Widcombe was known as Oslakesmulle and included a pool and watercourse[xvi]. The will of Thomas Chapman clothier of Bath, dated 1524, included a bequest to his youngest son, Richard, at the disposition of his mother of the Broke Mill[xvii]. Thomas Chapman was a wealthy clothier and owned several mills, including fulling mills, which he had purchased "of my Lord Prior of Bath in the parish of Weston in the oon side and of maister Rodnay in the parish of Tweverton in the other side". It is therefore probable that the mill at Widcombe was also a fulling mill. It is not evident which was the site of the fulling mills, but the three mills fed by the Widcombe and Lyn Brooks are likely candidates: the site of the later Upper Widcombe Mill, the site of Wicksteed's Machine or the site of Gibb's Mill.

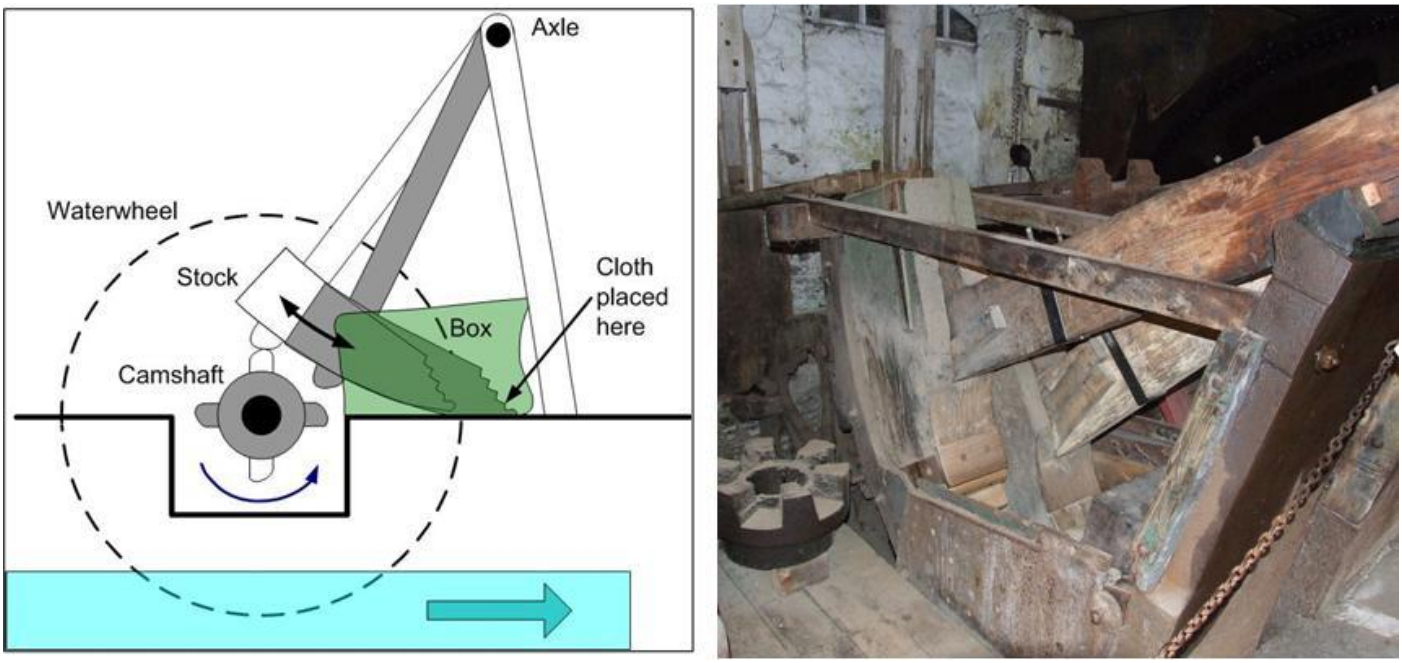


Figure 17. Fulling Hammers

Gibbs Mill

The 1742 map shows a third mill upstream of Bennet's Mill, fed by the Widcombe Brook, labelled Gibb's Mill and the walk continued to investigate its location.

The walk returned to Ralph Allen Drive, crossing the road and following Church Street to find the Widcombe Brook. Tracing Widcombe Brook up-stream from the Upper Widcombe Mill, the brook crosses Church Street close to Yew Cottages and flows through the grounds of the current Widcombe House. The walk left Church Street where the Widcombe Brook issues from the grounds and sinks into a drain, turning right and followed the right-hand edge of the grounds of Widcombe House with the brook flowing through the centre of the grounds. The path eventually turns left and arrives at the entrance to the Dell.

The brook is fed by a stream crossing the grounds of the Dell, which in turn is fed by the overflow from the lower Prior Park Lake, the source of the brook being higher in Prior Park. Today, the brook is culverted for much of its length, comprising a series of issues, streams and sinks, but can be traced on the 1883 OS map. A tithe map of 1799 (Figure 18) records the grounds of Widcombe House as Duns Mead and the grounds of the Dell as Gibbs Mill Ground.

Gibbs Mill Ground is shown on several eighteenth and nineteenth century maps: the 1742 map of Five Miles around Bath, a map of Ralph Allen's lands and surrounding lands dated 1762[xviii], a tithe map dated 1799 and a later tithe map dated 1840 (Figure 18 and Figure 19). In 1762, the ground is described as belonging to James Gibbs, and comprising a mill, close and pond, with a house[xix]. The mill and pond are evident on the 1762 map; the ground is shown on the 1799 tithe map but has gone in the 1840 tithe map, which shows the current house called the Dell. It is presumed that the mill ceased operation in the early 1800s.

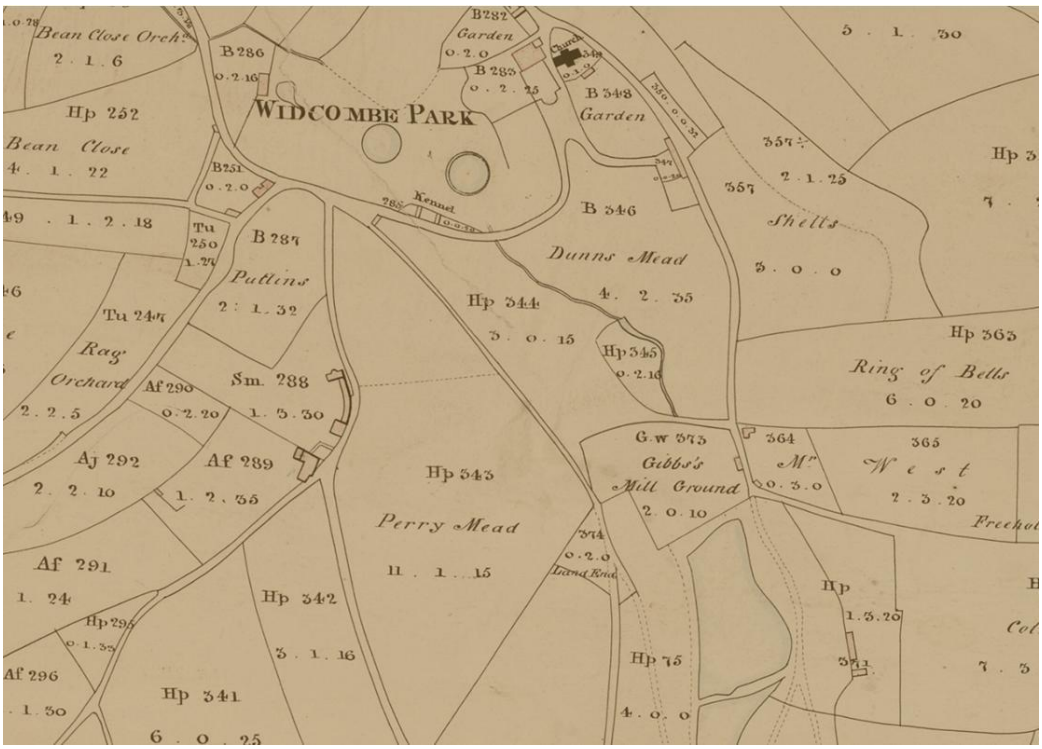


Figure 18. Gibbs Mill Ground. 1799

1762 1840

Figure 19. Gibbs Mill Ground. Thorp and Overton (1762) and Tithe Map (1740)

The 1762 map shows a roughly square pond with a building (the mill) to its north. The 1883 OS map shows that elements of the pond remained, then being used as cress beds. No images of the mill have survived but its structure can be inferred. The land falls steeply away at the northern side of the Dell's ground. It is likely that the mill used an overshot or backshot wheel fed by a timber launder from the pond. A similar arrangement can be seen in many examples in Britain, a typical example being Yspyty Ifan Mill on the River Conwy near Betws-y-Coed (Figure 20).

Figure 20. Yspyty Ifan Mill. River Conwy. Betws-y-Coed

Prior Park

The walk continued up church lane, past the lower entrance to Prior Park Gardens, and halted to observe the Palladian Bridge and upper and lower lakes. The recent restoration of the lakes includes a cascade between the upper and lower lakes which is likely reminiscent of the cascade in Wickstead's Pleasure Park.

It has been postulated that another mill existed in the Prior's Park, upstream of Gibb's Mill[xx]. Reference is made to the sale of the Prior's Park, including a mill, in 1592[xxi], the background to which goes back to the dissolution. The Park was surrendered to the Crown in 1539, being described in 1542 as:

> *'.. A mile a this syde Bathe by southe est I saw 2. parks enclosyd withe a ruinus stone waulle, now withe out dere. One longyd to the bysshope, an othar to the prior of Bathe.'*

The Priory lands were sold by the Crown to Humphrey Colles in 1543, which in 1592 were described as:

> *"Grod, Soyle and Woody Grod. parcell of the sd.Grod.and Soil called Prior's Park", the Mill and 37 acres of "Wood, Woody Grod.and Soil ... pcel of a Grod.called Prior's Park".*

The question is whether the mill was that which later became Gibb's Mill or a second mill higher up the valley. A deer park was created in 1091 by John of Tours, the Bishop of Bath. Part of the park was given to the Prior of Bath in 1245, hence the name Prior Park. The bounds of the Prior and Bishop's Deer Parks were still evident in the field boundaries recorded in a tithe map of 1840 (Figure 21). Gibb's Mill Ground is a small enclave within the northeastern bounds of the park. The purpose of the park was a deer park used by the Prior of Bath Priory and Bishop of Bath. It seems unlikely that land in the deer park would have been allocated for construction of a mill. A mill evidently existed on the park boundary. Would a second mil have been built so close? A more likely interpretation is that the mill referred to in the 1592 grant is what later became Gibb's Mill.

Figure 21. 1840 Tithe Map – Former Prior's and Bishop's Deer Parks

Thomas a Becket Church / Widcombe Manor

The walk retraced its steps back to the Dell at which point it continued along Church Lane to St Thomas a Becket's Church. The walk halted at the church and entered the churchyard where vantage can be taken on the south side of the church to overlook the grounds of Widcombe Manor. The lakes in the grounds which formerly drained into the millpond of the Upper Widcombe Mill were observed and a cascade between the two ponds, again reminiscent of the cascade in Wickstead's Pleasure Gardens.

The walk continued along Church Street, crossed Widcombe Hill and followed the Tyning to Abbey View. The walk passed down Abey View, crossed the Horseshoe Walk bridge over the canal and stopped alongside the chimney next to the lock

Razamar MIll

The chimney is all that remains of the second pumping station which worked in tandem with the Thimble Mill pump, viewed earlier in the walk, to raise water from the river to Widcombe Top Lock. The 1883 OS Map describes the lock as Razamar Lock, which is likely derived from the name Razor Mill. A mill existed here before the canal which produced cutlery and razors. The mill would probably have housed a grindstone for sharpening knives, powered by the Smallcombe Brook, which discharges into the canal basin just above the lock. Before the canal was built the brook continued to the river, discharging into the river opposite St John's Catholic Church. A grant dated 970 describes the brook as a boundary in a transfer of land between King Edgar and the Abbey. The Smallcombe brook entered the river Avon at Ferry Lane, flowing along what is now Ferry Land and Pulteney Gardens.

The walk dispersed from this point.

Postscript

Whilst Bath no longer has its own mill, the nation's output of ground flour is higher than ever, processing 6.2 million tonnes of wheat per year to produce approx. 5 million tonnes of flour. Today, flour milling is focused on a small number of large mills. In 2022, the UK's demand for flour was satisfied by 52 mills, not including heritage water and windmills. The closest mill to Bath is ADM Milling Ltd at Avonmouth.

Annex A Domesday Book

The Domesday Book describes Lyncombe as a large community of 22 households with a total taxable value of £10 (half the value of Bath) with two mills valued at 10 shillings. Table 1 is a summary of the Domesday Book entries for Bath and the surrounding district, sorted by value of mill. The Lyncombe mills were small by comparison to the mills on the River Avon, but worthy of taxation. The sites of the mills are not recorded but it is reasonable to assume that two of those mills operating in the eighteenth century were sites on which mills were operating in the late Anglo-Saxon, prior to 1066.

	Total Tax				Value of Mills
	Geld (£)		Households	Mills	Geld (£)
Keynsham	£16.70	Very Large	67	8	£4.25
Twerton	£12.50	Very Large	32	4	£3.00
Bathwick & Woolley	£2.50	Quite Small	15	3	£1.85
Saltford	£4.00	Medium	23	1	£0.62
Lyncombe	£10.00	Very Large	22	2	£0.50
Claverton	£5.00	Quite Large	15	1	£0.37
Bath	£20.00	Very Large	154	1	not taxable

Table 1 – Domesday Book – Bath and District

Annex B Types of Waterwheels

Waterwheels can be categorised as one of four types, undershot, breastshot, backshot or overshot, the choice of wheel being dictated by the topography of the site. Undershot wheels (Figure 12A) were employed where there was a low head of water but a large volumetric flow, such as on the River Avon. Undershot wheels employ a penstock gate to guide the water through a narrow opening to create a high velocity jet of water which hits the paddles of the wheel, imparting kinetic energy to turn the wheel. Such wheels are however inefficient with only around 20% of the energy in the stream being converted into power. An example of such a wheel can be seen at Saltford Brass Mill (ST 6872 6701) where the weir is only 1 m (3.1 ft) high. If a larger head of water is available, water can be delivered at close to the axel height. In such circumstances, a breastshot wheel can be employed (Figure 22B). In such an arrangement, energy transfer is achieved by using the weight of the water enabling efficiencies of around 50% to be achieved. Such a wheel is used by Claverton pumping station (ST 7911 6440) where the weir is 1.6 m (5ft 10in) high. If the water can be delivered onto the top of the wheel, the wheel is again turned by the weight of water (Figure 22C and D). A large diameter backshot or overshot wheel could achieve an efficiency between 70% and 90%. The topography at Upper Widcombe Mill is such that a large dam could be built behind the mill storing water at close to the second-floor level of the mill, enabling a higher efficiency backshot or overshot wheel to be used requiring a relatively low flow of water. Water-turbines (Figure 22E) were perfected in the late nineteenth century which could achieve efficiencies of around 80% from a compact machine using a low head of water. Such machines were made by the Armfield Company at Ringwood near Southampton, and it was probably such a machine that was installed in the upper mill.

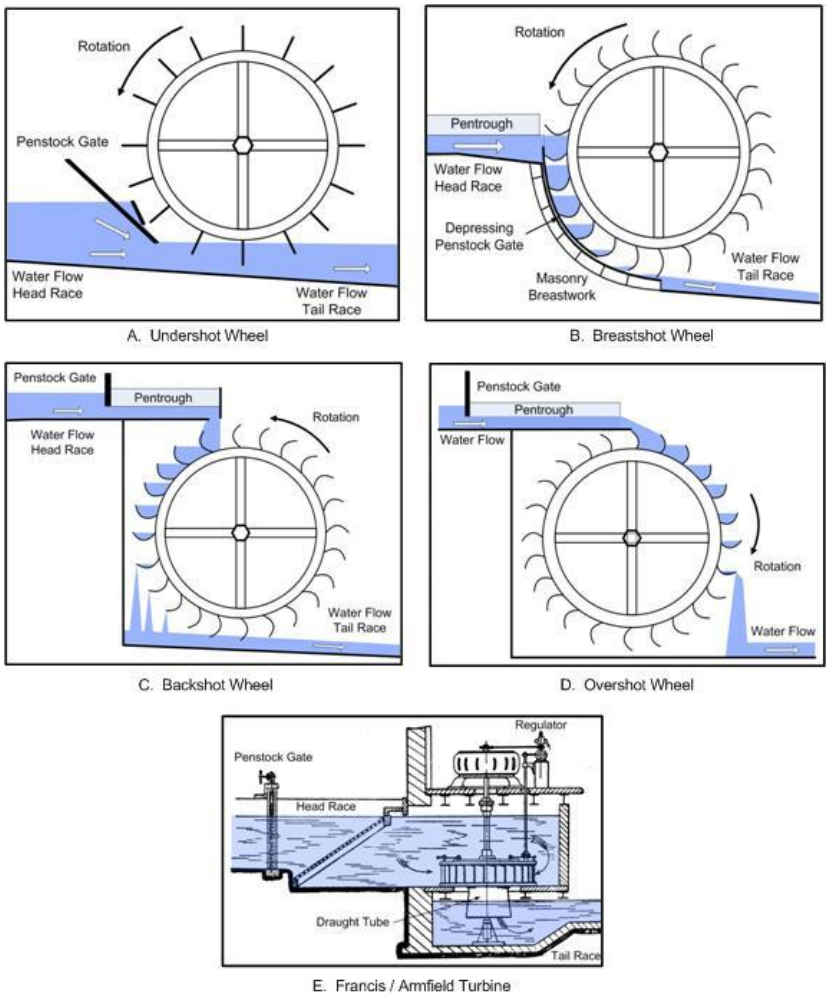


Figure 22. Waterwheel Types

[i] Historic England Listing 502387. Camden Mill
[ii] Referenced by C Smith, Lyncombe and Widcombe Local History Society. Chronology of Grist and Fulling Mills in the Parish of Lyncombe and Widcombe. Nov 1996. Ancient Deeds of Bath, R. Shickle. (SUS 1921)
[iii] Referenced by C Smith. Widcombe and Lyncombe Parish Register
[iv] Referenced by C Smith. SRO DD/3R/py C/434 51B
[v] Referenced by C Smith. SRO: DY MGR Box 1
[vi] Lyncombe and Widcombe Poor Rate Book
[vii] Lyncombe and Widcombe Rates Book
[viii] Bath at Work. D. Harler, 1989, pg. 8.
[ix] Bath Chronical. 24 July 1893
[x] Stratford Mill, Blaise Castle House Folk Museum. 1954. Stratford mill, Blaise Castle House Folk Museum – The Mills Archive
[xi] The Survey of Bath and District No.17, November 2002.
[xii] Historic England List Entry 1394481. 6-24 Ralph Allen Cottages and 1 Priory Cottages.
[xiii] Historic England List Entry 1394492. Car Repair Facilities at Southern End of Prior Park Road, Prior Park Road
[xiv] Bath Entertain'd. Amusements, Recreations and Gambling at the 18th Century Spa (Bath: Ruton, 1998)
[xv] Survey of the Manors of Hampton, Claverton with Widcombe belonging to Ralph Allen Esquire. John Hawkes. The Survey of Bath and District. No 9. June 1998
[xvi] Somerset Records Society 7:558.
[xvii] Som. Wills, Drown
[xviii] Thorpe and Overton's map c.1762 (Bath Record Office.28/854)
[xix] Survey of the Manors of Hampton, Claverton with Widcombe belonging to Ralph Allen Esquire. John Hawkes. The Survey of Bath and District. No 9. June 1998.
[xx] Chronology. Grist and Fulling Mills in the parish of Lyncombe and Widcombe near Bath. Compiled by Connie Smith. Nov 1996
[xxi] Prior's Park from the Dissolution to Ralph Allen. John Hawkes. The Survey of Bath and District, No.10, October 1998.