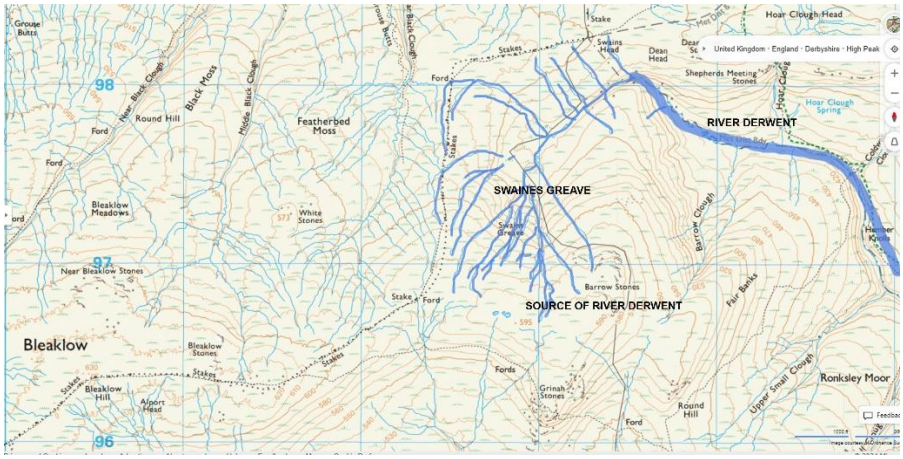
River Derwent Valley Geocross V81

BRIDGES OVER THE RIVER DERWENT

There are four Derwent rivers in England. The Durham River Derwent 33 miles, Cumbria River Derwent 60 miles and Yorkshire River Derwent 100 miles.

The Derbyshire River Derwent was originally 67 miles long.

The Derbyshre River Derwent is now often said to be 50 miles (80km) long. But this measurement is actually taken from its re-emergence below the Ladybower Reservoir. The true length of the original River Derwent is 67 miles.(107km) from its source in Swains Greave on Bleaklow Moor. The OS map shows a nearby spot height of 595m at the top of Swains Greave and someone has erected a small sign nearby stating THE SOURCE OF THE RIVER DERWENT.



The Derwent is by far Derbyshires most important river and it drains 1200 square kilometres, half the area of Derbyshire.

Not many people know that the true source is actually in Yorkshire!

The first six miles of the River Derwent is actually the county boundary between South Yorkshire and Derbyshire. So half the river bed is in each county.

The Derbyshire River Derwent begins on Bleaklow Moor, north-west of Grinah Stones. It tumbles quickly down for 9 miles to enter the Howden Reservoir below the rebuilt Derwent Village Packhorse bridge at Slippery Stones.

There are no bridges over the upper River Derwent until the bridge at Slippery Stones is reached.

Historically the first all year round bridging point of the Derwent River was at Derwent Village. In 1672 the first stone packhorse bridge was built by monks from Abbey Farm, replacing a wooden bridge and seasonal ford. The River Derwent was prone to rapid rises in water level, causing problems to packhorse trade between Glossop and Sheffield

This bridge is the original stone built one which stood in Derwent Village. It is a Grade II Listed Ancient Monument and was taken down carefully stone by stone before the Ladybower Reservoir was completed. The ‘drowned’ village is now beneath the water of the Ladybower Reservoir.

From Slippery Stones south, the next 8 miles of the River Derwent are now ‘missing’ as the river disappears as its water enters three reservoirs in turn, the Howden, Derwent and Ladybower Reservoirs.

Eventually, whem the reservoirs have taken all the water they need, 8 miles later, all surplus water overspills into the famous Ladybower ‘Plugholes’ and emerges in the original bed of the Derwent River just north of Yorkshire Bridge. Here it is reborn as the River Derwent and the best is yet to come.

The Derwent Valley Water Board was enabled by an Act of Parliament in 1899 and Howden and Derwent Reservoirs were completed by 1912. Water from these two reservoirs began to supply the cities of Sheffield, Nottingham Derby and Leicester. A decision to build the third reservoir, Ladybower, was delayed until 1924 when increasing demand made it necessary, and it was completed in 1945.

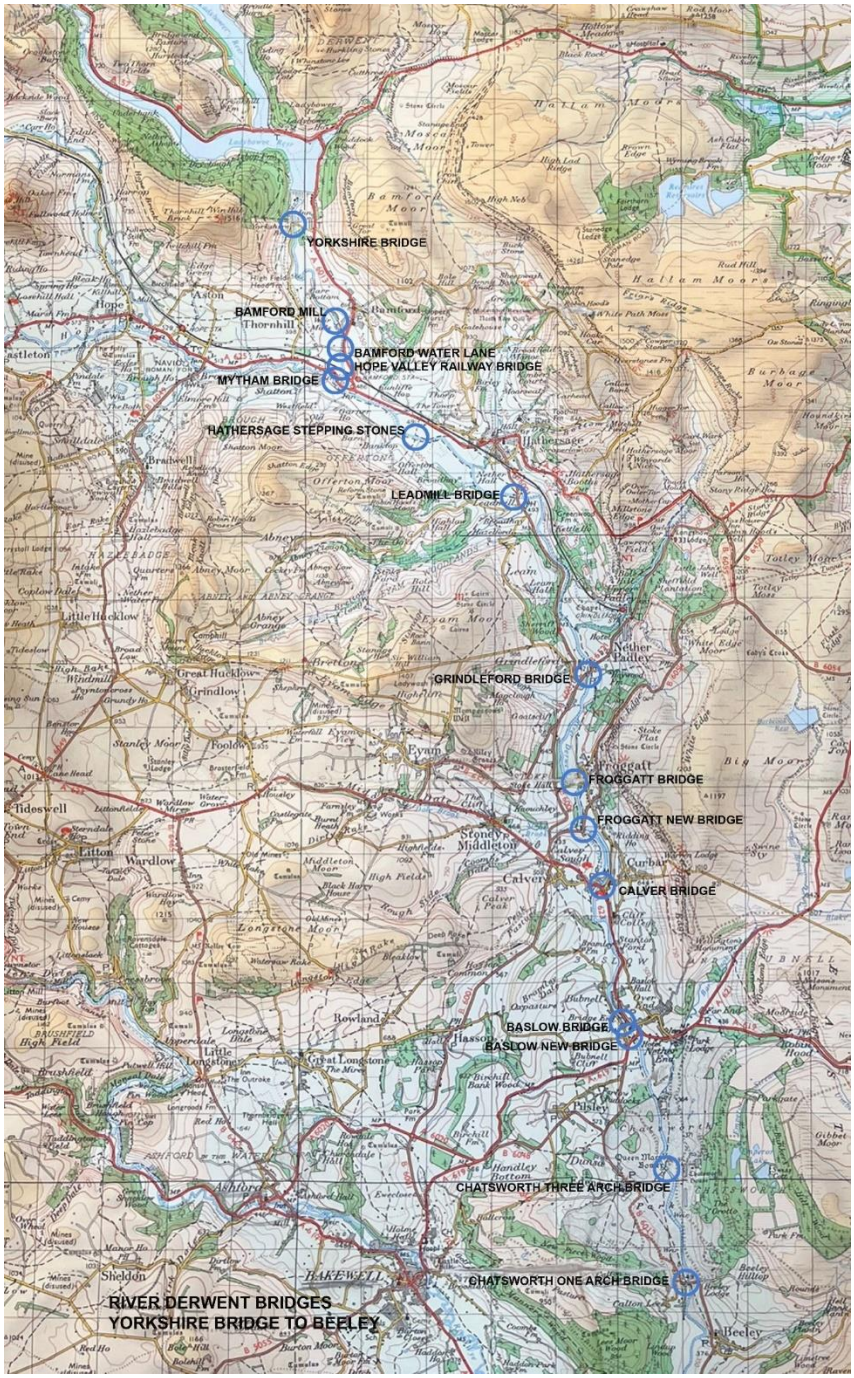
At any time a maximum total of 46 billion litres (46,440,000 cubic metres) of water which previously had flowed down the River Derwent, is held back in these three reservoirs.

Treated water travels by a mainly buried pipeline parallel to the River Derwent. This is the 45 kilometre Derwent Valley Aqueduct. The River Derwent also indirectly delivers water to Carsington Reservoir with water taken from the river at the Ambergate Pumping Station in times of high flow.

From its junction with the River Trent at Derwent Mouth, the River Derwent has completed its journey. From here its water is carried to the Humber Estuary by the River Trent.

In my opinion the water of the River Derwent has had the best deal. It has spent its few hours of glory passing through the magnificent scenery of the Derwent Valley of Derbyshire.

The map shows the 15 bridging points between the Ladybower Reservoir and Chatswoth Park. This includes a railway bridge and two sets of stepping stones.



From the Ladybower Dam a long distance footpath follows the gently descending valley of the River Derwent for 50 miles (80km) to its junction with the River Trent at ‘Derwent Mouth’

The Derwent Valley Heritage Way is said to cover ‘55 miles of magnificent valley scenery’ starting from the Heatherdene car park at Bamford by the Ladybower dam. This longer measurement may be true as the river has many meanders south of Matlock.

One of the delights of the Derwent Valley are the many fine stone bridges which cross the river. Eleven of them are Scheduled Ancient Monuments.

Sadly most of them are over 300 years old and are having a hard time trying to meet the standards expected in the 21st Century. Health and Safety, and Highways laws have

required many modifications to these bridges, not least for pedestrians, who are discouraged from walking down the Kings Highway.

In addition there are the continuing stuggles with one of the Five Elements, commonly named as Earth, Water, Wind, Fire and Air. The one most feared in Derbyshire valleys has always been ‘Water’ because it brought destruction every year.

Bridges have been mankinds response to try to tame Water, but not always successfully.

Sturdy Gritstone Bridges are the essential elements of the Derbyshre River Derwent. Before the stone bridges were built the river could only be forded in a small number of locations, and many of these became impassable in winter and spring floods. Wooden bridges were often swept away by these floods and even today the stepping stones are frequently re-arranged by the furious river..

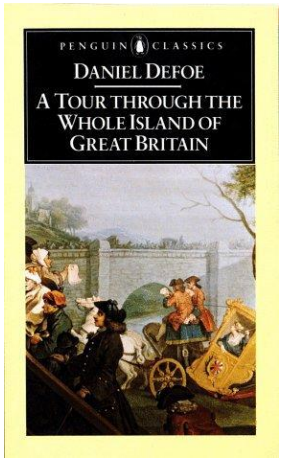
Daniel Defoe was an early novelist and journalist who visited many English counties in the 1720s in order to produce his book ‘*A Tour of England and Wales’*.

Beginning his tour at Derby, he had to abandon part of his plans due to spring flooding ‘the river drowning the low-grounds by a sudden shower’. In his age travel was very much at the whim of the weather.

He refered to the River Derwent in 1726 as a ‘*fury of a river’*.

He also said that ‘*The River Derwent is a frightful creature when the hills load her current with water’.*

The Penguin Classics edition of his book features a bridge and fording scene.



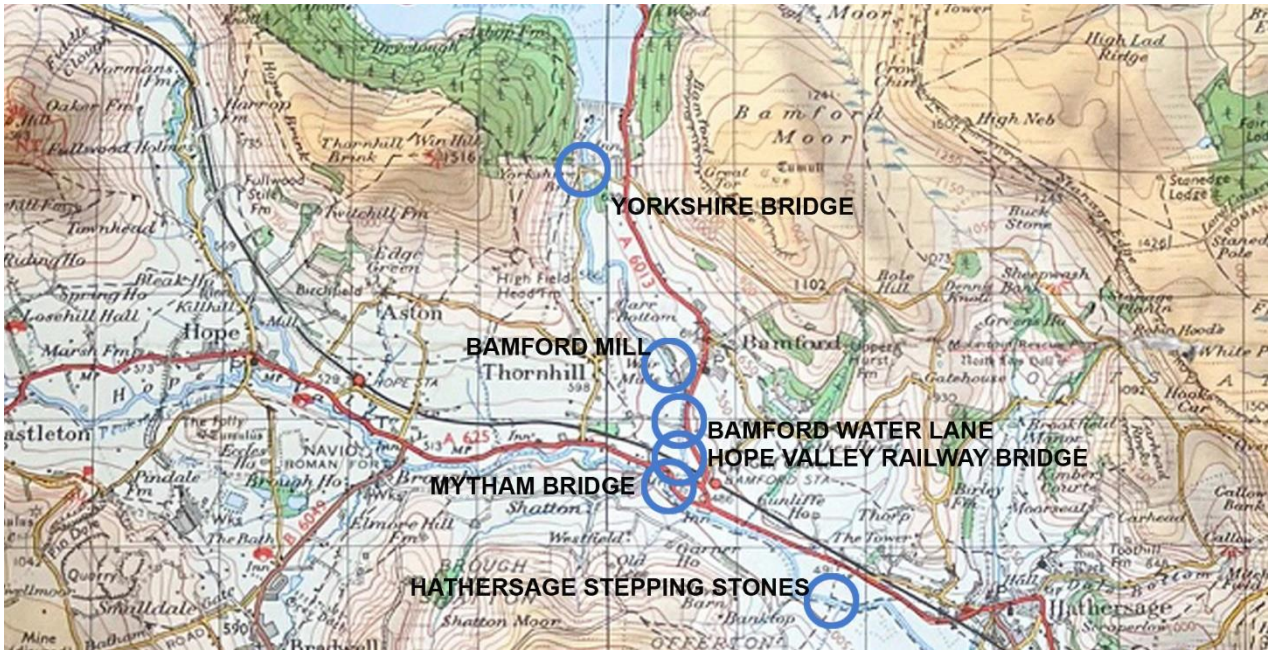
I have split this narrative of the first fifteen Derwent Valley River Crossings into three themes:-

Stepping Stones

Corn Mill Villages

Grand Deigns

SECTION ONE - STEPPING STONES



Yorkshire Bridge

OS ref SK 19792 84967

W3W workouts.highlight.perplexed

Once the River Derwent emerges from its visit to the Ladybower Reservoir plughole and is re-born as a river, it passes under Yorkshire Bridge, which curiously is in Derbyshire. This packhorse bridge is a tall double arch and wide enough for ‘two carts’ to pass. But not wide enough for two cars and a pedestrian to pass safely in 2024.

The original Yorkshire Bridge at the foot of Lydgate Lane was built from wood and needed frequent repairs.

In 1693 masons built a gritstone three arch bridge at a cost of £130. A particular feature is that the upstream walls curve outward and end in sturdy square stone pillars for strength.

Three arches mean that two supporting pillars have to be built within the river bed and protected by massive masonry. They also create potential for blockage by large branches or whole trees swept downstream by floods.

River bridges are attacked agressively by the river in flood, often carrying rocks and trees. The attack is mainly on the upstream part of the bridge structure. The masons of all the River Derwent bridges have all had to solve this problem, with varying degrees of success.

The present Yorkshire Bridge has been remodelled since, probably in the early 1900s and now has two arches and just one support pillar.

Notably this stone bridge has at least five metres clearance above the river in normal flow. The masons have clearly taken account of periodic flash flooding of the River Derwent.

It is a great pity that this, and almost all the other fine stone bridges over the Derbyshire River Derwent, are obscured by unmanaged trees growing too close to these largely Grade II (and finer) Listed Historic Monuments.

Bamford Mill Weir

OS ref SK 20454 83346

W3W mothering.level.yesterday

Two kilometres south is Bamford Weir, where the entire river is dammed behind a well built weir. There has been a weir here since 1782, long before the reservoirs were constructed between 1900 – 1945.

The river water can be released into Bamford Mill as required, and all surplus water spills over the weir to continue down its ancient riverbed.

Bamford Mill was built in 1782 as a four storey corn mill requiring only a small millstream..

It then became a large cotton mill employing 130 people, requiring much more water. The lake held back by the weir is 70 metres wide.

It closed in the 1990s and was converted into housing. The river water is no longer used to power the mill, although the sluice mechanisms are all in place.

A crossing point has been established here since 1782, now comprising a number of lightweight timber bridges on stone pillars, and a short section of ‘stepping stone’ planks supported by brick built pillars. The section of ‘stepping stone’ crossing is very short and it is said to be the easiest stepping stone crossing in Derbyshire.

In June 2024 the stepping stones were officially closed due to damage over the winter but the notices didn’t stop several people and their agile dogs. This lightweight crossing is cheap and cheerful, and intended to fail under high flows. It can be regularly repaired at low cost.

Bamford Water Lane Bridge

OS ref SK 20549 82928

W3W files.breakaway.spouting

This is a simple steel and concrete girder bridge spanning the river, giving access to the Recreation Ground today.

But from 1899 to 1973 it was much more important as the road leading to the offices of the Derwent Valley Water Board. Hence the name Water Lane.

This building was used as offices for the Derwent Valley Water Board and served from 1899 to 1945 during the reservoir construction period. It remained in DVWB ownership until the end of all works in 1976. By this time the Derwent Valley Project had cost £2 million.

The building was put up for sale in 2024 with a price tag of £1.9 million. Not much short of the total Ladbower Reservoir cost of £2 million.

Hope Valley Railway Bridge

OS ref SK 20584 82624

W3W cornfield.disbelief.cured

The Hope Valley railway crosses the River Derwent, and Severn Trent Water have taken advantage of this crossing by adding several sewage pipe bridges alongside and underneath.

The underside of this railway line bridge is not elegant but pigeons don’t seem to mind.

Mytham Bridge

OS ref SK 20474 82522

W3W times.fuse.emails

The Mytham three arch stone bridge stands at a particularly challenging junction of two rivers, several roads, a railway.and a Garden Centre. It is frequently under repair.

Most of the repairs are not needed due to river damage. These stone arches are 300 years old and have withstood many floods.

The damage to Mytham Bridge is mainly caused by heavy lorries. The frequent collisions with the parapet walls sometimes to collapse the stonework into the river.

This bridge was never intended to cope with the volume of traffic it now carries. A purpose built steel footbridge crosses the river a few metres upstream as the old bridge is too narrow for footpaths. Some lorries need the full width of the road to cross the bridge.

A glance to the OS map explains why this is such a problematic pinch-point which has not yet been solved by highway engineers. The River Derwent takes a zigzag course, first west then a sharp bend to the east. The roads and railways converge at this point and chaos ensues.

Immediately upstream from the bridge is an old stepping stone crossing of about 25 rocks, but it appears to have been wrecked and never repaired.

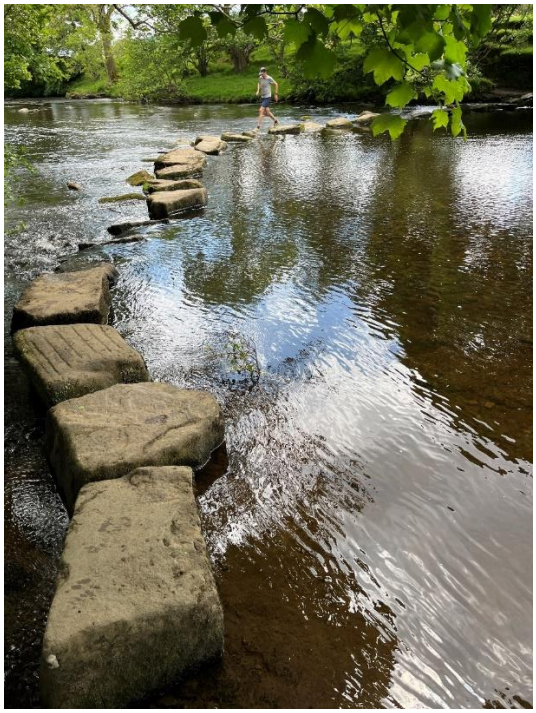
Hathersage Stepping Stones

OS ref SK 21710 81543

W3W duties.crinkled.quote

Many people are familiar with the ancient stepping stones near Hathersage. At this point the river is 25 metres wide with steep banks on either side. There are other famous stepping stones in Derbyshire but these are by far the best.

They are also the last of three stepping stones over the River Derwent. Downstream the river received more tributaries and gets increasingly deep, too deep for stepping stones..



The stepping stones comprise about 30 massive stone blocks placed on the river bed. It times of high flow the stepping stones disappear beneath the river. At this point the River Derwent is 25 metres wide, and wading across would be dangerous.

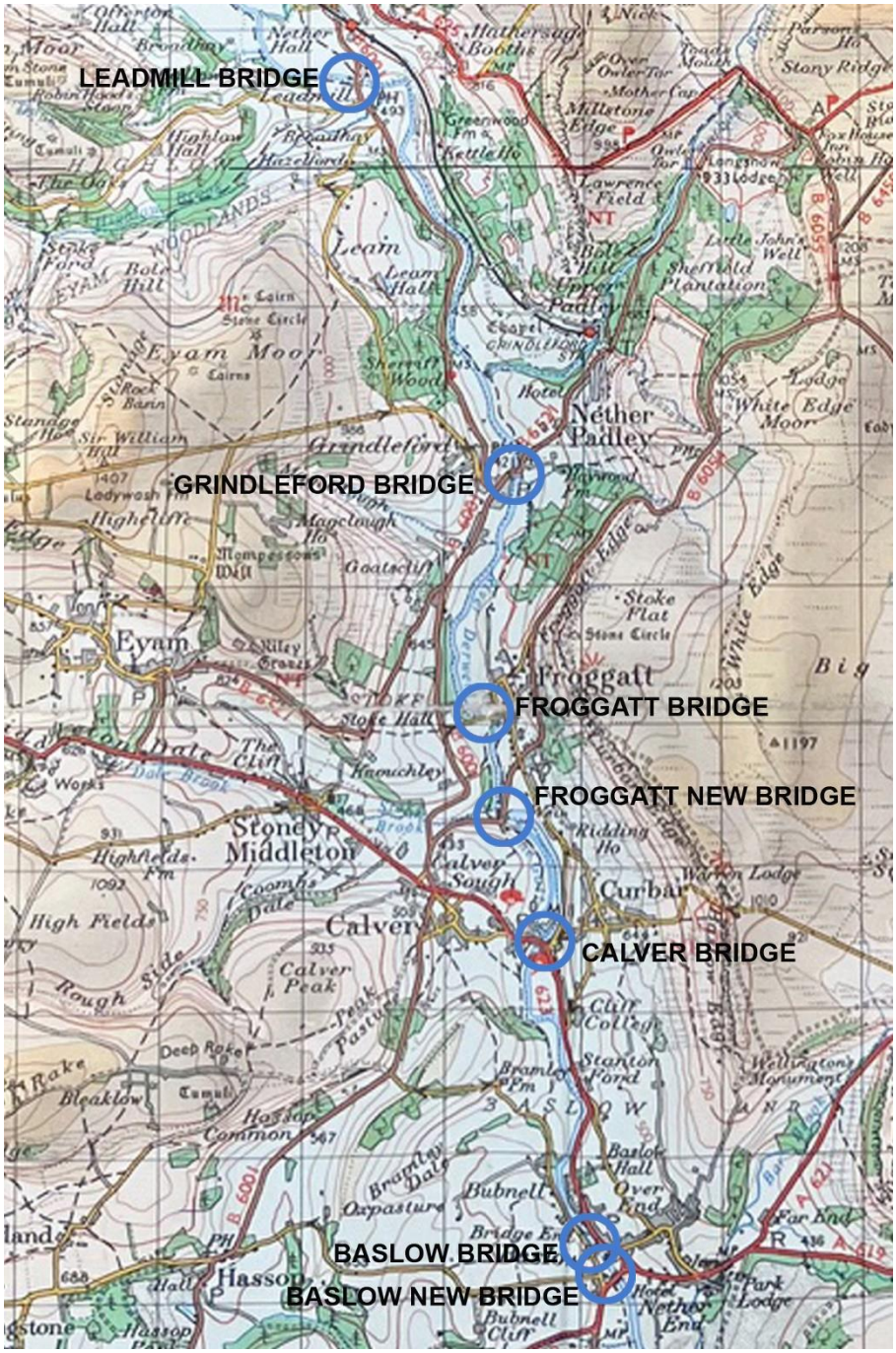
The river is managed for fishing and the landowner takes little interest in the stability of riverside trees. Inevitably when the river level rises it scours around the roots of trees which weaken and eventually fall into the river..

The river picks up fallen trees and carries them downstream, often colliding and jamming at the stepping stones. More debris builds up behind and often causes some of the stones to shift and become unusable. In June 2024 they were officially closed and dangerous but a local fellrunner was able to nimbly leap over a few toppled stones with no trouble.

There have been stepping stones here for at least 1000 years. Historically there was a short section of wooden bridge on the right bank. This might have been where Robin Hood fought Little John with quarterstaffs sometime aroud 1180.

The River Derwent next flows past a succession of corn mills and villages as it heads south to Matlock, where it will carry out its most famous task, launching a birthplaces of the Industrial Revolution.

SECTION TWO - CORN MILL VILLAGES



Leadmill Bridge

OS ref SK 23336 80586

W3W gent.collect.ulterior

For centuries the River Derwent provided a source of water power to the flour and textile mills of rural Derbyshire. As mills became bigger the river was dammed by weirs and diverted through millstreams.

Nether Hall near Leadmill Bridge at Hathersage was originally a corn mill.

The three arch stone bridge was built with a weir in the early 1700s. The weir diverts part of the flow into the corn mill. The bridge was widened in 1928 and does have a pedestrian footpath.

Grindleford Bridge

OS ref SK 24467 77814

W3W seabirds.grab.fallen

Grindleford Bridge is a three arch stone bridge with a more recent steel footbridge added on the downstream side. The bridge isnt wide enough for a footpath, so a similar arrangement to Mytham Bridge has been erected.

It is a great pity that the bridge cant be easily seen, even from the small garden that villagers have created on the right bank. .

The bridge is traffic-light controlled because it isn't wide enough for two vehicles to pass. That seems to have protected the parapet walls from vehicle impact damage.

Grindleford is named after the local industry of millstone manufacturing. Grindstones were carried over a ford in the River Derwent when water levels were low enough to cross. There was also a timber bridge here but it required constant repair. An exploratory walk up the woods to the east will discover some very heavy stone sleeper stream bridges required to get the millstones down from the quarries to the river.

Gritstone millwheels were needed in every town. The local quarries of Tegness, Froggatt, Curbar and Stoke brought prosperity and in 1758 a stone bridge was built, probably at the old ford location. The first bridge wasn't wide enough so remodelling was carried out soon after.

Froggatt Bridge

OS ref SK 24370 76075

W3W suitcase.habits.stirs

Froggatt Bridge is a narrow packhorse bridge with a pair of cutouts to allow laden horses to pass. It is unusual in having a large arch on the east Froggatt Village side, and a smaller arch on the west side. This may have been needed when the river was widened

by the weir damming at Froggatt New Bridge. Pedestrians have to use the cut-outs to escape cars.

Froggatt New Bridge

OS ref SK 24392 75319

W3W wheat.limbs.dilute

The ‘New Bridge’ is a rare single span arch stone bridge. It carries the busy A625 road.

It has no footpath so pedestrians have no choice other than to dodge the very heavy traffic or take a long walk. Traffic has to be tolerant.

Immediately downstream is the impressive and massive Calver Weir. This is often covered in timber debris.

The weir directs water into the 1km millstream known as The Goit, which delivers water to Calver Mill.

Calver Bridge

OS ref SK 24673 74463

W3W breathing.pedicue.missions

Calver Mill receives water by a millstream which is taken off at the weir at Froggatt New Bridge. The Goit is 1km long and enters the mill just above Calver Bridge.

There are two bridges here, side by side over the River Derwent and about 50 metres apart.

Calver Mill was first built as a corn mill in 1785 but was destroyed by fire and rebuilt in 1805 when it became a cotton mill employing a large number of local people. It closed in 1923 and has had a number of uses before being developed into modern flats.

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The nearby Bridge Inn is actually in Curbar.

The original Calver Bridge is a three arch stone bridge which has the same arrangement for pedestrians as Mytham and Grindleford bridges; a recently added steel footbridge on the upstream side. It dates from the early 1800s.

Before this the river was crossed by a ford immediately upstream from the bridge.

The village lane which crosses the bridge is too narrow for modern traffis, so there is a recently built 1974 concrete and steel bridge alongside carrying the busy A623 Baslow Road which bypasses Curbar village.

Baslow Bridge

OS ref SK 25095 72365

W3W grins.underway.deeply

Baslow Bridge was built in 1603 and is the oldest surviving bridge over the River Derwent. It replaced an earlier bridge of 1366.

It is unique because it has a tiny ‘watchmans’ tollhouse beside the bridge. The door is just 1.1 metre high. From 1603 onwards every fit man in the village had to take his turn watching from 9pm to 6am to make sure that undesirables were kept out of Baslow Village at night. It is sometimes called a Tollkeepers hut but a nearby sign refutes that.

The bridge parapet walls have cutouts to allow packhorses to pass.

Immediately downstream of the bridge is the old ford which served travellers before the bridge was built.

Baslow New Bridge

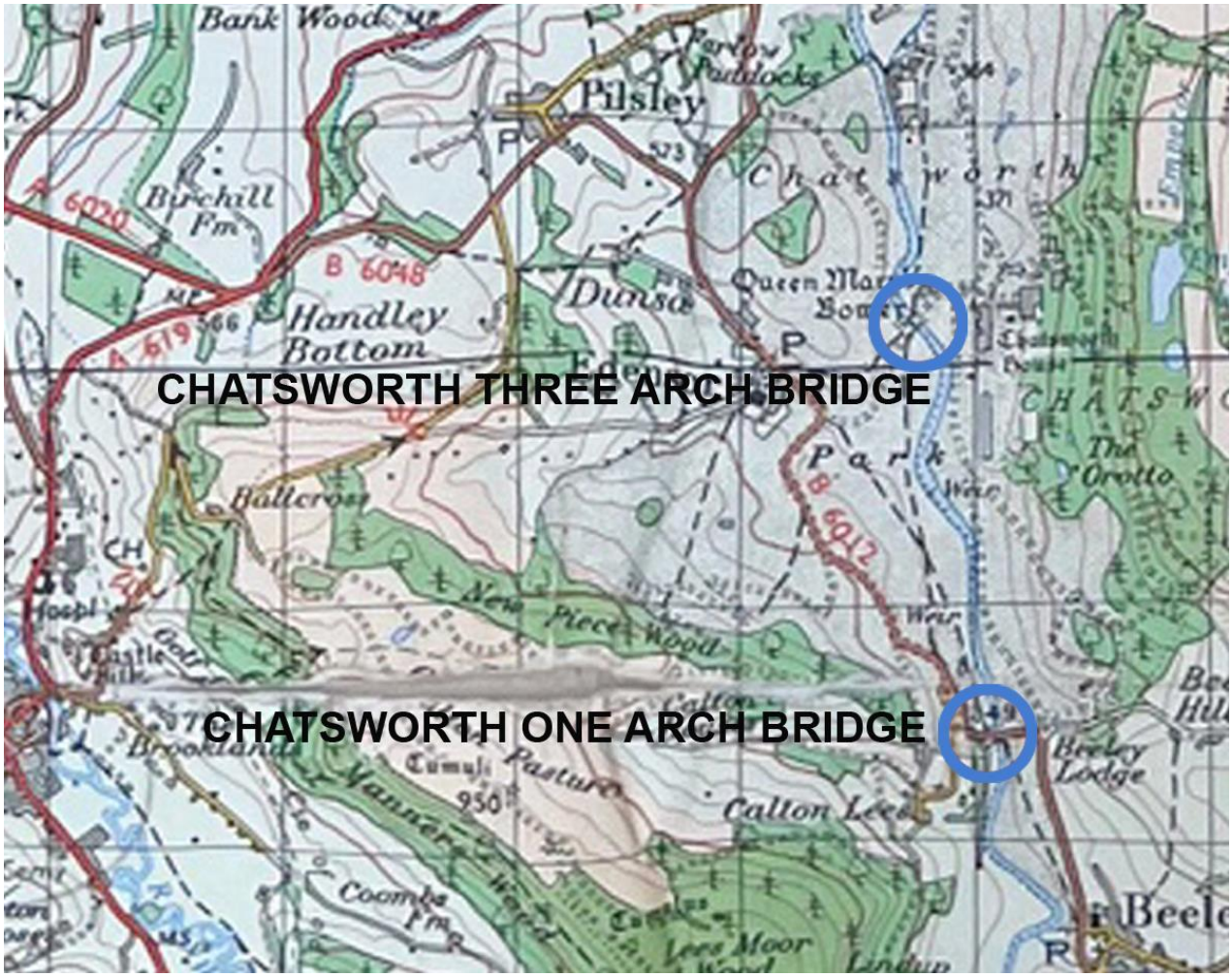
OS ref 25222 72179

W3W diner.bank.conquests

There is a second bridge at Baslow, 200 metres south carrying the A619 to Bakewell**.** This is known as the ‘Devonshire Bridge’ and was built in 1925.

It has a footpath.

SECTION THREE - GRAND DESIGNS



Chatsworth Three Arch Bridge

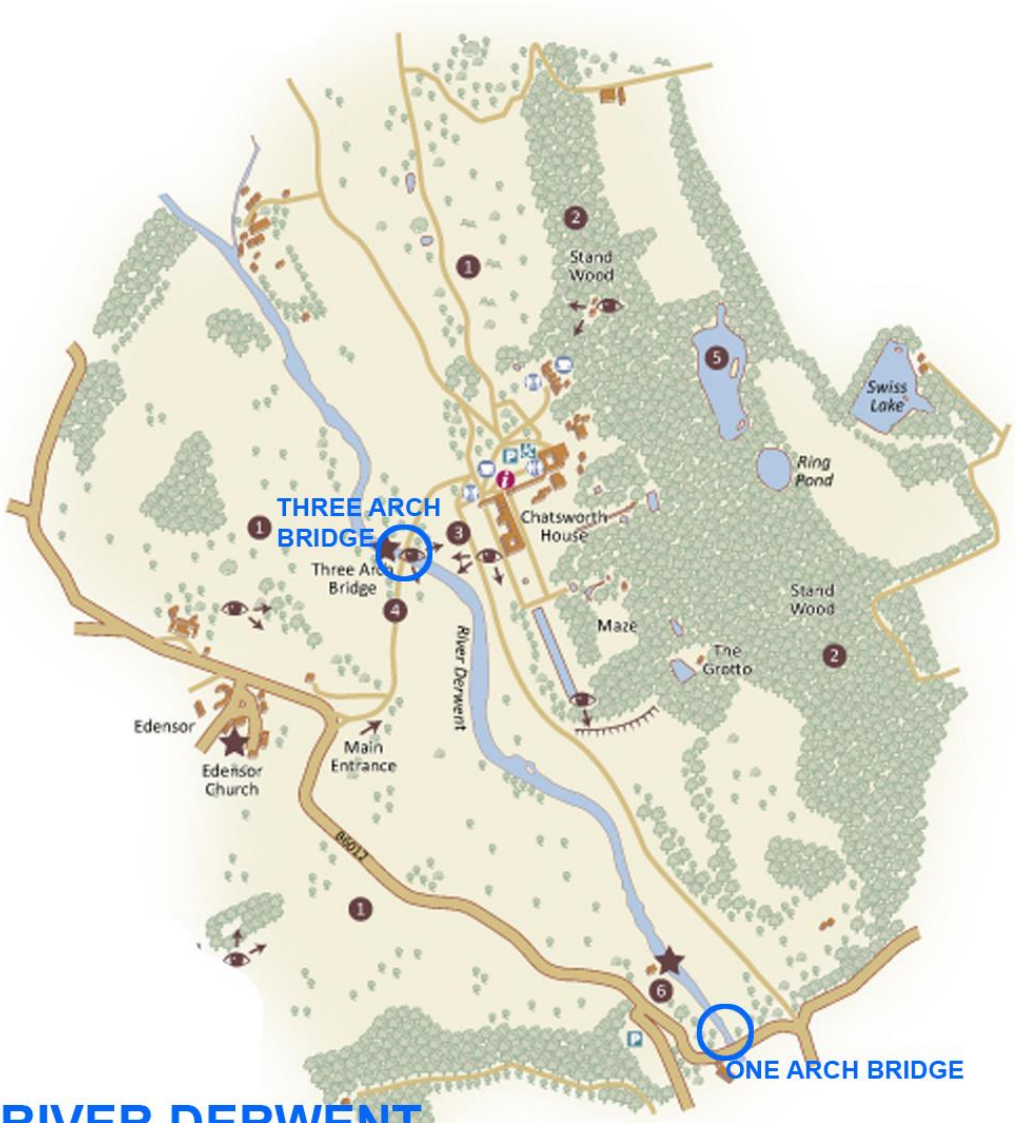
OS ref SK 25709 70161

W3W roughness.exporters.penny

The ‘Last Hurrah’ before the River Derwent becomes industrialised is interupted by passing through the magnificent parkland of Chatsworth House, stately house of the Dukes of Devonshire.

Lancelot ‘Capability’ Brown undertook a major redesign of the landscape of Chatsworth House between the late 1750s and 1765. He was commisioned by the 4th Duke of Devonshire early in his career as a pre-eminant landscape architect.

The map below show the landscape improvements carrried out under the direction of Capability Brown. It is a lot more than just the two bridges!



RIVER DERWENT
BRIDGES AT CHATSWORTH PARK

The grounds of Chatsworth include many elements of Capability Browns signature features; smooth rolling grassland reaching up to the walls of the house, a naturally landscaped ‘lake’, trees planted singly, in clumps, belts and on rising ground.

He paid particular attention to approach roads and drives. His masterpiece is the approach drive to the front of the grand house:-

> *The drive he created at Chatsworth, with falling parkland in the foreground and views of the bridge and the house beyond, backed by steeply rising wooded slopes, is one of the most impressive approaches to a country house in England.*

Capability Brown worked on over 250 large country estates. He was highly skilled in engineering, especially with water.

Before the 1750s Chatsworth had lavish walled formal gardens up to the walls of the house, but beyond that the landscape was rough and bare. The banks of the River Derwent were steep and the river could not be seen from the house.

Brown sloped the ground away from the house on the west side and built a weir to raise the water level of the River Derwent to create a more natural looking ‘lake’ although it was still part of the river. His ‘lake’ held behind the weir was 60 metres wide, considerably wider than the typical 20 metre width of the River Derwnt

Brown did also create a formal rectangular lake for Chatsworth, later named the Emperor Lake where 100 years later Joseph Paxton would create the spectacular Emperor Fountain.

While Capability Brown was envisaging a new landscape design, the Duke had commissioned an architect James Paine to add a new wing to the house and a separate stable block. Working with Capability Browns idea of a new carriage drive up to the front of the house, Paine designed the Three Arch Bridge which was completed in 1761. The bridge is artistically angled so as to be seen from the House, and for visitors to receive a striking view of the house from the Entrance Drive. This is recognized as Browns touch of genius.

Paines’ bridges are of an Italian style and quite different to the many other stone bridges on the River Derwent. His Three Arch Bridge is ornamented with two statues in Portland Stone by Danish sculptor Cibber, who had designed other sculptures at Chatsworth. Cibber died in 1700 and the bridge wasn’t completed until 1761, so the statues may have already been used elsewhere in the gardens until repurposed by Paine.

The sculptures are on the better protected downstream side of the bridge at the foot of the supporting pillars. The upstream side of the bridge has a place for a sculpture, but none was placed due to the risk of damage during flooding.

Chatsworth One Arch Bridge

OS ref SK 26058 68444

W3W pollution.smoking.scrapped

To create a single arch bridge Paine had to raise the height at the centre of the arch to seven metres above the river, creating a dramatic hump-back bridge.

The hump was not a problem for horse riders and carriages with good forward visibility. Not so for drivers of low modern cars who can't see over the hump until on top of it.

The bridge is now traffic-light controlled.

The One Arch Bridge is at the south of the park and was completed in 1760. Capability Brown also wanted a long distance eyecatcher at the south edge of the park. This would show visitors just how much land the Duke owned.

For this eyecatcher, Paine designed the nearby cornmill which was completed in 1762 and replaced an earlier mill which was closer to the house.

FUTURE

Derwent Valley World Heritage Site

One of the birthplaces of the Industrial Revolution began on the River Derwent.

Cromford is at the east end of the High Peak Railway. It has a viewpoint which overlooks the Derwent Valley, which was added to the list of World Heritage Sites in 2001, for it's significance as a birthplace of the Industrial Revolution. This is the 'Derwent Valley Mills World Heritage Site'.

A new type of workplace, the 'Factory', began here.

Factories used the water power and mass production ideas which began here and were copied throughout Britain and the world.

Arkwright's Mill at Cromford was the first water-powered cotton mill in the world, importing cotton from India and exporting finished cotton goods. His methods of organising his workforce and mass production caused Arkwright to be known as the father of the factory system. Masson Mill is an example of one of his later mills.

Transport infrastructure was needed to serve the industrial activities, and canals and later railways came to Cromford. The River Derwent was at the heart of industrialisation.

Textile mills sprang up on the banks of the River Derwent between Matlock Bath and Derby. Lombe's Silk Mill in Derby was the forerunner to the later cotton mills and only needed a small mill stream.

Cromford Mill only needed power from a small tributary of the River Derwent and the outfall of a lead mine sough.

Larger mills followed and harnessed the full power of the River Derwent. Belper, Darley Abbey and Masson Mill were much bigger mills and required large weirs to hold back water to drive their complex machinery.

The original cotton mill building have been reused and some still produce hydro-electricity from the River Derwent from turbines instead of by using water driving mill wheels.

Vast mills at Matlock. Ends at Shardlow Derwent Mouth