

Wirksworth Archaeological Society

The waters of Wirksworth and Wirksworth Old Bath

Wirksworth was once extensively supplied with streams, springs and wells. Importantly, some of these springs were thermal, they were warm springs, which, together with Wirksworth's position at the head of a fine valley, may have resulted in the foundation of the settlement in ancient times. Unfortunately, the hydrology of Wirksworth was drastically changed during the Jacobean and Georgian periods when many drainage soughs were built, almost destroying the town's warm springs with the streams they fed, so its necessary to look back to old documents for evidence of them.



Wirksworth looking north from Oat Hill in 1817 by J Farington

Coloured from "Britannia Depicta: the most interesting & picturesque objects in Great Britain"

The warm springs

Dr Thomas Short, a learned and scientific man for his time, visited Wirksworth in 1733, wrote a book and identified two "warm brooks" in Wirksworth: one on the east side of the town (the Hannage Sough), one on the west side of the town (the Warmbrook).

The Hannage Sough and its warm spring

"That on the east side of the town is a sough or level a mile long, made for carrying water from their lead workings; where it appears first to the day, they have made a very convenient bath."
The convenient bath was at Bath Close, near Willowbath Mill. This was at the outfall (tail end) of

the Hannage Sough, a drain said to have contained a warm spring, which must have been in the route for the sough to have intercepted it.

Later, in 1811, Farey misread what Short had written and reported that the warm spring was in the churchyard, but Short was referring to a warm spring in Stony Middleton churchyard, not Wirksworth churchyard. Short actually said of Wirksworth: *"There was formerly here a very good warm spring, but by sinking so many shafts in quest of lead, they have lost it and most of their cold springs."* He also refers to this lost warm spring in Wirksworth as having been "very pleasant, pure and wholesome".

The Hannage Sough, started in 1693, might have worked wonders for the drainage of the lead mines but it did terrible damage to the springs in the town. Thomas Bagshaw, a local lawyer much involved in litigation about the soughs said in 1702: *"the town of Wirksworth hath borne the losses of their water from the town to the impairing of their health, being utterly deprived by the sough of as fine springs in the town as the Kingdome had."* (Slack, 2000). This statement implies the warm spring must have been intercepted and diverted by the Hannage Sough by 1702, by which date the sough had only been built from Bath Close as far as Coldwell Street, about a mile, with a branch to the Lees lead vein, which it reached by 1696. It was known that most water in the sough came in from the Lees lead vein, which ran approximately from the north-west of Wirksworth under Blackwell Croft, Dale Car Park, the old Market Place, under the former National Westminster Bank and then towards the south-east corner of Wirksworth churchyard towards the end of Blind Lane.

Therefore the warm spring source must have been in that vein. The further implication is, before the sough drained the Lees lead vein, the warm spring was well known and served the town in some public way: given what Thomas Bagshaw had to say.

The Fountain of Wirksworth

It's perhaps notable that the Lees vein, containing the warm spring, passes under the old Market Place, so conceivably there might have been a springhead or fountain there, because this is a common feature of medieval market places. Two charters of Lincoln Cathedral record a fountain in Wirksworth, one in 1220 (noting "Adam at the Fountain") and one in 1275 (noting "Agnes at the Fountain of Wirksworth") but we don't actually know where, as the charters don't give more detailed information. In other medieval towns e.g. Wells in Somerset, the fountain was near the market cross. Wirksworth's Market Cross had been in front of the former National Westminster Bank and its location is shown on the 1709 map but not in later ones.

The Hannage Sough ceased to function in about 1776, it having been rendered obsolete by the Cromford Sough (Rieuwerts, 1980), most likely ending the warm spring altogether and this might also represent the final end to any public water supply, if it had survived until then, but if we take Bagshaw at face value, it had gone by 1702.

The Meadowcroft Sough, the Warmbrook and its warm spring

The second example of this loss of local springs was the Warmbrook, a stream which ran along the St John's Street boundary of the Meadows from Gate House, until 1692 when the Meadowcroft Sough was built, where its southward course can now only be traced by a little avenue of trees and a shallow ditch, it then turned eastward to flow along the south side of Water Lane. Its course was partially shown on the 1709 map of Wirksworth where it appears to cross the present Derby Road near Avalon House (junction of Summer Lane) at a ford and then it ran along the south side of Water Lane, where its course is completely obliterated, to flow into the Ecclesbourne near Willowbath Mill. It's not shown on subsequent maps.

An issue about the course of the Warmbrook was where it rose (began). Usefully, Rieuwerts (2012) recorded that lead was being mined "at the Warmbrook" in 1520 and the years afterwards, that is to say in Tudor times. Given that the Yokecliffe Rake lead vein extends under Yokecliffe and under Gate House, this can only mean that the source of the Warmbrook lay near Gate House or Hammonds Court. There is no lead anywhere else on that route. In the earliest map we have showing Gate House, from 1821, this area is shown as a parterre, a formal garden, perhaps suggesting it may have been landscaped after lead mining ended.

Information about the short-lived Meadowcroft Sough, 1692-1696, is also given by Rieuwerts who felt the sough outfall was 70 metres north-west of the Summer Lane - Derby Road junction. This distance is near where Wirksworth Archaeological Society estimated the junction of the Warmbrook and the Yokecliffe streams to have been in the Meadow Croft field. The sough outflow would still have drained back into the Warmbrook near the stream junction at that time.

Therefore as far as the Warmbrook is concerned, the warm spring which was its source was indeed at Gate House, in the Yokecliffe lead vein. Hackett in 1863 observed that at Warmbrook two springs, one warm, one cold, had been so near each other that "a man might have placed one hand in each at the same time", but Hackett misunderstands the exact location - the two springs, warm and cold, were at the bottom of the Dog Kennel water shaft at Gate House.

A problem, then, in researching the Meadowcroft Sough and the lost Warmbrook has been exactly where the warm spring was located at Gate House. Rieuwerts, fortunately, records the

number of meers laid out between the Dog Kennel water shaft and Yokecliffe. These are: the Dog Kennel for the founder meer; then the 3rd meer in the Meadow Croft; then the 5th meer in Woolley Lane (now Yokecliffe Lane); then the 6th meer at Yokecliffe. A meer is an old measurement used in lead mining of 29 yards (26.5 metres). These measurements enable us to confirm that the Dog Kennel water shaft was at the west end of Gate House, now below the lounge bay window of Claire Cottage, because the measurements fit these locations and the known location of Woolley Lane.

The warm spring at the bottom of the Dog Kennel water shaft (the shaft was supposed to be 16.5 metres deep) was described by Thomas Short as being a strong current of warm water from the north-east side. This warm water met a lesser current of cold water from the south-west side.

The loss of the Yokecliffe lead vein warm spring and of the whole Warmbrook itself, was probably due to the effect of the Meerbrook Sough which had reached a point in 1798 capable of affecting the hydrology of the whole of west side of the town, apparently ending the Warmbrook in that year.

The cold water mineral springs

Water Lane medicinal spring

Short additionally recorded three cold mineral springs in Wirksworth, including a "black sulphur" water spring "*at the south end of the town near the Warmbrook, in a stone enclosure on the right hand side of the road from Wirksworth to Derby*". Note the date again, as this affects which road he's talking about. If it was near the Warmbrook, the road he is referring to in his 1733 visit is Water Lane, which at that date went up through Gorsey Bank and a via now obliterated lane to Hardhurst, where it joined High Lane to Broadgate, then Shottle (or via Belper Lane End) to Derby.

Short describes this spring as being famous. Sulphur spring water was considered medicinal in those days for the treatment of eye problems as well as "cutaneous" and "scrophulous" disorders (which are skin disorders). Given its location, it perhaps suffered the same fate as the Warmbrook and is also likely to have been lost by 1798 as it appears on no maps after that date.

The chalybeate springs

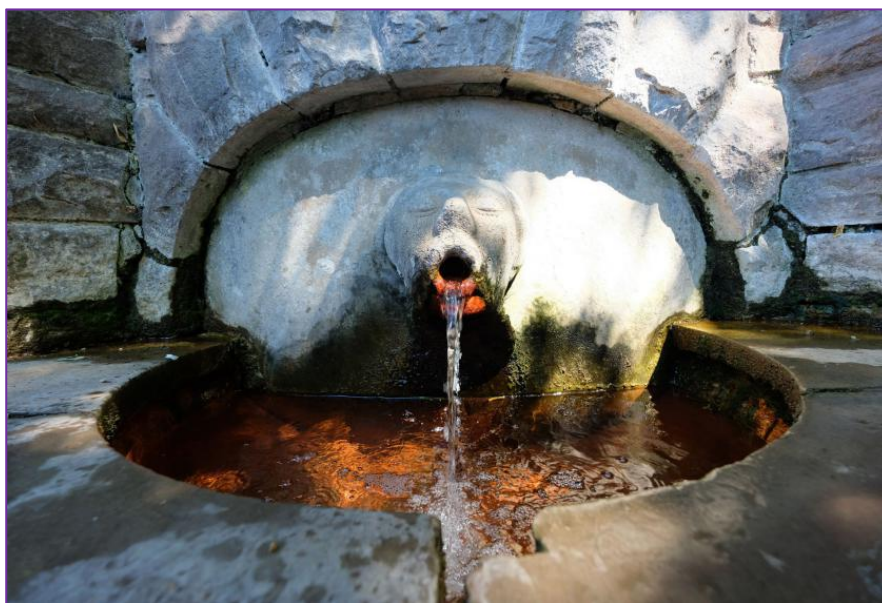
Bray (1783) said there were two chalybeate springs (mineral water containing iron salts) in Wirksworth, however like many others, he is simply quoting from Thomas Short. The first spring

can't be located from a poor description, but may perhaps have been one of the springs near St Helen's Lane near the modern Breamfield Reservoir: unusually Thomas Short's original wording is simply too vague: we don't know and he wasn't that complimentary about it either. On the other hand, he had much to say about the one south of the town:

The other chalybeate spring was in Fishpool Flatt. This is a meadow next to the Ecclesbourne about 300 metres south of Water Lane at SK 2863 5293. Short says: "*There is also a finer chalybeate spring at the south end of the town, in a marshy meadow called the Fishpool Flatt, at the foot of a fine hill, it's stream is dammed up with a very reddish brown ochre.*

The water is a fine colour, sparkles and bubbles when poured out, has no inky smell, nor nauseous taste, but has the most delicious nitrous pungent flavour like Pyrmont Waters. It rises out of shale and Gritstone. This I call Sui Generis ("in a class of its own") having found none like it in England."

Pyrmont Water was famous in 1734 when Thomas Short published his book and is famous yet: its bottled and sold as a fine mineral drinking water in Germany. Bad Pyrmont is a well-known spa town near Hannover, in the county province of Lower Saxony.



The spring head at Bad Pyrmont near the Great Pump Room

At the time of writing we don't know if the chalybeate spring in Fishpool Flatt at Wirksworth still flows, the site can be seen from passing trains and is excruciatingly overgrown, but it might be possible to investigate it if the landowners were known and willing. Fishpool Flatt is indeed a marshy meadow at its lowest point: through which the Ecclesbourne bubbles happily, before it enters a large culvert to run under the railway north of Forty Steps foot crossing, through Bennet's Dowry field, under the little bridge at Derby Road, into Haarlem Mill and then down the valley to its eventual confluence with the Derwent at Duffield.

Wirksworth Old Bath

The history of Wirksworth Old Bath near Willowbath Mill is interesting but again poorly recorded. Short described the bath as being “very convenient”. To touch first on the issue of “warm” in relation to its feeder, the Hannage Sough: Short, in the summer of 1733, took the temperature of both the “warm brooks” of Wirksworth, with the primitive equipment then available to him.

Short recorded that these were about the same temperature as the bath at Stony Middleton, because on a detailed reading of Short’s book, he appears to use the same equipment at both Wirksworth and Stony Middleton and gets nearly the same result. Stony Middleton spring still flows and is a constant 17.2 degrees, a little warmer at 18 degrees in the bath in the summer (Smith, 2017).

We can make some modern comparisons. Beginning with cold water out of your tap, this varies with time of year and other factors, but might be an average of 10-12 degrees Celsius. The Ecclesbourne stream, south of Water Lane, in May, is typically 10.7 degrees and in August 14.2 degrees: samples which illustrate a variance in water temperatures due to time of year, seasonal warmth and so on.



Location of the Old Bath, Wirksworth, off Water Lane

These temperatures can be compared with some other locations. The Old Bath at Matlock Bath is 20 degrees, it was described by Daniel Defoe in 1724 as being milk-warm, a similar description was also used of the Wirksworth Bath: "little more than milk warm", bearing in mind variability about what people describe. Today we would hardly describe 17-20 degrees as warm at all. St Anne's Well at Buxton is 27 degrees and our modern Wirksworth Swimming Pool is 32 degrees: positively tropical. We also don't have any accurate historic evidence for the temperature of Wirksworth's warm springs at their spring heads, this is because Short couldn't take the temperatures at the spring heads in the lead veins, but it's more than probable that the temperature of the spring heads is far in excess of that which Short recorded in Old Bath itself and in the Warmbrook in 1733, this is because of mixing with cold water flows in both cases. Therefore it cannot be excluded that both "warm springs" at their sources were much warmer than at their outfalls.

In essence, then, the Wirksworth Old Bath of three hundred years ago was probably a rather cool 17 or 18 degrees, perhaps a little warmer in hot weather, but really, it could only ever be described as "tepid". However, if you wished to bathe or cool down in the summer heat it would probably be entirely acceptable. In Georgian times cold water bathing was considered good for you.

In a recent article in "T'owd Man" magazine, Wirksworth Bath was described as being "*situated at the end of the Hannage Sough, from which it was filled in about half an hour; the bath being about 12 yards long and 6 yards wide*" we don't know how deep (Stoney Middleton bath is 1.5 metres deep though); bearing in mind that the modern Wirksworth Swimming Pool is 10 metres x 5 metres, so the modern pool is a little bit smaller than the Wirksworth Bath of Georgian times.



Wirksworth Swimming Pool (courtesy of Fleur Fern)

There is no evidence that the Wirksworth Bath was covered in a building, but it was probably at least walled and gated, because a charge was being made to bathe in it. Given it was fed from the sough, the earliest possible date of the bath cannot be before 1696 when the sough reached Lees lead vein. We don't know what the bath looked like, but there are others which have survived: the bath at Stoney Middleton is in a building which was added in Victorian times. Here, below, is an example of an outdoor bathing pool which has recently been restored in an archaeological project in Wales.



St Dyfnog's Bathing Pool at Llanrhaeadr near Ruthin, Clwyd

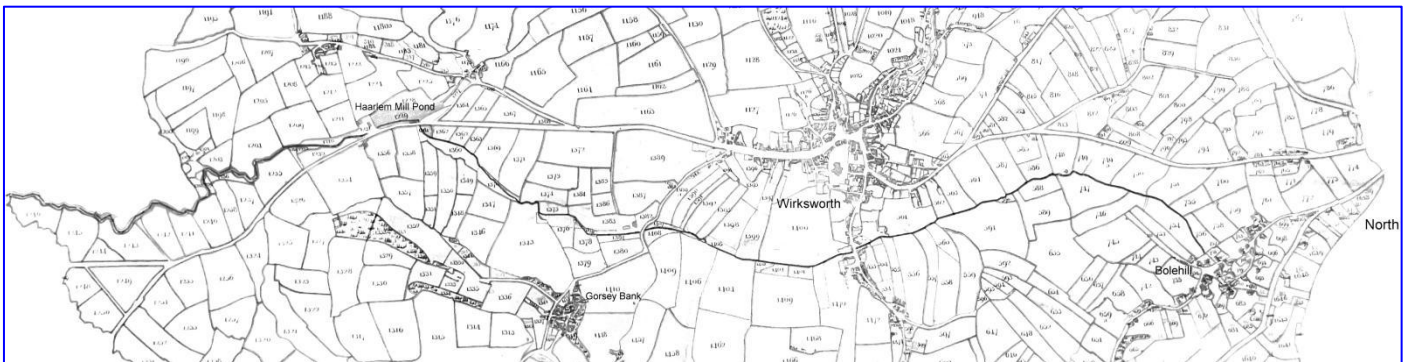
St Dyfnog's is a cold water bath See <https://stdyfnogswell.org.uk>

There was a small disagreement about when the water supply to the bath ceased and the bath closed: on the one hand Anne Griffin, the owner's daughter, thought it about 1775-1776, but on the other hand another local, George Land, thought it about 1788-1789. However, it is known from the records of sough building that the Hannage Sough was rendered obsolete during the late 1770s by then new Cromford Sough, thus confirming Anne Griffin's statement: the bath having served Wirksworth for about 80 years. The remains of the bath could still be seen in the 1830s, but after that no records mention it.

Source of the Ecclesbourne

The River Ecclesbourne rose at Spring Close at Bolehill in Wirksworth. This is shown in the Wirksworth Township Map of 1836 and the Wirksworth Tithe Map of 1848. These maps, made before the railway was built in 1867, show its course.

The source of the River Ecclesbourne is often subject to debate on social media, unfortunately in the usual confused social media way. The confusion arises because the railway changed the watercourse layout on the east side of Wirksworth and diverted the headwaters of the river to a culvert under Wirksworth railway station: this culvert emerges into the Great Hannage at Bridge Close and locally the Ecclesbourne at that point is often called the Hannage Brook (e.g. "Hannage Brook Medical Centre").



Town of Wirksworth in 1836

In addition, the Ecclesbourne has a large number of small tributary streams. The two most important being the Wash Green stream which runs down from Breamfield and flows into the Ecclesbourne at the culvert and on the south side of Wash Green bridge; as well as the Pittywood stream which rises in Callow parish and runs down to its confluence with the Ecclesbourne at Haarlem Mill. Further south in the valley the Ecclesbourne is fed by the Sherbourne at Hillcliffe Lane and by the Frankerbrook at Cowers Lane, amongst many other small tributaries, on its way to the Derwent.

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