

# THE PORTAL

Issue 85 - Summer 2023

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Friends of the Cromford Canal

Registered Charity No. 1164608

# FRIENDS OF THE CROMFORD CANAL

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No apologies for featuring the remarkable restoration of Aqueduct Cottage on the covers this issue! You can read more on page 12.

**Front Cover:** Jane Berry, a regular Aqueduct Cottage volunteer, is interviewed for local television at the opening of the cottage in March.

## Back Cover

**Top:** The cottage after it had been abandoned by the Wayfarers' walking group, with the roof beginning to collapse.

*(Photo: Arkwright Society)*

**Bottom:** The official opening to the public on 25th March.

**The copy date for the next issue is 18th August 2023**

President – Brian Blessed

Patron – Julian Richards

## The aims and objectives of the Friends of the Cromford Canal



The restoration, reconstruction, preservation and maintenance of the Cromford Canal, its associated buildings, towing path, structures and craft and the conservation of its natural character as a navigable inland waterway system for the benefit of the public.

# EDITORIAL

By Hugh Potter

It was wonderful to see Aqueduct Cottage officially reopened at the end of March. The project has been watched with great anticipation by thousands of well-wishers over the last few years, who have witnessed its gradual return from what most thought was an unrestorable condition to a viable visitor centre that stands proudly once again in the Derwent Valley Mills World Heritage Site.

Credit for this achievement must go primarily to one man – Ron Common – who has led and masterminded the whole project. But credit also to the enthusiastic team of volunteers who have worked tirelessly every Tuesday (and more!) to make it all possible, and to Derbyshire Wildlife Trust who own the building.

Exactly when the cottage will be open to view inside will depend on sufficient volunteers stepping forward to supervise it, so check out the Friends of Aqueduct Cottage Facebook page for week-by-week details.

Although the cottage itself is completed, work continues on the outbuildings, particularly the former pig-sty to the left, and of course the garden will need regular attention, so there will still be plenty of activity on the site.

To add to the cottage's fascinating story, I am delighted that we have in this issue the reminiscences of Frank Bark, who lived in the cottage as a child and remembers life there fondly – see page 26. Like Alison Uttley, he



*FCC members show funding consultants from Marsha Miles around the Beggarlee site, with the new crew cabin in the background.*

uses the word 'paradise' to describe it!

Whilst one project approaches completion, another – at the other end of the canal – is just beginning. Work to restore half a mile of canal and build a new staircase pair of locks at Beggarlee is finally underway and I look forward to seeing big changes in this area over the next few years. I hope many of you took the opportunity to view the site of the new canal at the Langley Mill Boat Rally at the end of May. If you want to visit it yourself at other times, much of the site is on or close to the public footpath that leads past Langley Mill Boat Yard.

Whatever you do this summer, I hope you will make the effort to get out and explore more of our fascinating canal. There is a public footpath following its entire length and full details are published in our Walker's Guide, available from the FCC shop **T**.

# CHAIRMAN'S NOTES

By David Martin

Back on 18th March members of the FCC attended the Inland Waterways restoration conference at the Winding Wheel conference centre in Chesterfield. The event was very well organised by the Chesterfield Canal Trust in conjunction with others and our thanks go to them for doing so. There were many speakers



on many various subjects. It was a great day listening to others and sharing our mutual aspirations and experiences.

The following weekend on 24th and 25th March we hosted representatives from the Marsha Miles Consultancy who have been working tirelessly away in the background applying for grants and seeking out charity-supporting donors for our cause. This was to help them gain a better knowledge of the canal and its environs. We gave them a two-day whirlwind tour of all of the Cromford Canal from the Beggarlee Project to Codnor Park and Lower Hartshay. Then on the following day their trip ended around the Cromford Wharf to High Peak Junction section finishing off at Aqueduct Cottage.

Coincidentally on 24th and 25th March Ron Common and the Derbyshire Wildlife Trust were celebrating the reopening of the now recently restored Aqueduct Cottage. On the Friday I attended an event there that was held to highlight all of those organisations who had helped this project along the way. They have done a really super job so well done to all of those involved.

On Saturday 25th March the *Birdswood* volunteer crew took her down to moor by Leewood Pumphouse to sell refreshments and merchandise to those members of the public visiting the newly opened cottage. This was a great success and the volunteers all enjoyed this very relaxed and different day. We thank them all

for their attendance in promoting the canal.

In April we held our AGM [*but see p34 - Ed*] where we presented this year's accounts which can be found on the FCC's website along with the minutes of the previous meetings, and also via the Charity Commission website. We updated those

members who attended on all of our activities over the previous year. After the break John Guyler gave a talk on our volunteers and illustrated the immense contributions that they have made to the many wide and various projects that we undertake up and down the length of the Cromford Canal, and also the huge contributions made annually by our world famous *Birdswood* trip boat operation.

This catalogue of data is extremely important in many ways. First and foremost it shows the level of commitment and enthusiasm for the restoration process as a whole by members of the public who contribute ever increasingly on a weekly basis. Secondly it proves to our external funders and external corporate organisations like the Canal & River Trust and Derbyshire County Council that our ability to maintain and sustain such levels of commitment to those projects is constantly there. Just as an example I can tell you that on the Beggarlee project alone, not including travelling hours, that 1,436 manual working hours have been committed by volunteers alone since we started down there last year, and the bulk of those are since last November. So if you would like to join one of those groups working on the trip boat, regular maintenance crews, or the restoration group please do get in touch with us at: [volunteer@cromfordcanal.org.uk](mailto:volunteer@cromfordcanal.org.uk) and let's see where we can go! **T**

# MEMBERSHIP MATTERS

By Yvonne Shattower

Well, we are supposed to be approaching the 'summer' but it is still very chilly, and steerers of boats going past my garden on the Erewash Canal are still well wrapped up.

The trustees were very sorry to learn of the death of Kath Brown, wife of our trustee Jack, and we send our condolences to Jack and their family. Kath frequently came to our meetings in the early days and I always enjoyed chatting to her. The large number of people at her funeral at Ironville paid tribute to her.

Looking ahead, we will be having a stand at the forthcoming Erewash Canal Preservation & Development Association Rally in the Basin at Langley Mill over the Bank Holiday. However unless the postman has very speedy transport I think this will have already taken place by the time you read this magazine. We are all keeping our fingers crossed for fine weather! Langley Mill Basin is a very important area as it was the junction of three canals - the Erewash below the lock, the Nottingham and of course our own Cromford. We have to thank the sterling work of the early ECPDA members who restored the lock (which is of course the last lock on the Cromford) and the surrounding area way back in 1973 because without their efforts our lovely Cromford would have nowhere to go to!

There are still many members who are paying their membership fees by standing



order but below the current level of £12 for single members or £20 for a couple. We are sending out reminders, but somehow they don't seem to work! Please, if you do receive a request to amend your payment, act on it - your fees are essential to our work, and although it may only be a couple of pounds, it all adds up.

We held our Annual General Meeting at Ironville on 17th April, but the numbers attending were very disappointing and the meeting was not quorate. This means that we shall have to have a second, very short AGM at the meeting on 19th June at Ironville to confirm the accounts, minutes of the previous AGM, and election of Trustees - see p34. Please do try to attend - it really will be a very quick process but it has to be held to ensure we are compliant with Charity law. Our speaker for that evening will be from Crich Tramway Museum; this is a subject we have never explored before so I am sure it will be very interesting and something quite different.

Our June meeting (as detailed above) will be our last meeting this summer; all being well we will be starting again in September with a new programme. I would like to take this opportunity to thank Wendy Scarle who has for many years run the raffle for us but is now hanging up her raffle tickets - thank you, Wendy, we will miss you.

Finally - don't forget to book your summer cruise on *Birdswood* - details are on the *Birdswood* web site [www.birdswood.org](http://www.birdswood.org). ■

# WORK PARTY REPORT

By John Guyler



*A hive of activity chipping brushwood on the Beggarlee site.*

At Cromford the work party cleared weed near the rugby club, and where the gully had been cleared out the mounds of silt had to be spread and flattened.

The FCC organised and funded floating reed cutters to operate on the section between Lawn Bridge and Leawood Pump. The work party had to clear all the cut reed off the towpath.

*Birdswood* was used as a floating platform for overhanging tree and shrub clearance on the opposite side of the channel from the towpath.

In Arkwright's Mill yard, the FCC team worked on the horseshoe weir, sealing the leaking sluice gate – see page 14.

At the area between Aqueduct Cottage and Gregory's Tunnel, we had to mark out fifteen positions with marker paint, which had been determined from engineering maps of the canal by Chris Broome and then those areas had to be cleared by the work parties for surveyors to work on the canal structure. A

very difficult job because of the terrain.

At Butterley Reservoir, at the request of Canal & River Trust, we had a work party clear the runoff of weeds and rubbish.

Lower Hartshay had a further 400 whips planted to continue the process of creating a new hedge (400 were planted last year). This year we had eight children from Ambergate Primary School come along with their teachers on 24th April and they planted 100 whips for us.

A delivery (funding sourced by the FCC) of twenty coir rolls was made to the Wharf Shed at High Peak Junction in mid-April and some were used immediately between Aqueduct Cottage and Gregory's Tunnel to reinforce an area of the towpath edge that was showing signs of erosion. Further work will have to be conducted, but not until the nesting season is over.

At Pinxton, work has been ongoing on sorting some trees and shrubs that need attention and generally clearing the area of rubbish. ►



*Whips ready for planting.*



*Laying out the damaged wall at Sawmills to lay the new stones.*



*Planting the whips at Hartshay.*



*Mixing the lime mortar.*

## **Sawmills**

At Sawmills, work on clearing brush was conducted by the main group, whilst work was taking place on the stone bridge to replace the lost coping stones. The coping stones had been missing off the bridge for a number of years. Master mason Robert Shacklock had sourced some stone, which he had bought to size and then finished off to look similar to the originals still in situ. The bridge was worked on in the morning, replacing the blocks, and from lunchtime onwards our team ➤

At Codnor Park Reservoir, a team led by Malc Chisnell replaced three posts and a top rail on a bridge over the weir and eight posts at the car park that were damaged. Then they proceed towards Golden Valley to remove fence posts dumped in the weir by someone who thought it was a funny thing to do.





*Those stones are heavy!*



*The completed parapet wall at Sawmills.*

## **Beggarlee**

Training of volunteers for the Beggarlee extension is continuing on the dumper and diggers and now the FCC has two certificated power saw operatives.

The FCC work party, on several Saturdays, joined forces with the ECPDA work party to use the Erewash-owned chipper to clear the Beggarlee area. The FCC had a total of eight separate Wednesdays working on brush clearance and pulling tree stumps and, on the 26th April, they finally cleared the site. Thanks go to ECPDA for their valuable support in this project.

On the 18th and 19th February, the Waterway Recovery Group spent a weekend pulling tree stumps out of the two gulleys that are to be piped before being covered by the new canal extension.

With the building of the Beggarlee Extension getting closer, we need a Site Manager, someone who has the experience of managing contractors and keeping the job on track. If anyone has the experience and is interested, please contact David Martin, [chair@cromfordcanal.org.uk](mailto:chair@cromfordcanal.org.uk).

If you would like to participate in the work parties, the volunteers are a sociable bunch, they look out for each other and are great to work with; contact John Barker, [work@cromfordcanal.org.uk](mailto:work@cromfordcanal.org.uk). **T**



*Nearly finished!*

of volunteers did the finish lime mortaring. The final repair looks good. This complements the work on the rebuild of the parapet wall of the adjacent original Brickyard Bridge at Waterloo Farm last year. Thanks go to Lockwood's Haulage for their backing for this project.

# VOLUNTEER HOURS IN 2022

By John Guyler

Last year was another good volunteer year for the FCC. The *Birdswood* business is doing very well with a big increase in maintenance hours, the cleaning crew have done a brilliant job, with many good comments from customers. The shop is opening on a regular basis with a stall at all the social evenings at Ironville.

The work parties had an excellent year with several work parties at Bullbridge, clearing the rubbish which had been piling up. At Sawmills a great deal of work went into clearing the channel of thick brush and doing a trial dig within the Gauging Narrows to discover an intriguing set of stop boards and possibly (we think) the stop chain which was placed across the narrows to stop boats sneaking through without paying.

At Pinxton Wharf, the section in water has been cleared by a contractor brought in by the FCC, so this nesting season should have the ducks all the way along the section. The Lock Keeper's Garden at Ironville had good results from the hours put in.

In running the FCC, all the meetings of the various groups were well attended. There are regular fortnightly Zoom meetings with Marsha Miles, the grant consultant that FCC have retained to explore financial opportunities. Four work party volunteers had training on First Aid and there was a tutorial from Canal & River Trust on what to look for when working on dams or reservoirs, regarding signs of possible failures in the structure.

At Lower Hartshay the FCC work parties have put another three hundred whips with another one hundred planted by pupils of Ambergate School, to add to the whips that were put in last year; a new hedge should be establishing itself in the next couple of years.

If 2023 is as good as last year, in terms of volunteer involvement, we are in for good year.

## Breakdown of Volunteer Hours

<b>Overview</b>	Direct Hours	Travel Hours
Executive & Officers	3352	274
Work parties	2875	501
Restoration Engineers	578	6
Birdswood Business	4715	429
Meetings (trustees, boat & restoration)	498	45
Lock Keeper's Garden	162	8
First Aid Course	25	5
C&RT Reservoir & Dam Tutorial	12	4
Slew ring design, Brown's Bridge	204	12
<small>(Not included in 2021 total)</small>		
<b>Total</b>	<b>12421</b>	<b>1284</b>
<b>Birdswood &amp; Shop</b>		
Masters	751	100
Crew	2646	150
Cleaning	172	27
Crew Training	126	15
Maintenance	820	93
Shop	200	44
<b>Meetings</b>		
Trustees	184	0
Birdswood Boat Committee	63	45
Restoration Committee	182	0
Zoom meetings Marsha Miles	69	0
<b>Work Parties</b>		
DCC areas	858	155
CRT Areas	939	167
DWT Aqueduct Cottage	15	3
FCC areas	1063	176

If calculated, using DerwentWISE structure of a 7-hour volunteer day, the value of FCC volunteer direct hours for 2022 is **£111,292.85**.

From January 2015, when I first started recording FCC volunteer hours to 31st December 2022, I have calculated the value of FCC direct volunteer hours as **£747,538.85**.

This year should be quite an eventful year, with the ramping up to the start of building work on the Beggarlee Extension at Langley Mill and all the associated volunteer work.▶

There has already been a lot of work cutting the brush and chipping the piles created and a group from the Waterway Recovery Group working over a long weekend to pull the tree roots out in the culverts. A WRG instructor has been on site training volunteers on driving diggers and dumper truck and with the help from the ECPDA work parties we should be good to go when required. So, next year's volunteer hours report might show the total to be up to those in 2018 and 2019. Here's hoping. **T**

<b>Direct Volunteer Hours</b>	
<b>Year</b>	<b>Hours</b>
2015	6,858.25
2016	10,784.5
2017	14,183.5
2018	18,158.75
2019	17,392.00
2020	7,429
2021	10,116.5
2022	12,421.00
<b>TOTAL</b>	<b>97,343.5</b>

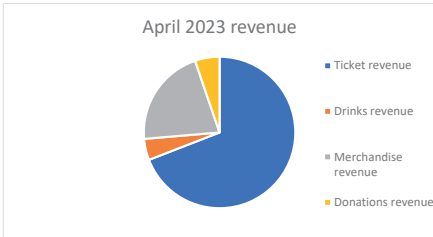
## FCC TRADING UPDATE – RAISING FUNDS FROM OUR TRADING OPERATIONS

**By Richard Handley**

Building on the 2021 'covid recovery year', our internal trading operations (our heritage trip boat *Birdswood* and merchandise sales) for 2022 was our most successful year so far, and we closed out the 2022 season having contributed over £30,000 to the charity's cash reserves.

We have an active sub-committee that looks after the trading operations of the charity, which decided to recommence public cruises on 8th April. Cruises were preceded by several training and refresher days for the team of 8 masters and 37 crew, and several test runs to check everything out. Additionally, our quartermaster has ensured that we have a new stock of refreshment consumables, and our new rota management team is up and running.

We have undertaken extensive publicity of our cruising schedule and have a good pipeline of pre-bookings. As I write this, we have just closed out the April cruises, and we delivered six charters cruises, one premium cruise and fifteen standard cruises: we carried 367 pre-booked and 154 walk-up passengers. Our push to being predominantly cashless continues with 75% of April's revenue being cashless.



The pie chart above gives an idea of where our revenues come from.

Merchandise revenues are continuing their strong performance thanks to our sales teams and new stock. In addition to ticket sales and merchandise income, we also get an average of 25p per passenger contribution from refreshment sales and 63p per passenger from on-the-boat cash donations.

Our plan is to operate until the 9th October, and then we face another very expensive out-of-water inspection of the boat by the Maritime & Coastguard Agency. So, starting this season later and finishing earlier than the 2022 season, plus the high costs of the MCA inspection, we don't anticipate the 2023 season being as financially successful as last season. I'll keep you in touch through the year. **T**

# THE DREAM BECOMES REALITY

By Ron Common

They said it couldn't be done, but on 25th March 2023 the beautifully restored Aqueduct cottage was finally opened to the public. It has taken four years and over 7,500 volunteer hours to restore this important and much-loved cottage and what an amazing project and accomplishment it has been.

The mission to save the cottage began 7 years ago in 2016 but it took 3 years of legwork to gain the necessary support for the project to go ahead. The restoration began on 28th October 2019 and continued through the difficult years of the Covid pandemic. The remoteness of the cottage meant that all materials had to be carried along the towpath to/from the Wharf shed using wheelbarrows.

Approximately 100 tonnes of materials have been shifted during the four years. That involved over 2,500 wheelbarrow trips, which equates to 826 miles walked by our volunteer team!

The financial support from the community has also been incredible. Cash donations from individuals and businesses totalled over £100,000. This includes a £6,000 donation from FCC/DCC in 2019.

In addition, local and national businesses and several individuals have donated over £25,000 worth of materials and services for the project.

In recognition of this wonderful generosity the names of project's major donors are on a 'thank you tree' mounted inside the cottage.

The project has also been actively followed by the public via its Facebook page 'The Friends of Aqueduct Cottage'. Launched back in December 2016, detailed weekly updates, including a photographic catalogue of the work undertaken, have kept the public informed and enthralled. Today, the page has over 4,300 members and is followed from around the world.

The Open Day was the culmination of the 7-year mission to save the cottage. The 2-day

event included a VIP day on Friday 24th March for major donors, volunteers and the media and on Saturday 25th, over 250 visitors enjoyed guided tours around the cottage and the Lea Wood Nature Reserve.

The event received great coverage on the BBC and ITV regional news, Radio Derby plus other local media. The story of this heart-warming project was also the main feature in the January 2023 issue of *Derbyshire Life*.

Saving the cottage is not just a dream come true but it is an example of what can be achieved when people come together for a worthy cause. When this happens, the seemingly impossible becomes possible and the benefits to those involved and the broader community are immeasurable.

To those who said it couldn't be done, have faith in human nature – it can move mountains. To those who have given their support, large or small, thank you. You have helped save this beautiful cottage which we can now all enjoy for many years to come.

## What's next?

At the time of writing, Derbyshire Wildlife Trust are recruiting a team of 'volunteer stewards' to manage the cottage going forward. The aim is to build a team to enable the cottage to open regularly on Saturdays, Sundays and Bank Holidays. It will take several weeks to get the team in place so in the meantime the cottage will continue to be open to visitors on Tuesdays and Saturday mornings when the restoration team is on site. Stewards will also be around on these days to show visitors around. With around 100 visitors a day, they are kept busy!

With the recent addition of a wood-burning stove in the kitchen and a solar power system for the lights, visitors can be assured of a warm welcome any time of year! **T**

# LEAWOOD – GREGORY TUNNEL SURVEYS

By Chris Broome

The general stability of the canal between Leawood Aqueduct and Gregory Tunnel has been an issue ever since it was constructed because of the height of the embankments supporting it above the river Derwent on such a steep hillside. The FCC have been looking into these issues using professionals to investigate the technical causes and how to potentially resolve them in the near future before this becomes inadvertently lost or irreparably damaged through potential climate change issues like deluge rainfall.

So FCC have recently commissioned a detailed topographical survey that has been undertaken, by the Greenhatch Group, of the canal, towpath and embankment over the 1.2km length between Aqueduct Cottage and Gregory Tunnel northern portal. The survey included 18 detailed cross-sections through the canal and its embankment, picking up critical locations where the canal has overtopped in the past and where the embankment is at its steepest.

These sections will be used by our geotechnical consultants, GEA Ltd, in their bank stability assessment of the canal along this stretch, which has been undertaken recently. The topographical survey also picked up bed levels along the canal which will be useful when we, hopefully, are in a position to dredge a channel sufficient for future navigation. The ideal scenario for FCC is to be allowed to raise the water level along this section of canal up to the original operating level so reducing the amount of silt needing to be removed.



*Techniques old and new were used to measure the profile of the canal bed between Aqueduct Cottage and Gregory Tunnel.*

Derbyshire County Council have asked that we investigate the stability of the bank using professional consultants so we can assess the impact that raising water levels would have on the banks for the increased water pressure. The towpath will also need to be raised along much of its length and this will need to be taken into account in the assessment as this will also increase the loading pressure on the embankment. Remediation works will probably be required to the banks, depending on the final results of the stability assessment.

DCC require these bank assessments to be undertaken before any future projects can be taken further. The results of these combined surveys will hopefully have been completed and be available to us this autumn and from that point on we shall be in a more informed position about what steps we need to take to improve and secure the general stability of the canal along this section to preserve its beautiful scenery for all future generations to enjoy. **T**

# FIXING THE FEED

## John Guyler on recent work to improve the flow of water into the canal at Cromford



*The leaking sluice paddle with twin lifting racks which should only allow water to pass when the level reaches the top. The protective trash screen has been removed and stands on the left. The feed to the canal is through the grill on the right.*

Last summer, the water level in the Cromford Canal on the stretch between Cromford Wharf and High Peak Junction became so low that our trip boat *Birdswood* could not operate on some days. Investigations into the cause of the low level, apart from the high temperatures, were undertaken. Some leaks were found in the structure of the canal alongside Cromford Meadows, which were addressed by Derbyshire County Council Countryside Service, by bringing in a contractor with specialist equipment (see *Portal* 84). But another problem with the water feed from Arkwright's Mill was also discovered at the 'horseshoe' weir in the mill yard.



*Fitting the synthetic rubber sheet.*

This weir was originally constructed when Richard Arkwright built the mills. The main channel supplied water to the wheel that powered the machinery in the second mill and the weir discharged excess water into the River Derwent, through a culvert.

The original weir chamber was stone built and was 10ft diameter, but when the Cromford Canal was built, the weir was modified to supply the canal through a side sluice in the chamber. This sluice channels water through a culvert under the roadside buildings to feed the canal via the open feeder channel that leads to *Birdswood's* overnight mooring behind what is now *Wheatcrofts' Wharf* café. The shape of the weir chamber was altered when this supply sluice was installed in 1792, so is now called the horseshoe weir.

If there is too much water coming over the weir to feed the canal, a second sluice diverts this to the Derwent. This sluice paddle was found to be leaking around and through the wood, with a large volume of water going straight to the river, thus there was a low flow to the canal.

A plan was drawn up by FCC engineers John Boucher and Chris Broome to fit a synthetic rubber sheet on the front face and sides of the paddle to prevent leakage.

A small team from the FCC work parties was brought in to first of all clear the weir chamber prior to completing the repair.

The water level was lowered the night before, by removing a couple of stop boards at a sluice lower down the main channel. The weir chamber ►



*Job done! Trash screen replaced and ballast over the bottom of the rubber skirt. (l to r) John Britten, Les Hall and Ian Hutchinson, with John Guylar behind the camera and John Boucher reloading his trailer.*

had to be cleared of rubbish and stones from around the paddle. The trash screen in front of the paddle was then moved out of the way and the old wooden gate guides removed. The ballast was retained for future use when the waterproof sheet was secured.

When the work party finally got to fix the repair, it was found that a large stone was jammed between the paddle and the bottom lintel, causing a gap of an inch below the gate, which didn't help.

With the stone and other debris cleared and the gate lowered fully, the first job was to pack clay along the base of the gate. A soft packer sheet was secured to the gate which will prevent the rubber being damaged with the water pressure against the paddle. The sheet was then fitted and secured over the paddle and tucked in the side guide slots. New wooden side batons were then fitted to the walls of the weir, to hold the trash screen in position up to the paddle. After these rear batons were in place, a wooden baton was placed along the entire length of the paddle and secured to the vertical wooden batons, resting on the rubber skirt and clay, to allow ballast at the end of the job to spread the load evenly.

When the trash screen was fitted it was also mounted on wooden packers at the bottom to prevent damage to the rubber sheet. The front wooden guide batons were fitted and then the ballast moved previously was used to weigh the bottom of the skirt into the clay to form a seal.

The chamber was cleared of tools and volunteers, the water supply was restored and the flow monitored.

There was no water leaking through to the river until the level reached the top edge of the sluice, and the flow into the canal sluice was much stronger that it had been for a long time.

The following day the water level in the canal was checked and found to be rising to a normal operating level.

Another good job done by the FCC work parties and engineers.

FCC is very grateful to the management of Cromford Mills for permission for the repair and valuable assistance with access to the weir. **T**



*Back in action, feeding water through to the canal, not the river.*

# A TALE OF TWO CHIMNEYS

## Hugh Potter on the origins of Leawood Pump

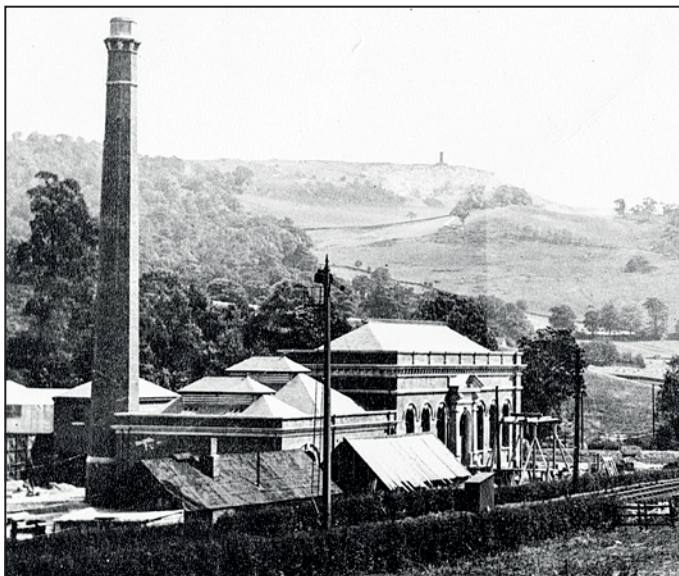
The late Victorian building with its fine chimney, seen in the black and white photograph, is the Homesford Water Treatment Plant, between Whatstandwell and Cromford. It was the result of the Ilkeston & Heanor Water Board (formed 1901) purchasing for £5,000 the rights of the Meerbrook Sough Company.

But what is its relevance to the canal? Well, two things. First it is situated close to the footpath between Gregory Tunnel and Homesford Cottage. Second, the Meerbrook Sough was the reason Leawood Pump was built, some 50 years before the water treatment plant.

When Richard Arkwright opened his first mill at Cromford in 1771, it was water from Bonsall Brook and Cromford Sough that powered it. Clever engineering and construction brought water to the top of the main wheel via a cast iron aqueduct over Mill Lane, which stood until demolished by an over-height vehicle in 2002.

The canal was originally fed by this water as it left Arkwright's mill; after turning the wheels the water passed over a weir, through a culvert under the road and to the canal.

Cromford Sough, begun in 1673, was a long adit built into the hills towards Wirksworth to drain lead mines. It was proving inadequate to



*Homesford water treatment plant. On the original print you can identify the old Crich Stand, which was built in stone in 1851 and hit by lightning in 1908. The water plant opened in 1904, which dates the photograph to 1904–08. This fine building was replaced by the present rather mundane structure in 1970.*

*Photo: courtesy Pat Morriss*

drain deeper mines, so work began as early as 1772 on the deeper Meerbrook Sough, an impressive 5-mile tunnel at a depth of up to 700ft.

It was completed almost 70 years and £70,000 later, and discharged up to 20 million gallons of water a day into the River Derwent, 2 miles downstream of Cromford at Homesford Cottage. This lowered the water table by an estimated 100ft and greatly reduced the flow in the Cromford Sough.

Anticipating a major problem from the loss of water supply, in 1839 Richard Arkwright Jnr took the proprietors of Meerbrook Sough ►





*The cast-iron aqueduct that carried the water of Cromford Sough across the road to Arkwright's Mill, photographed in the early 1960s, when the buildings were still in use by the colour works.*

*Photo: courtesy Pat Morriss*

to court for depriving him of 'his' water that previously came from the Cromford Sough. For many years it seems this had been avoided by gates being erected across the entry to Meerbrook Sough. However by 1838, the proprietors of Meerbrook Sough finally wanted to drain more mines and this meant opening the gates. This in turn stopped most of the water running down Cromford Sough, leaving Arkwright with only the water in Bonsall Brook to power his by then extensive mills. After a long debate, the court found against Arkwright saying in effect it was never really 'his' water and so he had no right to it.

The resulting decreased water flow caused Arkwright to cease using Cromford Mills, and he transferred the work to Masson Mill, powered by the Derwent.

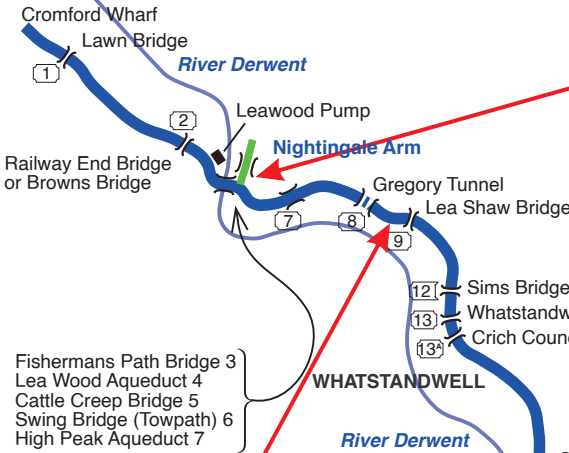
The Canal Company's solution to the reduction in water supply was initially to install a temporary 10hp engine to pump water up from the Derwent alongside what is now known as the Railway Narrows, between Lawn Bridge and High Peak Junction. This sufficed until the coming of the main line railway necessitated



*The only survivor in this story is the imposing Leawood Pump House, with its restored and working engine that still pumps water up from the Derwent. This unusual 'pop-up' card is produced by Peter Knight of The Common Press, Crich: [www.knightprinter.com](http://www.knightprinter.com).*

its removal. Fortunately, a new 70hp pump had been ordered in 1844 from Graham & Co's Milton Ironworks at Elsecar. This was not fully operational until 1850 but is largely what you see today standing beside Wigwell Aqueduct. Ironically, the splendid earlier chimney of the pump house survives whilst the much later one at Homesford does not. **T**

**CROMFORD**



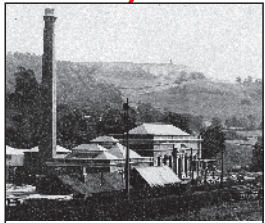
*Aqueduct cottage reopened in March - p12.*



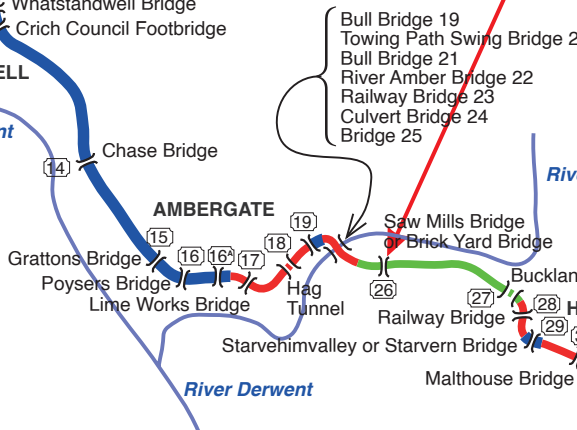
*The newly replaced stones at Brickyard - see p7.*

**WHATSTANDWELL**

- Fishermans Path Bridge 3
- Lea Wood Aqueduct 4
- Cattle Creep Bridge 5
- Swing Bridge (Towpath) 6
- High Peak Aqueduct 7



*Homesford Water Treatment Plant - see p16.*



**AMBERGATE**

**Walking the Canal**

We are fortunate that the canal's towpath was designated as a Public Footpath before it closed, and the entire route is still walkable today, with some minor diversions. Full details of the route are given in our Walker's Guide, available from the FCC shop.

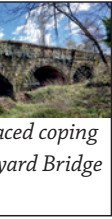
**Canal Ownership**

The 5.5 miles between Cromford and Ambergate are owned by Derbyshire County Council, but the remainder is in various ownerships. Details are published on the FCC website.

- █ Canal in w
- █ Canal bec
- █ Canal bec
- █ Rivers

**THE CROMFORD CANAL**





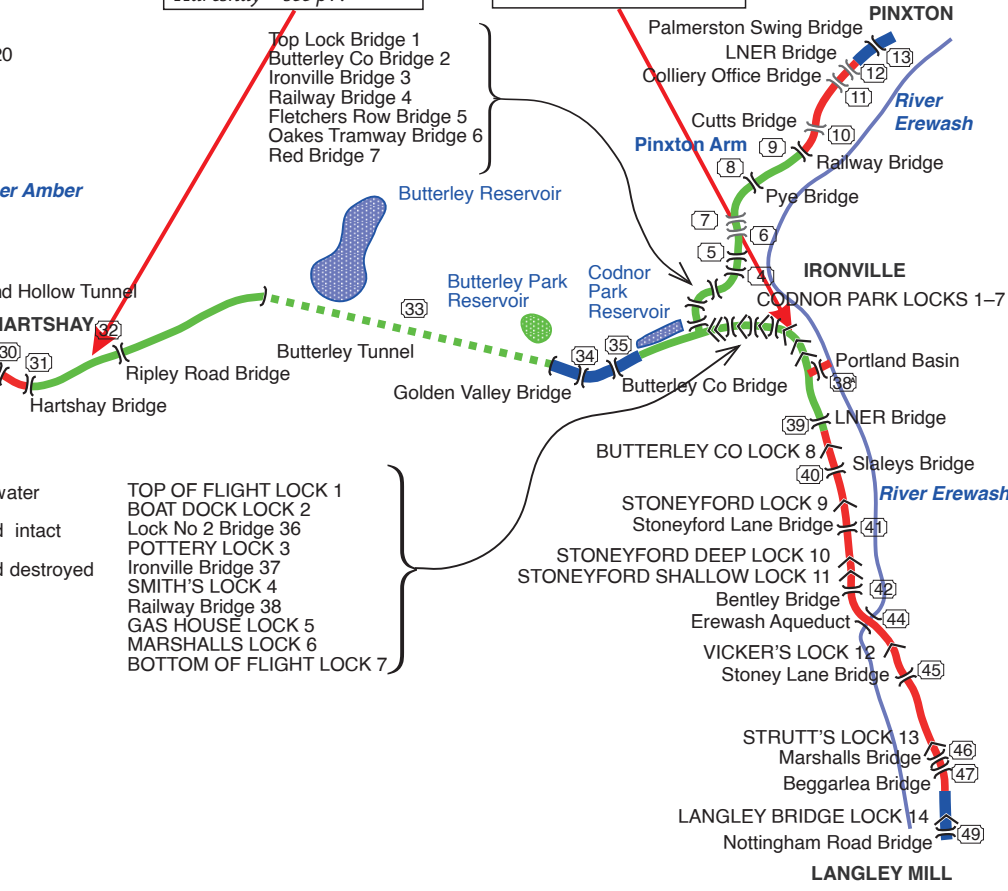
aced coping  
ard Bridge



New hedging at  
Hartshay – see p7.



Newly laid path along  
Ironville Locks – see p 24.



# MAGIC MUSHROOMS

## Keith Bailey watches "Mushroom" Dave Wright at work

The Canal Shop at Cromford Wharf does a steady trade in ornamental wooden mushrooms for gardens, terraces and patios. In 2022 the shop sold over 50 at an average price of £20 raising over £1000 for the FCC. These mushrooms are made and donated by FCC member Dave Wright.

Dave kindly invited me to see how they are made. Dave owns and manages about 10 acres of natural woodland at Leashaw Farm near Holloway, Dave's land is also not far from the canal and Gregory Tunnel.

Dave's woodland is a magical place which he clearly loves. My visit was on a beautiful sunny spring day and I can see why. The photo opposite shows a carpet of Bluebells. The woodland is mature and boasts a wide range of trees including Oak, Ash and Alder.

Dave started using his chainsaw to make ornamental mushrooms about 15 years ago after training and qualifying for his chainsaw certificate. In the UK chainsaw training is mandatory under the provisions of PUWER – the Provision and Use of Work Equipment Regulations and applies to volunteer organisations such as FCC as well as paid employees and Dave did a lot of work in our Work Parties felling trees and clearing brush.

It was through the Work Parties that Dave's skill with a chainsaw came to the attention of our shopkeeper, Paul Barras, who could sell fridges to Eskimos. Paul encouraged Dave to make some mushrooms as a trial, which was very successful. Dave initially used timber, usually Alder, that had been cleared from the canal banks around Whatstandwell which would otherwise have been sold as firewood or burnt on site. However, the mushrooms, figuratively "flew of the shelf" and Dave exhausted



*Leashaw wood with a carpet of Bluebells.*

*All photos: Keith Bailey*

this supply. As part of Dave's management of his wood he has to regularly "coppice", i.e. remove scrub and thin out trees to encourage new growth. Alder and Ash are both quick growing and can add 2ft in a year and need regular coppicing and so provide a renewable and sustainable source of timber for mushrooms

The following sequence of photos show the process of turning a short log into an ornamental mushroom. ▮



*A piece of Alder in place on the worktable at the start of the process.*



*Marking out the thickness of the mushroom "cap".*



*Making the first cut.*



*Cutting to set the diameter of the top of the "stalk".*



*Checking the chainsaw prior to starting.*



*Shaving the "stalk".*



*Shaving the "stalk" is an iterative process, taking a sliver off each rotation.*



*Using the edge of the blade to smooth the "stalk".*



*The mushroom's "stalk" finished and smoothed ready for tapered "cap" to be cut.*



*Cutting the taper on the "cap" is also an iterative process, like the "stalk". It is made more difficult because the mushroom is not supported.*



*Cutting the top.*



*Smoothing the "cap".*

# HOW LONG IS BUTTERLEY TUNNEL?

## Hugh Potter fails to answer a reader's question!



*One of the chain markers indicating the distance into the tunnel.*

Railway & Historical Society member Robin Avery wrote:

I have been compiling a spreadsheet on canal tunnels in the UK and am a bit stymied by Butterley Tunnel. What I have at the moment is as follows:

A length of 3,063 yards is given in Bradshaw's (de Salis) and 3,083 yards in Wikipedia. However, that Wiki article states that the tunnel was 2,966 yards long but later it was extended to 3,063 yards when the Midland Railway's Ripley & Heanor branch was built over the western portal – which corresponds with the length given in Bradshaw (1904). After closure, a 20-yard-long culvert was added when the A38 was built on the line of the railway. Measurements of the current length using OS maps and Google Earth however suggest that the post-railway length was only 3,021 yards and comparison of the 6in OS map surveyed 1878–80, which does not include the railway, with the 1898 revision, which does, shows the portal in the same location and what appears to be a reinforcing wall across it at the edge of the railway embankment.

Is there anything that you can tell me to clear up the discrepancy between the measured lengths and those variously reported please? The maps show a straight line for the tunnel with the air shafts on that line, which suggests that the variation is not due to bends in the tunnel.

My attempted response was as follows:

*A very good question, Robin! My first attempt to give you a definitive original length has just foundered as the Wilkes map drawn at the behest of the canal company in 1811 gives the length as built as 1.75 miles and 11 yards – ie 3,099 yards.*

*However there is a hand-written correction saying it is 1 mile 5 furlongs and 164 yards which makes 3,024 yards. Beneath that are figures of 1 mile 4 furlongs and 138 yards (= 3,008 yards) then "16 yds left", which is the difference between these last two figures.*

*None of these seems to match the oft-quoted 2,966 yards. I wonder if they were taken from the chainage measurements that were marked throughout the tunnel – from both ends. Possibly they were measured independently and did not tally.*

*Pre-railway, Phillips (1805) gives 3,000 yards, Priestley (1831) gives 2,966; post-railway Bradshaw (1904) gives 3,063, and Hadfield (1966) 3,063 but originally 2,966.*

*The most comprehensive (but not, I would say, necessarily entirely accurate) work was Des Greenwood's Portal to Portal, a few copies of which are still available at our canal shop. He was mainly concerned with the tunnel's interaction with the Butterley Company, which lay above it, and the 'Wide Hole' but his summary of the lengths is interesting.*

*It was certainly extended/altered in 1890 and subsequently for the A38 embankment in the late 1970s.*

*I guess today's digital surveying techniques (or even two gps readings) would give a definitive value for today's length, but estimates of previous lengths would have to rely on OS maps, or archive maps yet to be discovered.*

*However, the tunnel is straight as far as we know. ■*

# CROMFORD CANAL & CODNOR PARK RESERVOIR GROUP

By Marie Brown

The winter seasonal work this year has largely concentrated on flood elevation, channelling so that the waters run smoothly and repairs to the overall infrastructure of the pathways and crossings.

Once again visitor numbers were on a steady increase and photographers came out in their droves. Our resident superstars did not disappoint us; the kingfishers actually took to posing for people and seemed to be catching fish just to entertain the crowds. We have been closely monitoring and so far they don't seem to have been adversely affected by their celebrity status.

One of the key successes of any waterway is also having otters and this year they were present both in the river and the canal. We are seeing regular signs of otters visiting.



As many of you will know, having otters is a wonderful sign that the ecosystem is doing well, and food sources are good. It is also a clear indication that the water quality is of a high standard. This is constantly being monitored for several

organisations by one of our group's volunteers.

The water voles are showing well and we are seeing large numbers of pups which show that the general population is thriving and growing. These populations are being closely monitored and we are working alongside every organisation that works along the banks to ensure that scheduled disturbance of nesting sites is kept to a minimum.

We have however, had to issue several warnings to people who are choosing to put food out for the voles in the hope of that elusive photograph. This is not acceptable behaviour and has been challenged. It is also unnecessary in an area where the natural food source is abundant. ►



*Kingfisher posing.*  
*Photo: Marie Brown*



*Water vole at lunch.*  
*Photo: Marie Brown*




Volunteer numbers have also risen this year and we have performed a skills audit to get extra volunteers enrolled on courses such as first aid, chain saw qualifications and more.

This year, alongside the Derbyshire Wildlife Trust we will be undertaking our biennial larger project. We are reluctant to do a large scale project every year as we need time for necessary permissions, plans, work schedules and of course funding to be put in place. We are also keen not to overload our small band of regular volunteers and are mindful that they give their time freely with no expectation of reward ... although a bacon butty and hot drink is always welcomed.

2023 will see us undertake the final section of pathway from 'humpy' bridge at Portland Basin to the bottom entrance to Erewash Meadows nature reserve. It may mean that pathways are temporarily closed due to the amount of light plant vehicles required for the transportation of stone but warnings will be in place and plenty of notice will be given.

There is always much to do and we look forward to seeing what 2023 will bring.

If you would like to get more involved, then please contact us to find out more on our Facebook page or via email at [cromfordcanalgroup@outlook.com](mailto:cromfordcanalgroup@outlook.com). 



*Part of an old canoe found whilst clearing reeds near Portland Basin.  
Photo: Andy Moon*



*Always plenty of reeds to clear.  
Photo: Andy Moon*



*The work team and their trusty mechanised 'wheelbarrow'.  
Photo: Andy Moon*

# MY CHILDHOOD ON THE CROMFORD CANAL

## The late Frank Bark recalled life at Aqueduct Cottage

When I was six years old my mother told me that on the following day we would be moving from our home at Overton near Ashover. I thought this was really exciting. The next day a large van arrived and the removal men appeared, to clear our house of furniture and belongings. My father had found a new job with better pay and we were being evicted from our tied cottage. It had taken some time to find a new home.

Father stayed behind to help load the van. My mother, who had seen the new house only once, took my two elder sisters June and Fay, my younger sister Ruth and me to the bus stop where we caught a bus to Matlock. We then travelled on the blue bus, for about half an hour until we reached Lea Bottom where we got off at the bus stop near the sewerage works.

From there we walked around the large walls of the old hat factory, to Lea Wharf where you could see rings of steel where the crane lifted



*Frank and friend Raymond attempting to extract the work punt from under the swing bridge, watched by sister Ruth, and photographed by sister Fay.*

goods on to the side of the wharf. There was a cottage, which we presumed was the wharf keeper's cottage. This was empty as was a shed where the wharf workers probably made their tea while loading and unloading goods to take to and from Lea Mills.



*Aqueduct Cottage at Easter 1957, by which time the swing bridge had been removed.*

A narrow footpath led to our new home, Aqueduct Cottage. On the right hand side was a wall which was 15-16ft high, and below the wall was a field where, if you stamped your feet, hundreds of rabbits would appear. It was always full of rabbits! If you walked further on you came to a railway line, the London to Manchester line. Here the tracks go over the river, under the canal and into the hillside to disappear through the big tunnel. ►

When we arrived at Aqueduct Cottage everything was new and strange. It was a wonderful place to live. Three steps out of the front door was the canal. There were woods all around us. However, there were disadvantages. We had to carry everything to the cottage: oil for the lamps, coal and wood. We were able to take the old trees on the bank at the back of the cottage to provide our winter fuel. Worst of all, we had to carry all our water, including drinking water. We used a large churn and a barrow which we took to the spring to fill with water.

### The Pumping Station

My home was a paradise for a young child, along the footpath was the canal towpath going towards Cromford. On the towpath was a large pumping station, one of the best in the area, which was and is a magnificent building, it contained a big steam pump to bring water from the river Derwent to the canal. It was a great tonnage; nearly two tons of water came up the spout and into the canal. As a small boy I was fascinated by the place.

One day I decided to go off by myself to have a look around this great building. Down by the pump house chimney stack I found a piece of stone which I was able to move. I made enough room to be able to slide down into the flue of the chimney which ran underground from the boiler house. I walked through the flue into the bottom of the chimney stack where I could look up and see a ring of white light coming down the chimney. I thought this was wonderful! Then I turned round and walked back to the grid which I looked through to see the boilers. By now I was feeling hungry and I thought it was time to go home; I climbed back up to the surface and pushed the stone back into position.

I went back onto the towpath and walked back to Aqueduct Cottage where I gave my mother a shout, "What are we having to eat?" Mother came out of the cottage saying, "Come and get yourself something". Then she looked at me and said "What have you been doing?"



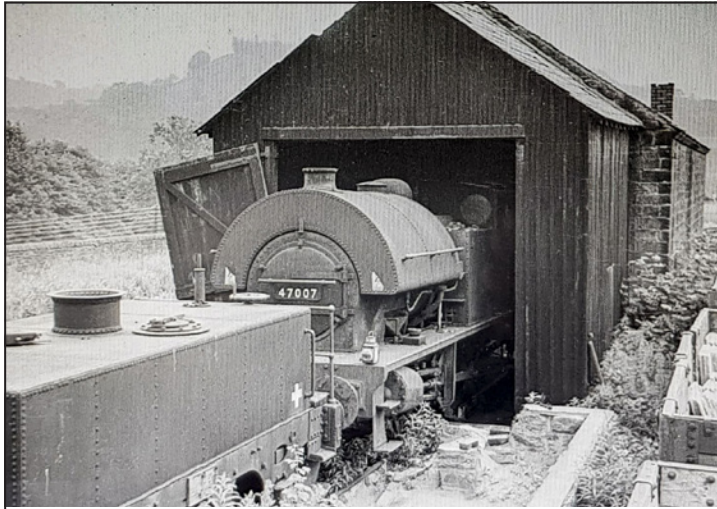
*The sluice opposite Aqueduct Cottage is one of those Frank Bark describes for draining sections of canal.*

You're black from head to foot. You don't come into this house until you are clean! Go and get the boiler going."

The boiler was in a shed next door to the cottage. We had a copper which was like a big round dustbin but stronger and you had to light a fire beneath it to get the water hot. You had to use a bucket to lift the hot water out of the copper and into the galvanised tin bath. As you can imagine it took a long time and a lot of soap and rubbing to get rid of the soot and grime to get me clean! At last mother said, "you're about right now; empty that out, we'll shove these clothes in now". She had a smile on her face; I'd got away with it!

### Repairing Leaks

A small punt was moored near to my house. This was a small boat which the canal men used when repairing leaks. It was difficult sometimes to identify where a leak was. The canal men used shutter boards. They ►



*A saddle tank engine in the now demolished engine shed which stood just to the north of the present picnic tables at High Peak Junction. In front of it is one of the former tenders converted to carry water up the inclines to the upland farms and reservoirs.*

## An Adventure

One morning, Saturday, no school and my friend Raymond Bramwell appeared saying "Let's take the punt up to the engine house". I was a bit surprised but I agreed. But we did not consider the wooden swing bridge.

The rain had raised the level of the water and we got stuck under the bridge. We tried everything to free the boat: jumping up and down, pushing and pulling but we could not move it. It happened that my

put a shutter board in one place and having seen where the flow of water went they put another board at the narrowest point they could reach so the water would run down; by the time the water reached the bottom the men were able to see where the leak was.

To help there was a gate on an old fashioned ratchet made from cast iron with big teeth with a handle. These are used on canals today and are made from wood or steel to open the sluice. The water was drained off to enable the men to get below the level of the hole, so they could use clay which they puddle, to block the hole. Soil and grit were pushed back over the clay to give protection when the water flowed again.

The shuttering was removed to allow the water to level out, it might take some time for this to happen, depending upon the weather – the pumping station was not working for that purpose alone. It might take a day or so for the water level to be reached. I spent many hours helping to puddle clay.

sister Fay was on the towpath with her little Brownie camera and she took a photograph which I still have. I had a painting made of this photograph to remind me of the occasion.

Eventually some people came along the towpath and offered to help us free the boat. Three or four of them jumped into the boat and under the bridge we went, we did not go to the pump house but we took the punt back to the mooring!

## Holiday Outing

When we broke up for the school holidays we did not go away on holiday but we had a lot of fun. After the last day at school we came home to find a large barge moored by our cottage; we could not believe it was there. On Sunday, when it was quiet and there was no one working on the canal, six of us decided to go for a ride on the barge.

Off we went, some pulling on the ropes and some pushing with sticks. We travelled along the canal towards Whatstandwell, quite a distance. We had to pass over the ►



*A rare photograph of the railway complex at High Peak Junction showing the crane with which Frank Bark played. In the distance, above the Wharfshed, is Leawood Pump House which he also visited.*

railway which in turn went over the river. It is a unique place! We travelled towards the canal tunnel which we always called Gregory's Tunnel, not knowing if this was the correct name. It is a long tunnel and we had a great time shouting and yodelling.

We decided to move on and we took the barge to a turning space, which was the only place where it could be turned around. We tried to turn it but the reeds made it difficult. We pushed with the punting poles but the barge would not move, we tied a rope onto the barge but we still could not move it. We decided to leave four people on the boat to push with the poles and Raymond and I would pull with the rope at the front.

At this moment a man came along the towpath and he offered to help us. He took hold of Raymond and I grabbed the rope and we pulled. We got the barge moving but the knot had not been tied properly and Raymond and I fell into the canal; the man escaped getting wet. Raymond was not

too wet but I was wet right up to my neck. However, it was a warm evening and I was not bothered.

We got the rope out of the water and tied it carefully on the front of the barge. The barge began to move very slowly, the man helped us for a little while, and when we reached the tunnel two of the boys left us to go home. The man continued his journey saying he had had as much fun as we had. We carried on heading for home and it was dusk by the time we got to the mooring. We turned the boat round and put it back where we had found it.

My parents were away, leaving my sister in charge of me; she had not realised I had gone and she was very angry when she found out that I had been away all day.

There was always somewhere for us to play, the River Derwent, below the canal had a sandy bank which we called the beach so we had our own seaside and we could go there anytime to paddle in the water.▶



*Inside the busy High Peak Junction workshops, at a time rather earlier than Frank Bark recalls.*

## On the Railway

At Homesford the Manchester/London railway line met the High Peak track which was straight and flat to the end of the wharf. The canal workers stored the goods in the large warehouse. This building is used now to accommodate young people and adults who come to enjoy leisure activities in the area. *[Now known as the Wharfshed, it is currently empty – Ed.]* There is a short road leading from the wharf to the A6. The other smaller building was used as an office. The railway track ran from the junction near the canal across the hills of Derbyshire as far as Buxton.

My uncle was a clerk in the office, so I was able to ride on the engines, which were called 'saddle tanks' because the metal was bent over the boiler and looked, therefore, like a horse's saddle. Of course, the railway workers were very safety conscious and told us never to go on the railway by ourselves. However at night when the track was not in use we played around the wharf.

An old crane had been used to offload the canal barges; it was in good condition and we had a great time playing with it. By the wharf was a large stone with a big ring on it, we put the crane hook into the ring and raised the stone and lowered it into the canal and picked it up again. It was fun swinging the crane up, down and around; we spent many evenings playing with it.

There was always something to amuse us on the canal. Walking from the wharf offices by the side of the water you came across some very old buildings where steam engines were repaired. As High Peak Junction Workshops, this building is open to the public today.

There were big black wagons with flat tops, shaped like a milk lorry; the flat top could be opened and filled with water *[these were locomotive tenders converted to carry water to the limestone plateau above – Ed.]*. When the trucks reached the top of the incline the track became level and engines pulled them on along the track and up a slightly smaller incline to Middleton Top. ■

# FINDING FUNDS

By Richard Handley

The charity's two main means of generating funding have traditionally been through trading and membership fees, with some ad-hoc income from donations and legacies. In February 2022 FCC trustees decided to employ the services of a professional fund-raising organisation in order to accelerate the funding of our conservation and restoration aims.

Marsha Miles Consultancy have submitted 150 funding bids to date, and we're starting to see the benefits.

## *Here's a selection of recent funders*

**Awards for All**

**Nora Smith Settlement**

**HDH Wills Charitable Trust**

**The D'Oyly Carte Charitable Trust**

**William Dean Countryside and**

**Educational Trust**

**M J Camp Charitable Foundation**

**Foundation Derbyshire Core**

**Mansfield Building Society**

**Gordon Fraser**

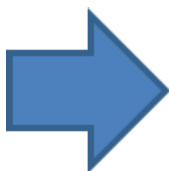
**Derbyshire Environmental Trust**

**BNA CIO**

**Duke of Devonshire Trust**

**The Lady Hind Trust**

**The Big Give**



## *Here's the range of things we've done*

**Purchase of a welfare cabin to support work party volunteers**

**Purchase of coir rolls for canal bank stabilisation**

**Weed clearance at Pinxton wharf**

**Lime mortar training of work party volunteers**

**Chain saw certification of work party volunteers**

**Weed clearance at Cromford**

**Purchase of tools for work party volunteers**

**Technical survey work on the Aqueduct Cottage to Gregory Tunnel stretch**

**Purchase of materials for the enhancement of lock-keeper's garden**

**Funding of generic 'core' charity**

Engagement with external professional fund raisers has had other tangible non-financial benefits for the charity – we've had to update several policy documents and introduce new processes and procedures which means that prospective funders will now see a charity in a much better position to receive and use grants. **T**

# WORKING WITH WATER

## Ken Brockway on how British innovation reached America



*Although the detail will not be legible at this size, an impression of the complex layout of canals can be seen in this map from [www.nps.gov/lowe](http://www.nps.gov/lowe) where there is much more information.*

Cromford offers an excellent opportunity to see what can be achieved harnessing that basic element, water. William Jessop found a level route through hilly terrain to bring a canal close to the Peak District while Richard Arkwright used flowing water to power his cotton mill.

Today, that water power is used to make electricity: at Milford (150kW), Belper (350kW), the new Arkwright Mill scheme (15kW) and Derwent Hydro have plans to improve the existing hydropower scheme at Masson Mill.

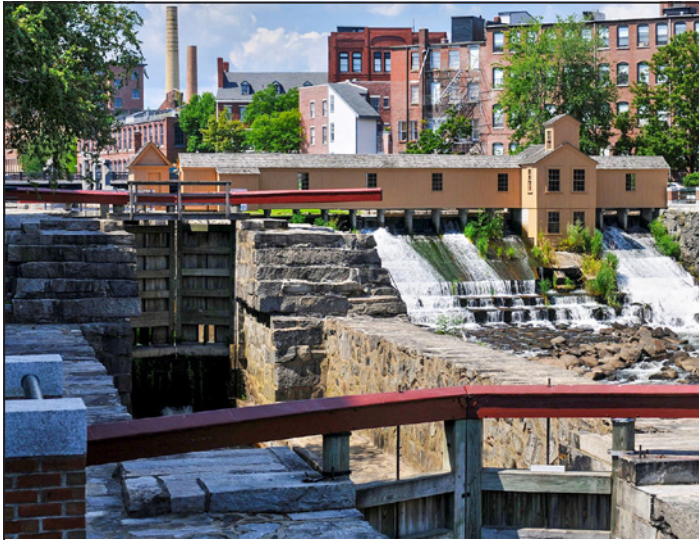
Samuel Slater was born in Belper in 1768, and at age ten he began work at the cotton mill of Jedediah Strutt which used the water frame pioneered by Richard Arkwright. Slater was

well trained by Strutt and by 21 he had gained a thorough knowledge of the organisation and practice of cotton spinning. He memorised as much as he could before setting sail for New York in 1789.

Some people of Belper called him 'Slater the Traitor', as they considered his move a betrayal of the town where many earned their living at Strutt's mills. In 1793 Slater developed a mill on the Blackstone River falls at Pawtucket, a town south of Boston. This was the first fully mechanised cotton-spinning mill in the United States.

Elsewhere, half way between Manchester and Boston, to the west of Gloucester (all USA versions!), is the town of Lowell, Massachusetts, set by a bend in the Merrimack ➤





*View of the Lower Locks Gatehouse from the Lower Locks in Lowell.*

*Photo: Stephen L Markos*

River. Here in 1796 the Pawtucket Falls (not to be confused with the town of the same name) were bypassed by a 1½-mile canal with four locks constructed of wood. The material chosen was most likely down to cost but it proved expensive because as the first boat entered the lock at the opening ceremony the structure burst apart. The main cargo was timber, but this trade later transferred to the competing Middlesex Canal completed in 1803.

By 1821 the locks around Pawtucket Falls were rotting and income had declined. A group of entrepreneurs easily acquired the ailing company, adding land and water rights to their portfolio. They had other plans: to block the natural flow of the river and use the power to drive machinery in textile mills. The first mill was operational the following year after alterations to the navigation canal, which had to be kept open, and the construction of a new canal that we might call a mill leat.

By 1828 other branch canals had been constructed to feed more mills, and demand for water continued to increase. A wooden

dam had been constructed across the falls in 1826 but by 1830 this had been replaced by granite. The mill feed still relied on the original twisting canal until in 1846 work started on the Northern Canal, a shorter and bigger channel from the dam. By 1848 twelve mills were being worked by the power of water that once wasted naturally over the falls.

The company 'Locks and Canals' moved away from mill operation to the supply of power, a

unit of which was known as 'Mill Power'. The new canal offered an assured supply of 139 Mill Powers which was equivalent to 12,000 horsepower, created by the 30ft fall in the river.

The textile mills are now silent but the 5½ miles of canal remain feeding water to four hydroelectric installations: 19 generators with a combined output of eight megawatts.

The above article was taken from two booklets *Working the Water* and *The Lowell Canal System* by Patrick M. Malone, 1976.

The Canal System and Gatehouse were designated a Historic Civil Engineering Landmark in 1984 and a Historic Mechanical Engineering Landmark in 1985. It is part of Lowell National Historical Park, added to the National Register of Historic Places in 1976, and declared a National Historic Landmark the next year.

For a more complete tour of the system, without crossing the Atlantic, search for 'Canals of Lowell' on YouTube for a 30-minute 'guided walk'. A tour by Google Street View is also rewarding. ▀

# EVENTS AND MEETINGS

## What's On this Summer

### Leewood Pumphouse

**Leewood Pump House near High Peak Junction will be open on the following dates.** 'Static' means the site and building will be open 11am to 4pm but not operating. 'In Steam' means the boilers will be fired up and the pump fully operational 12 noon to 4.30pm. Admission is free but donations are welcomed, especially in view of the huge increase in the price of suitable specialist coal for the boilers.

Saturday 3rd June *Static*

Sunday 4th June *In Steam*

Saturday 1st July *Static*

Sunday 2nd July *In Steam*

Thursday 3rd August *Static*

Saturday 5th August *Static*

Sunday 6th August *In Steam*

Thursday 17th August *Static*

Thursday 24th August *Static*

Sunday 27th August *In Steam*

Monday 28th August *In Steam*

Saturday 16th September *Static*

Sunday 17th September *In Steam*

Saturday 7th October *In Steam*

Sunday 8th October *In Steam*

### FCC Meetings

Illustrated talks take place on the third Monday of the month at 7.30pm at Ironville Church Hall, Casson Street NG16 5NN. Car parking at rear. Bar, tea/coffee, raffle and FCC sales table. Admission £2.50 (AGM free).

**19th June:** Crich Tramway Museum by Frank Bagshaw.

### Birdswood Canal Trips



Our electrically powered trip boat *Birdswood* will be operating throughout the year from Cromford Wharf to Leewood Pump House. Regular two-hour return trips take place at 11am and 2pm on Wednesdays, Saturdays and Sundays, with extra trips on Thursdays in the summer holidays. Light refreshments are available on board as is a toilet, and well-behaved dogs are welcomed. A tour of our traditional boatman's cabin is included.

In addition 'Premium Trips' take place on 4th June, 2nd July, 6th and 27th August and 8th October starting at 2pm from Cromford Wharf. Trips include guided tours of Leewood Pumphouse in steam, Nightingale Arm, Aqueduct Cottage and High Peak Junction workshop. Free refreshments are offered. To book any of the *Birdswood* trips or to enquire about chartering, visit [www.birdswood.org](http://www.birdswood.org).

### FCC AGM

As the 7th AGM of FCC held on 17th April was not quorate, we will be holding a very brief postponed AGM at 7.30pm at our social meeting on Monday 19th June at Ironville Church Hall, Casson St NG16 5NN, prior to the main meeting. Members will be asked to agree the Minutes of the 6th AGM and vote on the adoption of the 2022 Accounts, the appointment of auditors and the election of trustees, in accordance with the procedures laid down by the Charity Commission.

Copies of both the 2022 accounts and minutes are available on the FCC website (click on 'Key Documents' under the 'About Us' tab). Members without access to the internet can obtain copies by sending an A5 sae to FCC Executive Secretary, 12 Holymoore Road, Holymoorside, Chesterfield S42 7DX.



# Friends of the Cromford Canal



## **YOUR WILL COULD MAKE A HUGE DIFFERENCE LEGACIES MEAN FASTER PROGRESS ON CANAL PROJECTS**

Our aim is “The restoration, reconstruction, preservation and maintenance of the Cromford Canal”, but that’s an expensive business: a gift in your will could make a huge difference to the pace at which we can restore our unique canal.

### **HAVE YOU MADE YOUR WILL ?**

Making a will ensures that your money and property go to people and organisations you choose to support. Leaving a financial gift to the Friends of the Cromford Canal will help secure the projects that are needed to complete our canal's restoration.

If you have already made a will and would like to include FCC as a beneficiary, a simple codicil (amendment) can be added. Leaving charitable gifts in your will can help you reduce the value of your estate liable for Inheritance Tax as charitable bequests are tax-exempt – so a gift to FCC could reduce the amount to be paid to HMRC after your death.

**Please contact the FCC Executive Secretary;  
secretary@cromfordcanal.org.uk or the FCC Treasurer;  
treasurer@cromfordcanal.org.uk for a confidential discussion. We  
can also supply a blank codicil for you to complete and attach to  
your will. This can also be downloaded from our website.**

The Friends of the Cromford Canal – registered charity 1164608



[www.cromfordcanal.org](http://www.cromfordcanal.org)