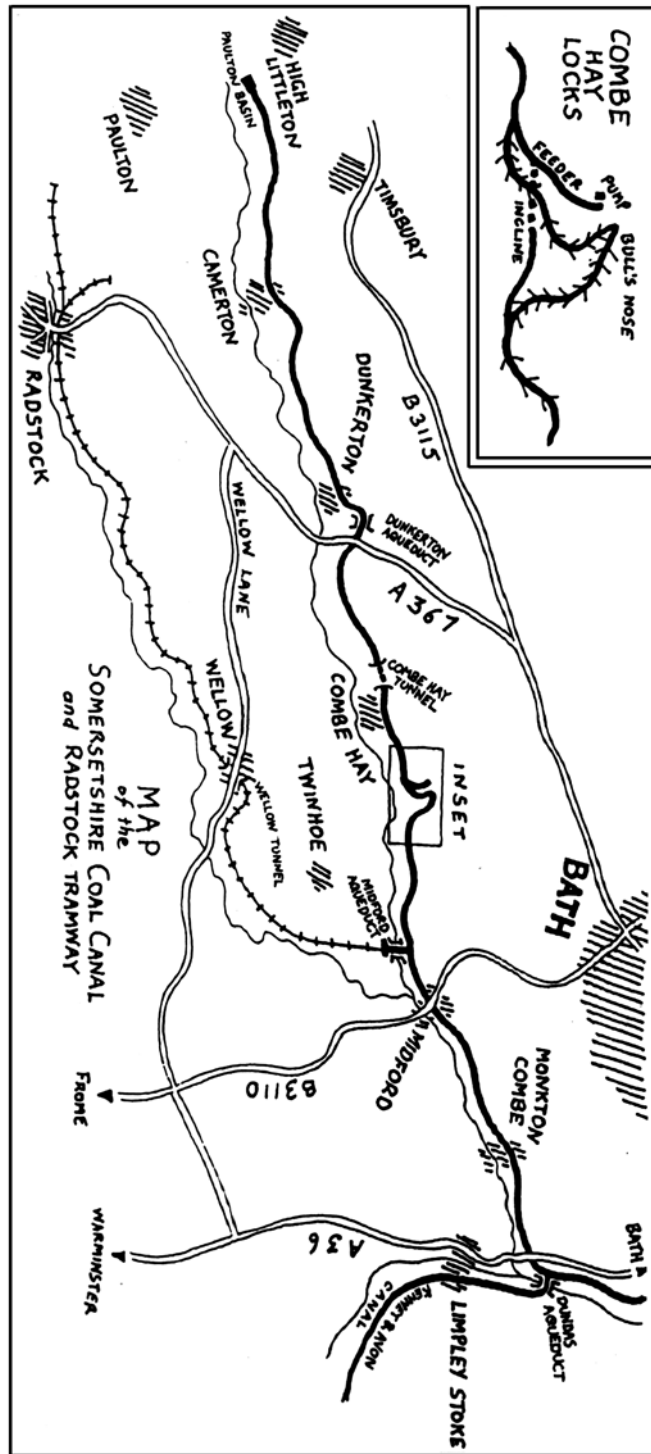


WEIGH-HOUSE

THE NEWSLETTER OF THE
SOMERSETSHIRE COAL CANAL SOCIETY



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The Somersetshire Coal Canal Society was founded in January 1992 with the aim:

'TO FOCUS AN INTEREST ON THE PAST, PRESENT AND FUTURE OF THE OLD SOMERSETSHIRE COAL CANAL'

The Society is aimed at those people who are interested in finding out more about the history of the canal, preserving what is still there and walking the parts that are still accessible to the public.

The Society does not aim to restore the canal, but to protect the remaining structures (Midford Aqueduct, Combe Hay Locks etc.) and line of the canal from decay, dereliction and vegetation.

Registered Charity N^o 1047303
Registered under the Data Protection Act 1984 N^o A2697068
Affiliated to the Inland Waterways Association N^o 0005276
Inland Revenue reference code for tax purposes: CAD72QG

MEMBERSHIP FEES
(as at 1st June 2003)
£7.50 (Family / Individual) £5.00 (Senior Citizen / Student)
£150.00 (Life) payable by lump sum or four annual instalments

Membership Application Forms are available from the acting Membership Secretary at:
1, Hillcrest Close, Nailsea, Bristol BS48 2HP ☎ & Fax: 01275 798479
E-mail: laurie@gibney.freemove.co.uk

Society Website: <http://rtjhomepages.users.btopenworld.com/scc2.html>

THE VIEWS AND OPINIONS EXPRESSED IN THIS NEWSLETTER DO NOT NECESSARILY REPRESENT OR CONVEY THOSE OF THE SOCIETY

The Editor welcomes any letters, articles, photographs etc for inclusion in **WEIGH-HOUSE** and will try to include them in full, but reserves the right to shorten them if space is limited.

Please send articles and correspondence for the next edition of **WEIGH-HOUSE** to:
Adrian Tuddenham 88, Mount Road, Southdown, Bath BA2 1LH
☎ 01225 335974 *E-mail (not HTML): sccs@poppyrecords.co.uk*

Saturday 17th September — 10:00

SATURDAY WALK — SHOSCOMBE

Meeting at Miners' Welfare Hall car park, Shoscombe.

For further details please contact:

Mike Chapman ☎ 01225 426948

These are all circular walks unless otherwise noted. You only need to arrange your transport to and from the meeting point. They tend to be in the form of detailed explanations of short sections of the canal and its relationship with the locality; and, as such, are less suitable for young children. Dogs are normally welcome (except where indicated) and must be kept on leads at all times.

SOMERSETSHIRE COAL CANAL EXHIBITION

To celebrate the 200th anniversary of the official opening of the Combe Hay flight of locks, a small exhibition on the Somersetshire Coal Canal is being staged within the Museum of Bath at Work, Julian Road, Bath

1st May — 31st July

*The Museum of Bath at Work is open daily from 10.00am to 4.00pm
Admission fees are Adult: £4.00, Concessions; £3.00, Bath & North East
Somerset Residents: £2.00, Family (2 adults & 2 Children): £ 10.00.*

Telephone 01225 318348 for further details.

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CHAIRMAN'S NOTES

At this year's June AGM the Committee will lose two more members when Laurie Gibney and Philip West stand down as Membership Secretary and Minutes Secretary respectively, both of whom have served since 1997 (i.e. for nearly three terms as laid down in the Society's constitution). This will reduce the remaining serving members to six, and although this number still falls outside the minimum of three set by the constitution, it is insufficient to fill several key offices. Since the Committee has been operating without a Secretary since 1997, a replacement for a Membership Secretary will be particularly necessary, even if the duties of Minutes Secretary is shared amongst the other members. Fortunately, for the time being, Laurie is willing to maintain the Society records (Microsoft Excel spreadsheet) until a replacement is found.

As can be seen from the inside front cover of the Weigh-House, there are also vacancies for Publicity, Events, and Project Officers. Although the need to fill these is less pressing, a Project Officer in particular would help relieve the Society of several embarrassing commitments, including the completion of the sign-board project and the provision of a tool-store for the Work Party - both of which were provided with grant funding many years ago!

Mike Chapman - Chairman

June 2005

NEW MEMBERS

The Society welcomes the following new members:

Mr. T. N. Butters	South Stoke, Bath
Ms. M. Stroud	Combe Hay, Bath
Mr. N. Hughes	Fulking, West Sussex
Mrs. V. C. Messam	Devizes, Wilts
Mr. R. D. Hollands	Chippenham, Wilts
Mr. R. R. Allen	Trowbridge, Wilts

DONATIONS

The Society wishes to thank the following member who has generously made a donation:

Mr. C. Axon	Brislington, Bristol
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DATES FOR YOUR DIARY

WORK PARTIES

Venues may change at short notice, always check with Bob Parnell before turning up.

Tuesday 14th June — 19:30

ANNUAL GENERAL MEETING — Radstock Museum.

Followed by a talk by Daniel Brown

“William Smith and the Batheaston Coal Mine”

Sunday 19th June — 10:00

WALK — THE AREA AROUND FULLER'S EARTH WORKS

Meet at Odd Down P+R

For further details please contact:

Mike Chapman ☎ 01225 426948

Sunday 3rd July — 10:00

WORK PARTY — Location to be advised

For further details please contact:

Bob Parnell ☎ 01225 428055

Sunday 17th July — 10:00

WALK — TWO K&A AQUEDUCTS

Meet at Brassknocker Basin

For further details please contact:

Mike Chapman ☎ 01225 426948

Sunday 7th August — 10:00

WORK PARTY — Location to be advised

For further details please contact:

Bob Parnell ☎ 01225 428055

Sunday 21st August — 10:00

WALK — WILTS & BERKS CANAL

Venue T.B.A.

For further details please contact:

Richard Hignett ☎ 01793 855631

Sunday 4th September — 10:00

WORK PARTY — Location to be advised

For further details please contact:

Bob Parnell ☎ 01225 428055



**THE HOLE IN THE CANAL TUNNEL ROOF
SEEN FROM BELOW**



**THE APPARATUS WHICH SHARES THE
CELLAR WITH THE HOLE PLINTH**

The cellars of the building held a mystery. There is a hole in the roof of the canal tunnel which legend suggests was used to pass messages from the offices to boats beneath. The improbability of this became apparent when we saw how the hole is continued inside the cellars of the building. It rises about four feet inside a stone plinth before turning horizontally, then bends through another right angle — finally emerging into the cellar at chest height.

The plinth structure shares the cellar with another mysterious object: a brick-built apparatus connected to a flue and fitted with an iron door. Could this have been an early gas-making plant or some sort of incinerator or heating plant? In that case, could the hole have originally served for dropping ashes into a boat waiting beneath? The hole certainly emerges to one side of the tunnel roof, where a boat might be moored rather than just passing by.



**THE TOP OF THE HOLE IN A PLINTH SEVERAL FEET ABOVE
CELLAR FLOOR LEVEL**

We ended our visit by thanking Mike Richardson, not only for coming in to work on a Sunday, but for his concern for the preservation of such a magnificent historical building and its sympathetic re-use. Still mulling over the mystery of the hole, some members of the party rounded off the morning with a stroll along K&A canal, so different now from when it was bustling with SCC coal traffic nearly 200 years ago.

Derrick Hunt

ANNUAL GENERAL MEETING

The next Annual General Meeting of the Somersetshire Coal Canal Society will be held on Tuesday 14th June at the Radstock Museum, Waterloo Road, Radstock, commencing at 7.30 pm.

EDITORIAL

At first sight, the contributions in this issue appear to mainly be concerned with other canals and not the SCC at all. A little thought, however, soon shows that if we are to understand the SCC and discover more about its past, we can learn a great deal from seeing how other canals were progressing at the same time.

The SCC did not have the benefit of a river to power a pump like Claverton on the K&A, but the technology was used on a smaller scale by harnessing the Cam Brook to pump out the mines which fed coal to the canal. Also, the pumps themselves would have been very similar to those used in the well in Engine Wood.

It was interesting to have the opportunity to see inside Cleveland House, the offices of the K&A Canal, and contrast its grandeur with the more modest buildings of the SCC and the rustic architecture of the more practical structures on the SCC. This proved one of our most popular walks for a long time. If anyone has any suggestion for another visit the Society might be able to arrange, could they please mention it to one of our depleted committee.

Adrian Tuddenham – Editor

June 2005



S.C.C.S VISIT TO CLEVELAND HOUSE
See page18 for details

NAVYING NOTES

The redundant railway bridge at Rowley Bottom has long been used as a landmark by visitors to the canal and the view through it forms a striking introduction to the best-known section of the lock flight.

Many years ago, the Society cleared a heavy growth of ivy from the bridge, but recently a number of scrubby trees have taken root on the top of it. These were beginning to cause damage to the parapets and there were fears that the weathered brickwork might eventually become loosened and fall onto the footpath beneath. With the help of Richard Hignett and his chainsaw, the scrub was cleared and the approach to the lock flight made safe and tidy once more.

From the bridge, the plan was to work our way up the lock flight from Lock 15 to Lock 11. The lower locks have been receiving regular attention from work parties for several years now and the amount of re-growth has been getting progressively less, so they didn't need a great deal of work. Bob Parnell has also regularly strimmed the locksides, so these looked tidy too.

The pounds between the locks, however, were a different story. They were a tangled mass of brambles, scrub and dead and dying trees. In Autumn, the pounds are often very wet and in Spring we have to be careful where we work to avoid disturbing nesting birds, so Winter was the best time to tackle the job.

Having become used to re-clearing sites which had only recently re-grown, we were reminded sharply of the sheer quantity of work involved in starting a new clearance where the tangle of undergrowth and scrub is long-established, well-intertwined and sometimes conceals massive fallen trees.

During our work we were approached by several members of the local community who offered to take away any unwanted logs and put them to good use, nevertheless we were still left with a huge quantity of wood which was either too big or too small to be useful, so once again large bonfires were the focal point of the work party — but this time there was no smoke. The dry timber burned fiercely and, from a distance, a faint blueish column of shimmering air was the only visible evidence of our activity. The heat was so intense that we were forced to retreat to a safe distance on several occasions.

At the beginning of the last century, several trees had established themselves in the locksides and had done considerable damage to the structure over the years. Now that they had reached old age and were

beginning to die off, they posed an even greater threat: that a high wind might bring them, and a good part of the lock structure, tumbling to the ground. With the landowner's permission, these were felled too and that made the area a good deal safer to work in.

With only two pounds cleared and three more to go, it looks as though the work parties will not be able to move on from this area for some time to come — unless we can recruit a few more volunteers.

Anyone who would like to join the work party please contact Bob Parnell on 01225 428055



LOCK 12 — Waiting to be cleared



THE FORMER BOARD ROOM OF THE KENNET & AVON CANAL COMPANY

— now beautifully restored and used as a modern office

A VISIT TO CLEVELAND HOUSE

Cleveland House was built as the headquarters of the Kennet and Avon Canal Company, one of the first purpose-designed office buildings in the world. Nearly 200 years later, it is still fulfilling its original function, but now as the offices of Richardson Groves, accountants and tax consultants. We had seen the building, which partly spanned a canal tunnel, on one of our previous walks through Sydney Gardens, now we were being offered a rare opportunity to visit it.

Normally Cleveland House is not open to the public, but Mike Groves of Richardson Groves had offered to take the time to show us around his offices. He explained that the building was designed by John Pinch, the architect of the Bathwick Estate, and was built some time between 1817 and 1820 by the Duke of Cleveland to house the offices of the K&A Canal Company. It belonged to the Bathwick Estate, not the K&A Canal Company, and was part of a much grander scheme.

The canal tunnel underneath the house, and a similar tunnel on the north side of Sydney Gardens underneath Beckford Road, seem far longer than necessary. This is because there was originally intended to be a broad carriage drive, lined with 5-storey Georgian Houses, forming a hexagon around Sydney Gardens and crossing the canal at two points. In the event, only Sydney Place and Sydney Road were completed, so the extra width for the other buildings was not needed.

Inside Cleveland House we were shown the tastefully redecorated rooms which are now used as modern offices. Many have retained their original Georgian features and fittings, such as cast-iron fire grates, or have had them reinstated with appropriate replacements. The board room on the first floor was particularly impressive, soaring to lofty heights, equivalent to two normal storeys, and resplendent with that finishing touch of any grand Georgian salon: a chandelier.



CLEVELAND HOUSE, SYDNEY ROAD — former headquarters of the K&A Canal Company
The board room is behind the centre and two left-hand windows on the first floor



LOCK 15 - Looking towards the site of Lock 16 after the 15-16 pound had been cleared



LOCK 14 - Looking towards the work party on Lock 15, before the 14-15 pound was cleared

THE MYSTERY OF THE JUNCTION — A WALK ON THE D&S AND K&A CANALS

June 20th 2004

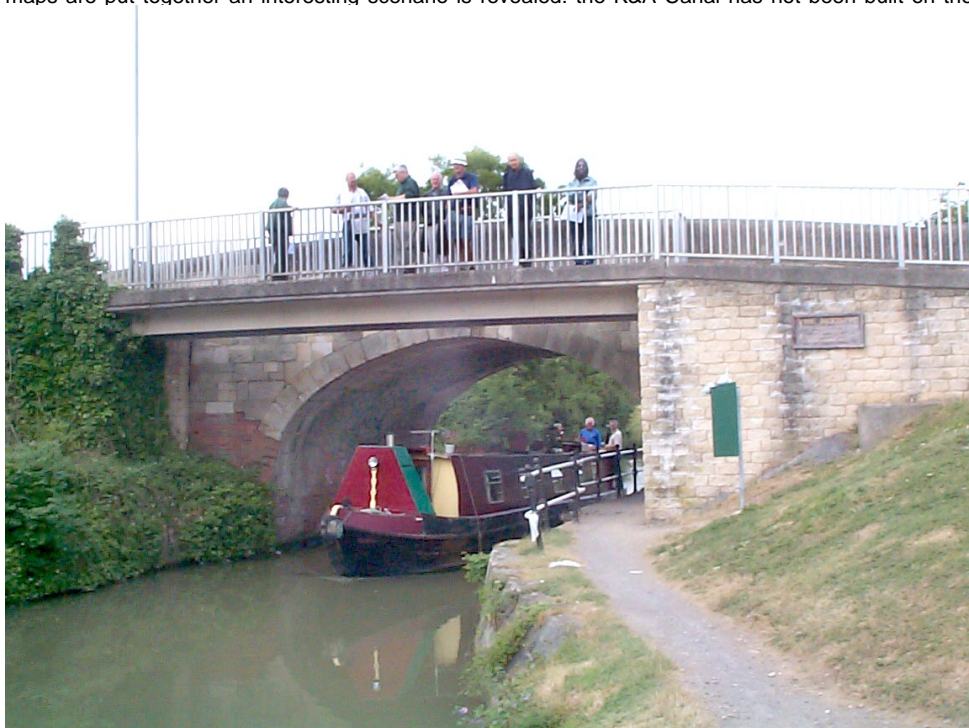
The unfinished Dorset and Somerset Canal was described by Robin Atthill in "Old Mendip" as 'The Canal That Never Was'. This walk set out to discover more about the Junction That Never Was.

Canal historians have been mystified by many aspects of the D&SC, including the apparently simple question of where its proposed junction with K&A canal was to be located. The route of the K&A is perfectly obvious (it's the wet bit), so finding the point of the junction ought not to be too difficult.

The minutes of the D&SC are lost and the minutes of the K&A do not refer to this subject. A very different situation from that of the SCC, where there is evidence of the K&A's negotiations and attitudes over the junction of those two canals.

There was some evidence to suggest that early plans proposed a junction near Freshford but topography and economics dictated that the junction should be further east. William Bennet's map of 1795 clearly shows the junction to be a short distance west of the road from Bradford on Avon to Trowbridge, but this does not make sense when compared with the current positions of the road and the K&A.

Our colleague John Candy has spent an enormous amount of time scanning-in Bennett's original map and, with the kind permission of the Ordnance Survey, the current OS maps of the area. When these maps are put together an interesting scenario is revealed: the K&A Canal has not been built on the



BRIDGE 170 CARRYING THE A363 OVER THE K&A CANAL

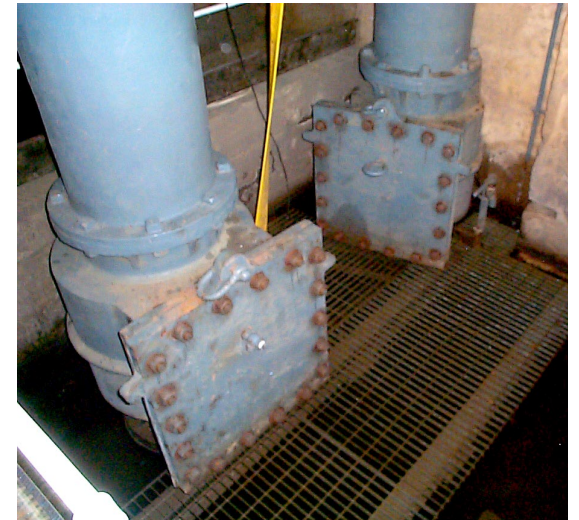
For a long time this was thought to be the site of the proposed D&S Canal junction with the K&A

smaller and faster-running cast-iron gear wheel which turns a crankshaft fitted with two cranks of 4ft 6in throw set at 180 degrees, together with a 3½-ton flywheel to smooth out the varying power requirements. Each crank is attached to a cast-iron connecting rod which reaches upward 18 feet to link with steam engine pattern beams pivoting on a massive 'bob-wall' - a now familiar feature to us after our visit to Crofton.

At the opposite end of each beam a neatly-made James Watt parallel motion linkage is connected by a 3 inch pump rod to the pistons of two 18⅜ inch diameter bucket pumps reaching back to below the lower floor level. Here water is drawn through a pipe from the millpond past a coarse filter and through a one-way valve situated in a chamber at the lower end of the pump cylinder which, at each upward stroke, lifts the water up in 4ft 6in increments. As the water leaves the building in its 19 inch diameter delivery pipe (and before passing under the Bath to Westbury railway line), it passes under an air vessel which acts as a sprung reservoir against the surge of the pumps, thus smoothing the flow to the canal and relieving the resulting stresses on the machinery. With the waterwheel set to rotate at 5 revolutions per minute, the gearing causes the crankshaft to turn at 16 rpm, and each pump to operate at 16 cycles. Under these conditions the plant develops 24½ horsepower of useful work, delivering 98,000 gallons of water per hour to the canal 48 feet above.

On the top floor, the gearing room serves as a museum which houses various tools, casting patterns and other artefacts salvaged from the past. The building has survived remarkably well, considering that the lower floor was frequently submerged by the river floods which periodically occurred during its lifetime - as was pointed out to us on the walls which still record the flood levels! Before leaving the site, we took the opportunity to inspect the mill island, reached by an accommodation bridge where the millpond sluices were located, which has an unusual history of its own. Just below the weir, steps can be seen which formerly led down to a rope ferry which crossed over to Warleigh. It was here, during the Civil War, that a temporary bridge and bulwarks erected by the Parliamentarians was captured by the Royalists in the skirmishes which preceded the Battle of Lansdown.

Mike Chapman



A PISTON WITH VALVE (Left) AND THE FOOT VALVE INSPECTION COVERS (Right)

Very similar to the technology which would have been used on the S.C.C. pumping engines



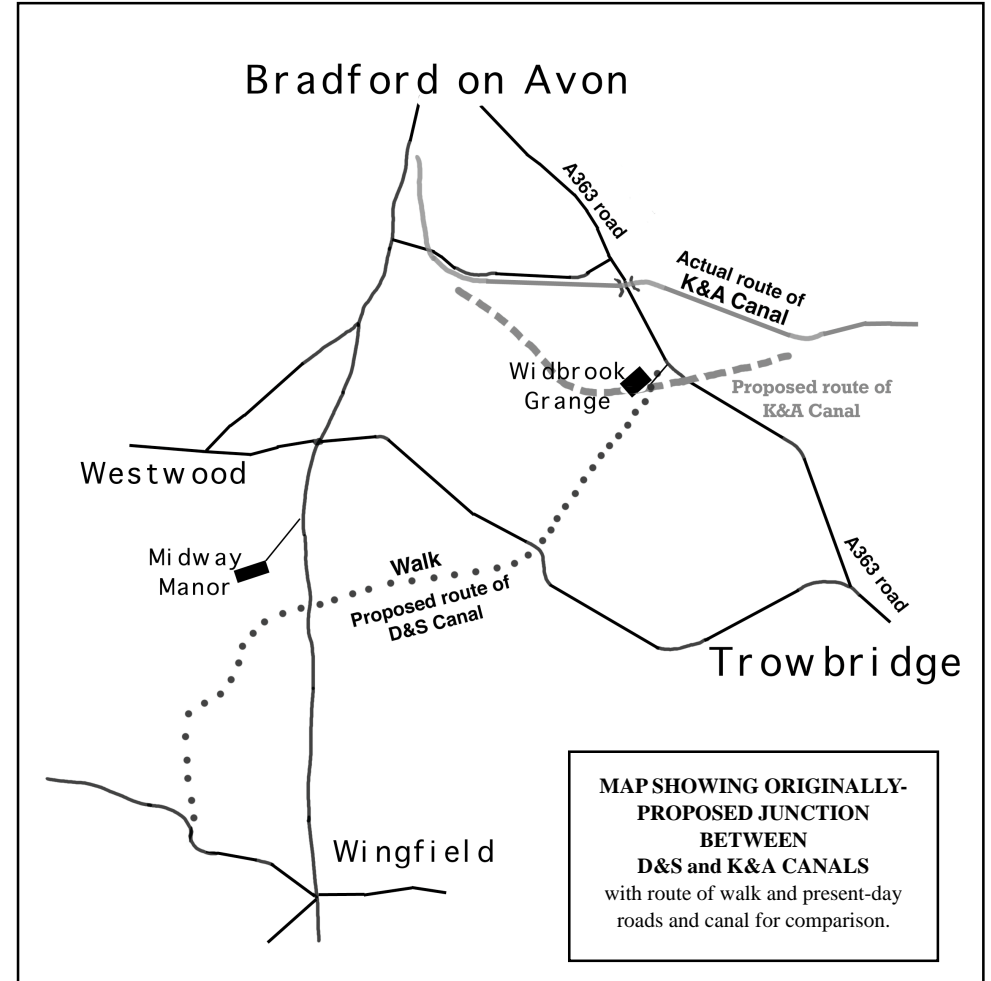
THE PIT WHEEL (nearest) DRIVING THE FLYWHEEL AND CONNECTING RODS

Designed by the K&A Canal's engineer, John Rennie, and erected on the site of a former grist mill, the pump uses the river water to 'pump itself up' 48 feet to the canal - an elegant solution to a problem, typical of its day. Despite extensive modifications during its working life to improve efficiency, most of the pumping plant still exists today as originally constructed by Rennie. It functioned continuously for 140 years until 1952, when, as a result of damage caused by a floating log jammed in the wheel, a diesel-powered centrifugal pump was installed instead.



OAK TEETH ON THE PIT WHEEL (left) MESHING SMOOTHLY WITH THE IRON TEETH OF THE CRANKSHAFT GEAR (right)

The most unfamiliar feature for us, perhaps, was the massive 'low breast-shot' waterwheel, 24 ft wide and 17½ feet in diameter, fed by a leat off the Avon from above Warleigh Weir. Because there was a tendency for the wheel to sag between its end bearings (with 3½ to 4 tons of water pressing on the paddles), an additional bearing was later added in the centre, which now gives the whole assembly the appearance of two wheels on a common shaft. Its speed is controlled by raising or lowering an arc-shaped sluice directly in front of the wheel, operated manually by curved rack and pinion and reduction gears. The waterwheel axle then transmits the power to a large 16-ft diameter cast-iron 'first-motion wheel', partly installed over a pit and hence known as the 'pit-wheel'. This has a segmental rim with mortice sockets for 408 oak teeth - each of which has to be individually fitted and shaped in situ! These teeth engage with a



MAP SHOWING ORIGINALLY-PROPOSED JUNCTION BETWEEN D&S and K&A CANALS with route of walk and present-day roads and canal for comparison.

originally-planned line.

With this knowledge in mind, we set out on our walk to look at the places where the D&S Canal and its junction were intended to be built - but unlike previous walks we did not have any actual structures to guide us. This meant that we were seeing the land and the problems of planning a route in the same way as the original canal surveyors would have done, which gave a refreshingly different aspect to our walk.

Our walk started a visit to the K&A Bridge 170 near "The Beehive", for a long time supposed to be the site of the planned junction. From there we travelled the quarter mile southwards to Widbrook Grange, which we now know to be the location shown on Bennett's map.

The D&S was planned as a contour canal, so there were no locks shown in this area. During the walk, this gave rise to a great deal of interesting speculation about the relationships between the levels of the D&S, the K&A and the landscape across which they would have been built..



WIDBROOK GRANGE — Now thought to be the site of the proposed junction

From Widbrook Grange to Weswood Road and Midway Manor was straightforward, but confusing topography between Frome Road and Farleigh Hungerford Road was the subject of much discussion and scratching of heads, despite the benefits of a modern OS map. We could only admire the skills which were possessed by the early surveyors to keep their canals level over such distances.

Derrick Hunt

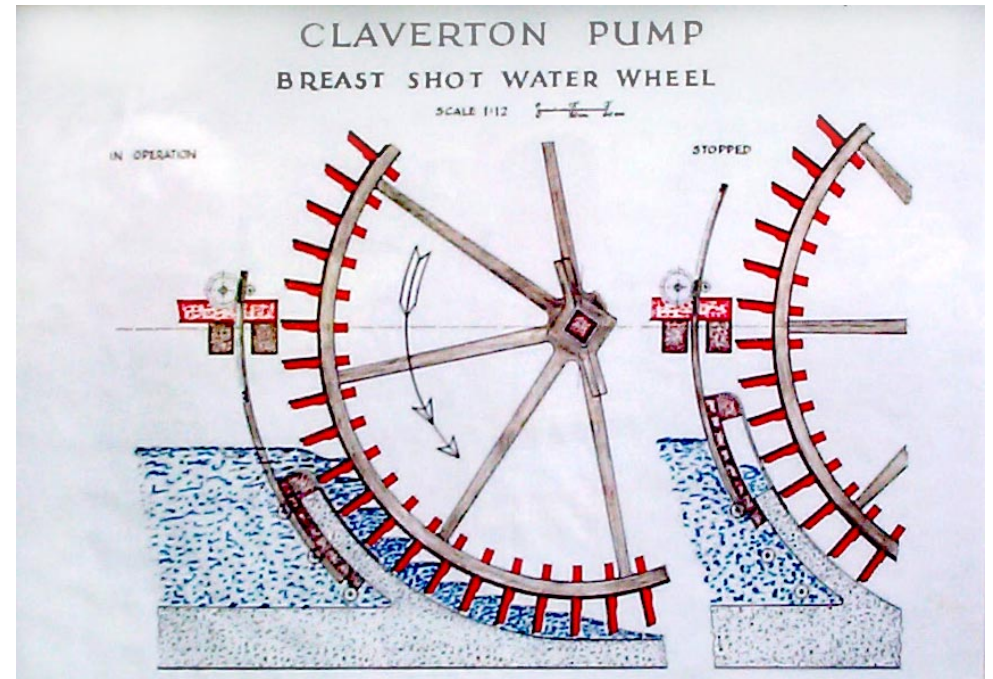


SHRAPNEL BOMBS USED AS DECORATION ON THE GATE PILLARS OF MIDWAY MANOR — home of the Shrapnel family



THE SLUICE GEAR WHICH CONTROLS THE WATER FLOW TO THE WHEEL

*Above: George 'Bungle' Eyecott opening the sluices.
Right: The sluice pinions and racks*



A DIAGRAM OF HOW THE BREAST-SHOT WATER WHEEL OPERATES

VISIT TO CLAVERTON PUMP

Sunday 26th September 2004

There is a particularly close association between the celebrated waterwheel-powered pump on the K&A canal at Claverton and the Somersetshire Coal Canal. Lying not far from the entrance lock, the pump's restoration (started in 1969) naturally also helped to revive interest in the SCC, and we were delighted to be given a guided tour of its workings by the pump volunteers and to have it put through its paces for our benefit.

As an industrial monument, the Claverton Pump is unique, being the only example of this kind of technology to be applied to a British canal. Completed in 1813, three years after the canal was completed, its purpose was to supply water from the river Avon to the nine-mile pound between Bradford on Avon and the lock flight at Bath. However, elsewhere in this neighbourhood water-driven pumps were a common feature long before that time. Although there was insufficient local water power for use on the SCC, most of the adjoining coal works still relied on 'water engines' for keeping the pits dry. Indeed this method was so effective that steam power only became widely adopted from the 1790s onward to replace the horse winding gins which were taking increasingly longer to raise the coal as the pits became deeper. The water-driven pumps at Vobster, for example, were still in use up to the 1870s, and it is quite possible that the unnamed millwright who installed the pump at Claverton came from the nearby coalfield.



AN EXTERIOR VIEW OF CLAVERTON PUMP HOUSE

The pumps are in the tall building, with the canal on the hillside behind it.

The wheel is under the lower roof.

The housing for the modern electric pump can be seen on the river bank

MORE NEWS FROM THE D&S CANAL

The second chamber of Fussell's Trial Balance Lock near Mells has now been successfully excavated and a large number of cast iron and other artefacts discovered. These are clearly very significant 'finds' which have the potential to shed a great deal of light on the technology of canal lifts which was developing rapidly at the time this structure was built.

A visit for members of the SCCS and other interested parties took place in May 2005 and others may follow during the year.

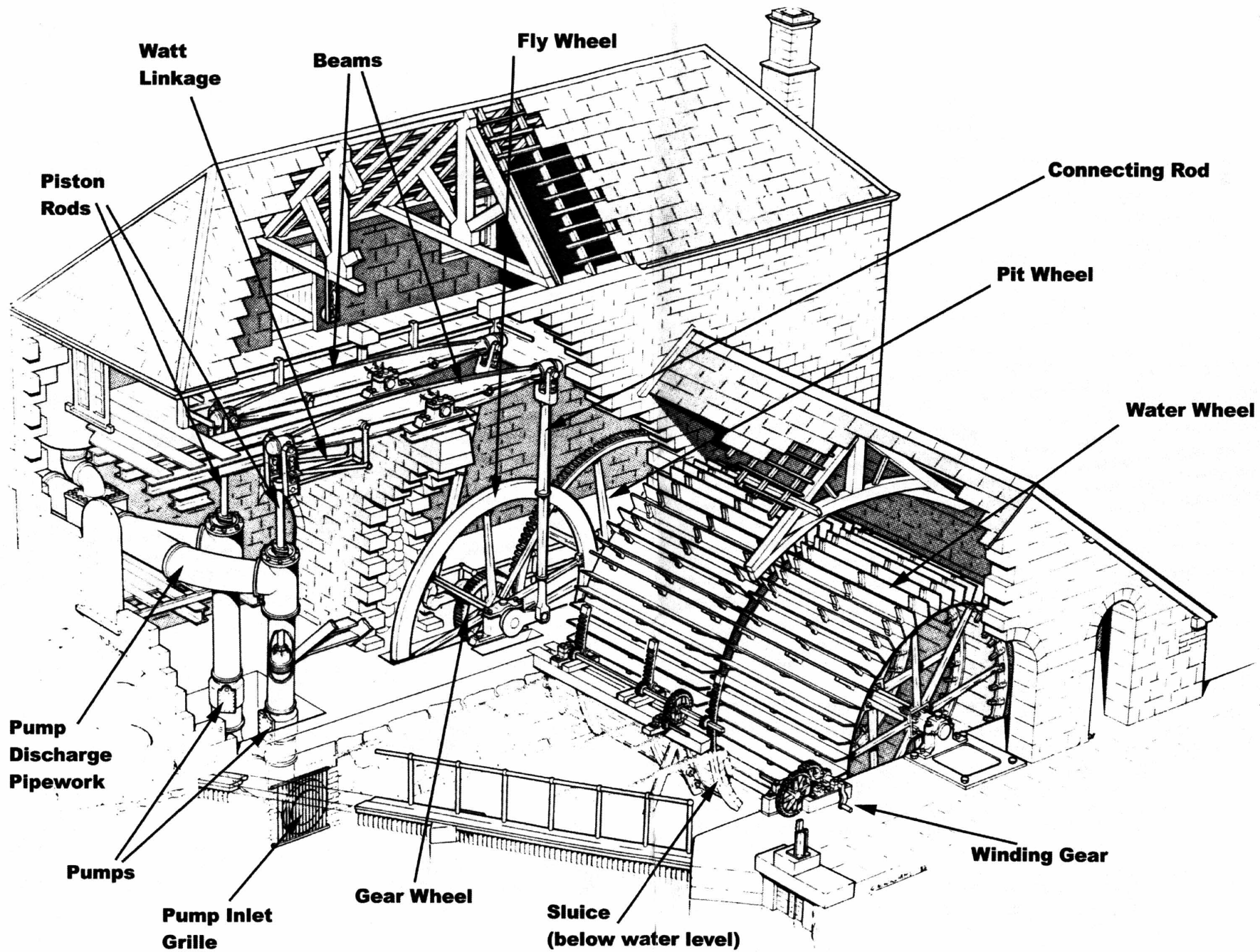


Right:

**SOME OF THE CAST
IRON ARTEFACTS
DISCOVERED
DURING EXCAVATION
OF THE SECOND
CHAMBER**



INDUSTRIAL ARCHÆOLOGY ON AN INDUSTRIAL SCALE



A SECTIONAL DRAWING OF CLAVERTON PUMP