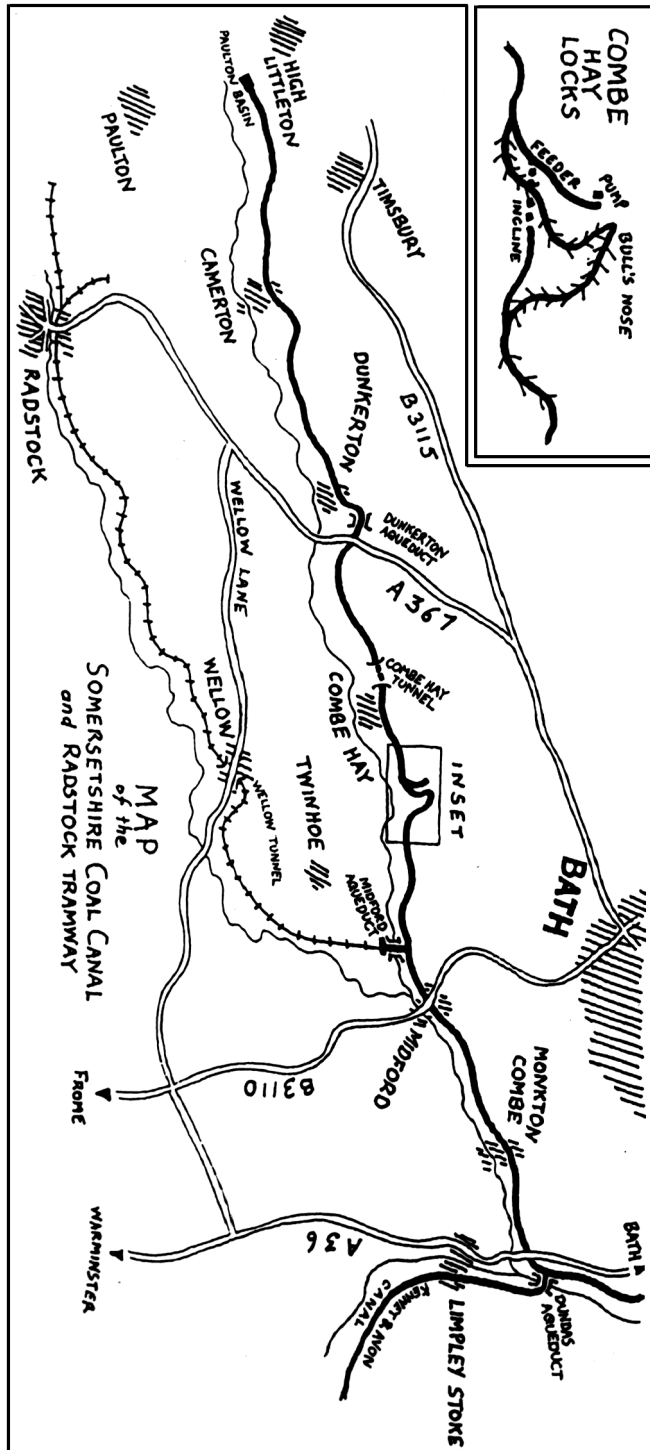


WEIGH-HOUSE

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

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 Membership Secretary at:

1, Hillcrest Close, Nailsea, Bristol BS48 2HP ☎ & Fax: 01275 798479

E-mail: laurie@lgibney.freemove.co.uk

Society Website: <http://www.homepages.enterprise.net/rtj/sccs2.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

Sunday 15th February — 10:00

WALK – RADSTOCK & KILMERSDON

Meet at Radstock Museum

For further details please contact Mike Chapman ☎ 01225 426948

Sunday 7th March — 10:00

WORK PARTY — Location to be advised

For further details please contact Bob Parnell ☎ 01225 428055

Sunday 21st March — 10:00

WALK – COMBE HAY LOCKS AND CAISSON SITE

Meet at The Avenue, Combe Hay

For further details please contact Mike Chapman ☎ 01225 426948

Sunday 4th April — 10:00

WORK PARTY — Location to be advised

For further details please contact Bob Parnell ☎ 01225 428055

Sunday 18th April

WALK – STROUDWATER CANAL — EASTINGTON TO M5

Meeting arrangements T.B.A.

For further details please contact Roger Halse ☎ 01249 652846

Sunday 2nd May — 10:00

WORK PARTY — Location to be advised

For further details please contact Bob Parnell ☎ 01225 428055

Sunday 16th May

WALK – THAMES AND SEVERN CANAL — DANEWAY TO CHALFORD

Meeting arrangements T.B.A.

For further details please contact Roger Halse ☎ 01249 652846

A collection will be made at the end of each walk

WEIGH - HOUSE N° 37

EDITORIAL	3
CHAIRMAN’S COMMENTS	4
NEW MEMBERS & DONATIONS	4
OBITUARY — MALCOLM BATES	4
S.C.C. TRAMWAY REFERENCES Discovered by Mrs. Isla Tuck	5
NAVYING NOTES	6
WALK — DUNDAS TO MONKTON COMBE By Mike Chapman	8
FINDING FUSSELL’S TRIAL BALANCE LOCK By Derrick Hunt	10
DIGGING FOR EVIDENCE OF THE CAISSON By Richard Hignett	14
AVON INDUSTRIAL BUILDINGS TRUST’S S.C.C. PHOTOGRAPHIC PROJECT	20
DATES FOR YOUR DIARY	21

EDITORIAL

During the last 10 years, under the Editorship of Roger Halse, this Society’s magazine has grown from a single A4 news-sheet into a well-respected source of factual information. It has expanded to fulfil a wide range of functions, not all of which are apparent to the individual reader.

At a Society level, the newsletter serves to chronicle the results of the members’ diverse activities - archival research, photographs, work parties, walks, exhibitions, representing the interests of the canal to Local and National Government and liaison with landowners along the canal route – but its reputation in a wider domain puts it in a category which few other ‘local society’ newsletters have been able to achieve.

Many of the articles have been written by experts in their own fields and take the form of factual reports on significant projects, often unfunded but nevertheless carrying considerable weight in professional circles. It is a tribute to Roger that he maintained such a high standard of publication as to persuade these authors to publish their work in Weigh-House and, probably unknown to him, that Weigh-House is increasingly used as a highly respected reference resource by many historians and archivists.

Roger has set a standard which will be difficult to maintain, but he has also laid a firm foundation on which to continue building the Society’s reputation as a respected body with the highest motives and standards.

I am pleased to be given this opportunity to continue his work.

ADRIAN TUDDENHAM – Editor

CHAIRMAN'S PAGE

Since Roger Halse has finished his term of office as Chairman, it has now fallen to me to be co-opted to this post by the executive committee. Happily, Roger will, as a committee member, continue to advise on society matters and maintain the Society's contacts with other waterway organisations (an important rôle).

Owing to these and other developments, it has not always been possible to keep the membership as well informed of events during the past year as we would have wished. The newsletter, now in the capable hands of Adrian Tuddenham, will of course continue, but communication is always likely to be a problem in the absence of a permanent Secretary whose duties are presently shared amongst the rest of the committee.

This has been a particularly important issue just now with so many developments taking place in connection with the canal which will have important consequences for the future. Communication however should not be one-way, and I hope that members will keep the committee informed of their own thoughts on the future progress of the Society.

MIKE CHAPMAN

Chairman

NEW MEMBERS

Dr. M. Aylett	Combe Down, Bath	Mr. J. Balley & Family	Chesham, Bucks.
Mr. M. J. Coombs	Yeovil, Somerset	Mr. S.M. Bryant	Farnham, Surrey
Mr. D. G. Brown	Batheaston, Bath	Mr. & Mrs. T. Coles	Bath
Mr. J. M. Owen	Bath	Mr. C.S. Goff	Windsor, Berks.
M. J. Schrecker	Bath	Mr. J. A. Walker	Bristol
Mr. G. Woodward	Harpenden, Herts.	Mr. E. Watts	Melksham, Wilts.
		Mrs. A.R. Wilson	New Brunswick, NJ, U.S.A.

DONATIONS

MALCOLM BATES

Malcolm Bates, who has died of cancer at the age of 63, will mainly be remembered as an energetic and influential figure in the world of inland waterways and ship restoration, but his latter-day interest in the Caisson Lock is of particular significance to those of us involved in the Somersetshire Coal Canal.

In Bath, during a stay in the summer of 1947, his interest in the canal system started whilst (as he put it) 'watching narrow boats strapping in and out of the Kennet & Avon canal onto the River Avon'. He was soon involved in planning and organising boat rallies on the London canals, as well as becoming a member of the Waterway Recovery Group. After meeting Roger Halse at one of these events and hearing about the Caisson Lock, his initial scepticism gradually turned to admiration for its inventor, Robert Weldon, whom he came to regard as an 'unsung genius'. This led him into a feverish programme of research on Weldon's life and work, with a determination to complete a paper in the subject. Despite his illness, he persevered with this task (an occupation previously unfamiliar for him) and it was with great satisfaction that he eventually saw his work entitled 'Simply Brilliant & Brilliantly Simple' published in the BIAS Journal in April 2003 (Volume 35) for which he was awarded the BIAS Brunel Prize.

By this means he hoped to re-establish Weldon's reputation as one of Britain's great pioneer inventors. There is little doubt that, had he lived, Malcolm would have pursued this topic further with his usual enthusiasm and energy.

DATES FOR YOUR DIARY

Work party venues may change at short notice, always check with Bob Parnell before turning up.

All Mike Chapmans walks are circular walks unless otherwise noted. You only need to arrange your transport to and from the meeting point.

Sunday 16th November — 10:00

WALK – SINGLE HILL TO RADSTOCK (6 miles)

Meet at Single Hill Community Hall

For further details please contact Mike Chapman ☎ 01225 426948

Sunday 23rd November — 10:00

WORK PARTY — BALANCE LOCK TRIAL SITE, near Mells. DORSET & SOMERSET CANAL STUDY GROUP

For location details please contact:

Derrick Hunt ☎ 01225 863066 (not after 9pm please)

Sunday 7th December — 10:00

WORK PARTY — Location to be advised

For further details please contact Bob Parnell ☎ 01225 428055

Note: No walk planned for December

Sunday 4th January 2004 — 10:00

WORK PARTY — Location to be advised

For further details please contact Bob Parnell ☎ 01225 428055

Sunday 18th January — 10:00

WALK – FOSSEWAY

Meet at Radstock Museum

For further details please contact Mike Chapman ☎ 01225 426948

Sunday 1st February — 10:00

WORK PARTY — Location to be advised

For further details please contact Bob Parnell ☎ 01225 428055

AVON INDUSTRIAL BUILDINGS TRUST'S SOMERSETSHIRE COAL CANAL PHOTOGRAPHIC PROJECT LAUNCH EVENING

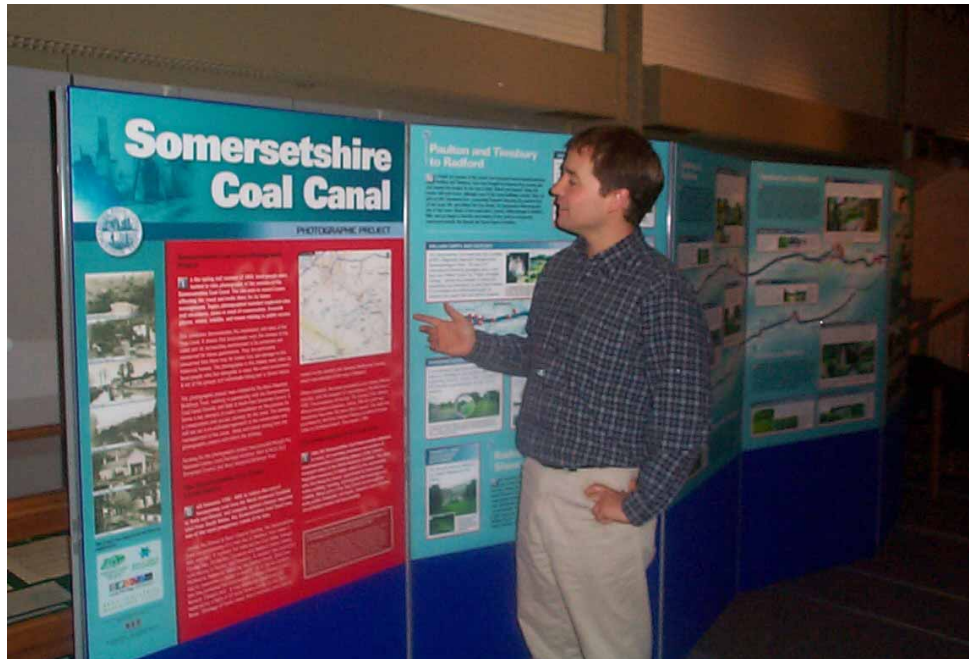
Avon Industrial Buildings Trust held their photographic exhibition launch event at Radstock Museum on **Thursday 30th October 2003**. The meeting room was packed with people from across the canal area, who had taken part in the study.

The evening began informally with an opportunity to view the exhibition, enjoy a selection of local cheeses and a glass of wine, and to meet and chat with those involved with the project. After formal introductions, Richard Aston, on behalf of Avon Industrial Building Trust gave a presentation summarising the objectives of the Photographic Project

"The Exhibition has enabled people to demonstrate the importance of the Coal Canal and develop ideas for its future management. People who live and work in the Coal Canal area took the photographs in the display. The exhibition provides an insight into favourite places and features along the canal and illustrates a number of problem areas where local people thought improvements could be made."

Mike Chapman then gave a detailed Illustrated presentation on the history of the the Somersetshire Coal Canal with particular attention to how it blended into the local landscape. This gave a clear insight into exactly why it was such a rewarding canal to photograph and the seemingly unlimited opportunities it offered for new and interesting discoveries.

After thanking all the project volunteers for their hard work, the exhibition was thrown open to informal discussion, which — sustained by further refreshments — continued late into the evening.



RICHARD ASTON WITH A DISPLAY OF THE PROJECT

SCC TRAMWAY REFERENCES

The following unexpected references to the canal tramway between Radstock and Wellow were kindly brought to our attention by Mrs. Isla Tuck of Hinton Charterhouse who has been carrying out research into the ecclesiastical history of that parish.

We tend to forget that, since the boundary of Hinton Charterhouse lay along the Wellow Brook, very close to the canal, the tramway would have been a familiar sight to its inhabitants. The first reference not only provides a colourful insight into its everyday workings, but also shows that the restrictions that applied to the canal towpath continued to apply to the tramway. The second reference is the only 'eye-witness' account yet known of Ashman's pioneer locomotive that ran on the tramway for a short time in the late 1820s.

'However poor the rate-payers of a parish may be, the parish itself is regarded by the paupers, as an inexhaustible fund, from which they can never get too much. We see this tendency in all who have lived in idleness on the property of others. On the rail-road leading from the coal pits, may be seen a dozen women, following the waggons of coal, under the pretext of picking up all that falls from them; but, this casual supply not satisfying them, when the driver runs forward to open a gate, some of the gang knock off lumps of coal, which are immediately gathered up by the rest, and afterwards divided amongst the whole company; and by this traffic they have for many years chosen to live, rather than by the usual methods, which are attended by less excitement and liberty.'

1. From a pamphlet, "The Successful Application of the New Poor Law to the Parish of Hinton Charterhouse", 1836, by Rev.Thomas Spencer, vicar of Hinton Ch., 1826-1847 — p.42:

'From the windows of the parsonage [of Hinton Ch.] we could see, at the distance of three or four miles, a steam locomotive drawing coals from the pit; and greatly exercised I was at the spectacle, then, in 1827, quite new to me.'

2. From "Reminiscences, Chiefly of Towns, Villages and Schools, Vol II", by Rev.Thomas Mozley (Longmans Green & Co, 1885) — p.185:

NAVYING NOTES

Back to the Locks

Having spent several months working at Sellar's Stile, we felt that we had neglected our old haunts for quite long enough, so for our next two work parties we returned to the Combe Hay lock flight. An amazing amount of growth had taken place since our last visit and the chamber walls were once again sprouting a profusion of brambles, nettles and ivy.

Proficiency

By now the work force had become proficient at perching on ladders at various crazy angles in perfect safety and identifying and removing each of the many species of troublesome flora in the most appropriate and efficient way. At surprising speed the chamber walls were cleared of all greenery and brambles. A little mental arithmetic shows that a 70 ft long lock chamber, with two sides 12 ft high represents 1680 square feet of stonework. In two work parties, we cleared Lock 1 and Locks 12 to 15 — a grand total of 8400 square feet of vertical gardening in two six-hour working days.

Several fallen trees needed cutting up to keep the footpath clear and some fence posts would have been replaced if the hammer had held together long enough. One of the nicest aspects of working on the lock flight next to a public footpath is the encouragement we receive from passers-by. Many people stop to enquire what we are doing and why — and when we intend re-opening the canal.

Dunkerton Aqueduct

Another of our old haunts was Dunkerton Aqueduct and a return visit to that showed that two massive trees had become rotten and dangerous. The autumn gales had broken one of the trees and left it teetering at an unsafe angle, partly supported by another. To make matters worse, a broken branch had already fallen on the footpath of the A367 road and been removed by the Local Authority. If a tree fell in the wrong direction we could finish up blocking the main road or damaging a passing vehicle.

To make certain that the trees would fall where we wanted, a rope was attached between one of the upper branches and Richard Hignett's Land Rover. Despite our precautions, the tree did not fall when cut, but jumped and turned as the springiness of its neighbour wrenched it into an awkward position. It required considerable skill to finally bring it to the ground and some idea of its size can be gained from the fact that it needed over a dozen Land Rover trips to carry all the rotten wood to the bonfire.



BURNING OUR BOATS AT DUNKERTON — January 2003

This bonfire continued to burn for several days, having consumed not only a massive amount of timber, but also an unwanted boat, large quantities of other material cleared from the site and even a derelict mobile chicken house.

Next time you find yourself heading from Peasedown towards Bath on the A367, why not pull off into the layby on Dunkerton Hill and take a few moments to admire the view which we have now opened up across the aqueduct?

Digging proceeded at a fast pace with the driver alternating between the bucket and the breaker. Bed rock was no problem as the breaker demolished rock and quickly removed it. By mid afternoon we had a LARGE hole, down to the necessary depth, and there was no tunnel !! What we did find was a wide vein of clay which may or may not have been fill over a collapsed tunnel, the excavator driver reported that the bed rock below this clay was not orientated as he would have expected and could be collapsed rock from tunnel demolition. With heavy hearts we then back filled the hole.

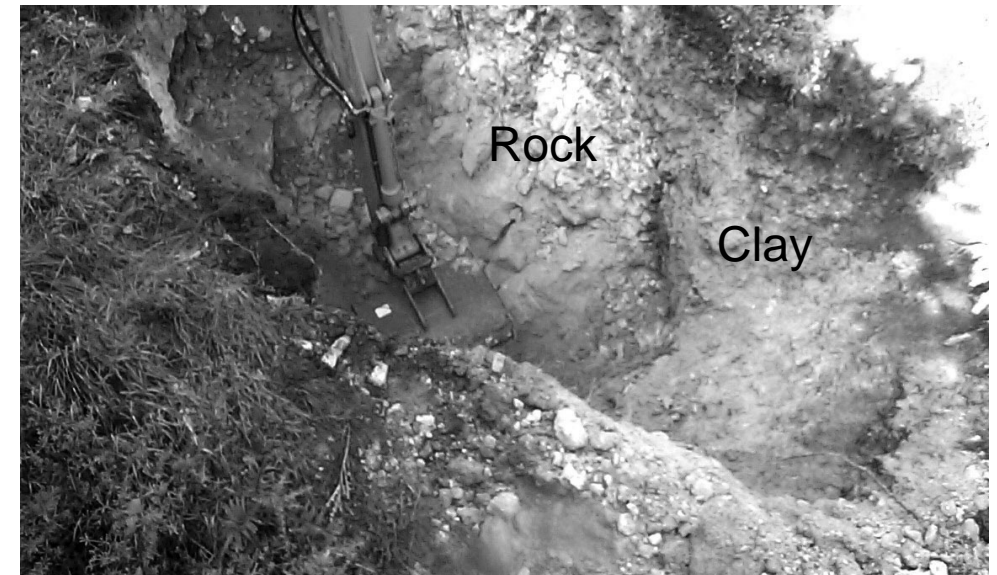
Conclusion

The tunnel is not there but there is evidence that it might have been. If it had once been there, the navvies must have collapsed it prior to building the lock flight over it.

What next? From discussions with other civil engineers it is reasonable to suppose that the invert (bottom) of the tunnel is still in place, that would involve digging down another 3.5 metres which is out of the question at the time. We can't justify the money, the land owner has been extremely patient and deserves to be left in peace, and what would we prove if we did find the invert? Only that the tunnel was there, it would not help to solve any of the questions about how the Caisson Lock operated.

It might be possible to dig a trench across the supposed caisson site, that has been tried with manual digging, an excavator would be much deeper, safer and easier but again we have no idea how deep to go to produce evidence so an inconclusive result is quite likely. I'm therefore of the opinion that the time has come to again leave the Caisson in peace until someone else comes up with an alternative idea.

RICHARD HIGNETT



Photograph: Adrian Tuddenham

THE RESULT

Left: Undisturbed rock — Right: Possible tunnel infill?

We would like to express our gratitude to the landowner, Mr Felix Pole, for his tolerance in allowing (and actually encouraging) such a large and disruptive excavation on his property. Members are reminded that the site in Caisson Field is part of a private estate should not be visited without the landowner's permission. The Society hopes to organise a walk around the site in 2004.



THE HYDRAULIC BREAKER BEING PREPARED FOR USE



**THAT'S WHAT LAND-ROVERS ARE FOR
REMOVING TREES ON DUNKERTON AQUEDUCT — January 2003**



Photographs: Adrian Tuddenham
.... WATCHING A LARGE HOLE APPEAR— August 2003



LADDER WORK AT LOCK 1 — June 2003

DUNDAS TO MONKTON COMBE

A new series of walks was started earlier this year based on Niall Allsop's book "***The Somersetshire Coal Canal Rediscovered - A Walker's Guide***". This not only served to introduce new members to the route of the canal, but also provided the opportunity to identify improvements (or otherwise) in access since the most recent edition of the book was produced some 10 years ago. The first of these walks, which follows, was taken on 16 March:

Walk 1 : Dundas Wharf to Midford

Perhaps it is now best to start this walk by first visiting the Brassknocker visitor centre which has been considerably enlarged and improved since Niall's book was written, and now includes a useful carpark. However the rest of this section of the canal, the 'Marina', is still 'off-limits' (unless permission is obtained), and to view the entrance lock at Dundas Wharf it is still necessary to walk back along the main A36 road.

From the centre, Niall's walk follows the footpath along the edge of the Monkton Combe School playing fields, but the roadway along the track of the old Camerton & Limpley Stoke Railway is preferable. Although this is not a right of way, it permits access by the public to the furniture warehouse at Monkton Combe Mill and affords a good close-up view of the remaining canal formation. Further along, the track converges with the footpath which then actually follows the bed of the canal for a hundred yards or so. At the end of this section Niall leaves the canal to follow the footpath up into Monkton Combe high street, but it is worth continuing along the track to the Mill, where there is a good view of the canal embankment - later the site of Monkton Combe railway station. It is also possible to pass through the mill premises directly to the site of the canal bridge in Mill Lane, although this was not available to us as the warehouse is closed on a Sunday.

Beyond the village, however, it is still necessary to follow the Midford Road to Tucking Mill. Here, the east side of Tucking Mill bridge has been cleared and is now more easily seen, but the footpath opposite the Mill cottages has been altered, and the 1½ milestone has been removed to a less visible spot on the outer bank of the canal as a garden feature. The rest of the footpath (formerly the canal towpath) to Midford remains unchanged, although we have since confirmed that the mysterious 'drainage sluice' mentioned by Niall along this section is actually a canal water-gauge.

At Midford Niall returns along the opposite (east) side of the valley along the footpath which leads off the lane to Limpley Stoke. Having not ventured along this route previously, we were most impressed with how easy it was from this high viewpoint to identify the various lines of the canal and railways, together with such related features as Midford Castle, De Montalt Mill, and Combe Down village. We were even more pleased to find that, as the footpath descended, it was possible to climb onto the embankment of the Camerton & Limpley Stoke Railway where we could see a considerable section of the canal still existed in fair condition in the dense woodland on the opposite side of the Cam Brook. Being totally invisible from the Tucking Mill side, this was quite unexpected and will require a more detailed examination in the future.

This footpath then continues past Monkton Combe Mill where one can either cross back into the village or continue along Niall's route which climbs up the hill towards Limpley Stoke in order to link up with the K&A Canal and thereby return to Dundas. We compromised by following the much shorter route past Waterhouse, an interesting and attractive 18th century building, to reach the main A36 road and cross over the Limpley Stoke Viaduct to the Brassknocker centre.

MIKE CHAPMAN



A "SERIOUS PIECE OF KIT" BACKS INTO CAISSON FIELD — August 2003

A survey to compare the volumes of cut and fill would be informative.

By scaling 30 yards off the 1804/1970 map it appears that the portal of the tunnel could easily be under the towpath wall of the forebay of lock 5. It could also be downhill of this location, but is very unlikely to be uphill of this location. An excavation 4m deep, just above lock 5, would, if my theory is correct, strike the outside crown of the tunnel arch.

Geophysics was considered, but the fractured nature of the rock meant that any signals would be impossible to interpret. A dig, conducted in the summer of 2002 proved inconclusive. A JCB excavator was hired to dig down 4m in the field just above lock 5 in an attempt to find the exterior of the exit tunnel. Competent bed rock was struck at 2.8 metres, precluding further digging. From this two conclusions can be drawn,

1. The tunnel, if it was dug in the supposed position, was constructed through rock. This is considered to be a perfectly feasible proposition. The tunnel, if it was dug there, still exists. It may have been lined or left unlined. If lined the lining could have been left or removed. With any of these four scenarios, the tunnel still exists whether lined or unlined is not known. For the tunnel to not exist it is either backfilled, in which case fill will be discovered below the competent rock indicating previous activity on the site — or has collapsed. If the tunnel had collapsed there would not have been competent rock above it. *i.e.* It has not collapsed.

2. If excavation in the supposed position determines that there is competent rock at the depth where the tunnel is supposed to be then the Caisson is not in Caisson Field in the orientation supposed.

I made a second attempt on the 2nd of August this year, this time using a 13 tonne tracked excavator with a hydraulic breaker mounted on the boom. A hydraulic breaker is a big version of a pneumatic road drill. This one was huge, about 6 feet tall and weighing in at about half a tonne, it was a serious piece of kit!

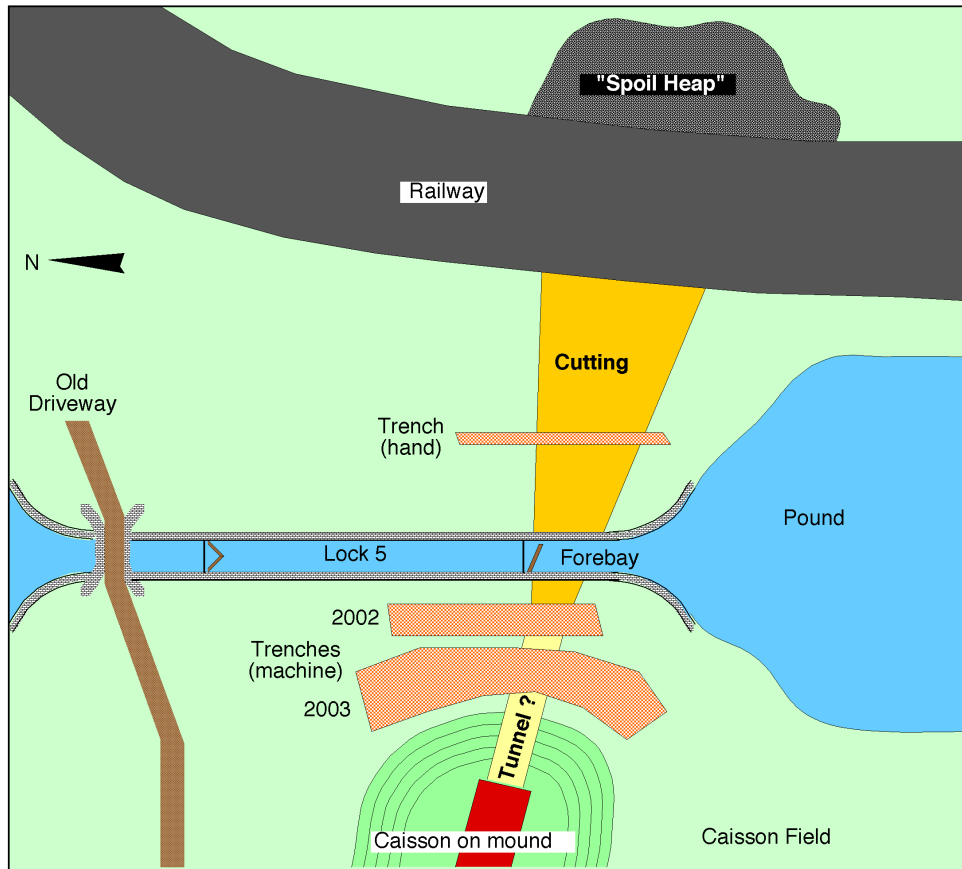


Hypothesis

I hypothesise that the Caisson spoil was used to fill the Caisson exit cutting and raise the level of the ground below lock 5 to enable lock 5 to be built. This would result in the removal of an embarrassing reminder of the failure of the Caisson. It would result in the removal of an eyesore from adjacent to Caisson House. It would be the most convenient supply of material for the purpose as it was uphill of lock 5. Also the spoil dug from our trial pits below lock 5 was unquestionably 'fill' and not undisturbed soil.

Some Questions

Where did the spoil come from to build the Caisson? Look for a site adjacent to, and uphill of, the supposed caisson site. After abandonment of the Caisson where did the spoil go? If this spoil was used to restate ground below the Caisson, where is the spoil which was dug out initially, and why was it dug? There is a quarry, now a tennis court, and a spoil heap a considerable distance below on the edge of the valley.



THE AREA AROUND LOCK 5 AND CAISSON FIELD
Showing the probable position of the Caisson exit tunnel with its cutting, the "spoil heap" and railway trackbed.



DUNDAS AQUEDUCT ON THE KENNET AND AVON CANAL — March 2003



A "BOAT'S-EYE VIEW" OF THE ENTRANCE TO THE SOMERSETSHIRE COAL CANAL — March 2003

FINDING FUSSELL'S TRIAL BALANCE LOCK

Although the Caisson Lock on the Somersetshire Coal Canal is the best-known in the area, it was only one of many different ideas put forward for boat lifts. Often these ideas were abandoned whilst still at the theoretical stage, but the Fussell's Boat Lift was one of the few which became a practical reality. The prototype was built and tested on a branch of the Dorset & Somerset Canal which was planned to run from the Nettlebridge Valley via. Mells to Frome.

History

The first trial of Fussell's boat lift took place on the Dorset & Somerset Canal, near Mells, on 6th September 1800. The experiment was made over a fall of 20ft and laden boats were transferred between the two levels.

The probable location of this trial was first identified by Robin Atthill, who then passed this information to Gerald Quartley and Ken Clew. However, the area had become completely overgrown and was virtually impossible to interpret. As we also discovered on our previous guided walks, the entire site has been totally obscured by the impenetrable vegetation ever since. No evidence of any lock chambers was visible and the only suggestion that this might actually have been the site of any sort of structure was two small dressed stones set into a steep bank.

Why Action Was Needed

This was the first ever practical balance lock, the ancestor of many later boat lifts, including those by James Green on the Grand Western Canal, Anderton on the River Weaver and many others throughout the world. In the opinion of many Industrial Archaeologists, this was an unrecognised World Heritage Site and worthy of further investigation.

The First Work Party

In Autumn 2002, a preliminary work party was organised to clear access to the site and expose the upper canal and towpath. This site is on the Mells Estate of Lord Oxford and all the work was carried out with the permission and support of his son, Viscount Asquith. Some clearance work was also done on the lower level, but the central area, where the levels changed, remained virtually unexplored.

Spectacular Progress

Since then, a series of work parties has gradually cleared more and more of the vegetation from the site, culminating in two spectacular events in April and October 2003 which have brought to light an entire canal basin. Some further excavation work by Richard Hignett has shown that the dressed stonework continues downwards for several courses and includes part of a projecting wall. This is consistent with our concept of what the balance lock might have looked like, but a lot more exploration is needed before we can be more certain.

Further Exploration

The work parties have so far consisted of Bradford on Avon Scouts, members of the SCCS Work Party, the IWA, Wilts & Berks Canal Trust, Fussell's Iron Industry Society and, of course, friends of the D&S Canal. A further work party is planned for Sunday 23 November 2003 when we shall need to continue vegetation clearance, carry out a survey of the site and continue with our exploration of the underground structures.

DERRICK HUNT

New work party members are always welcome, if you would like join in, please contact Derrick Hunt

☎ 01225 863066 E-mail: derrick@carlingcott7.freemove.co.uk



Photograph: Adrian Tuddenham

THE "SPOIL HEAP" VIEWED FROM THE COMBE HAY-MIDFORD ROAD — February 2002

11. A subsequent level survey indicated that there would have been 6' 1" of cover over the tunnel where it passed under the lock forebay. This would probably be sufficient for the two structures to be stable.

12. The depth from the ground level at the supposed position of the portal to the soffit of the tunnel is 3' 10", a relatively easy depth to dig to manually.

13. If the tunnel had been collapsed it is likely that the ground level at the portal would be below soffit level, not above it as the level survey indicated.

14. The level of the "spoil heap" is 46' 4" below upper pound water level. 1' 4" below the expected lower pound water level if the rise was 45'. Alternatively, if Clew p165 is correct, the lift of the Caisson is 46' then the "spoil heap" is only 4" below lower pound water level. This is either deliberate or a very surprising coincidence. The theory of the rise and fall of the Caisson being 45', this being one third of the lift of the pump is a red herring. A level survey of the adit has determined that the lift was indeed 135' but this has no relation to pound levels.

15. Having dug 5' deep in two locations as suggested in item 1, I can now state that the tunnel portal is not there. I have however gathered further evidence from Mike Chapman who states that an advert in the Bath Chronicle of the time requested tenders from contractors to construct 30 yards of tunnel and 30 yards of cutting. This would place the tunnel portal under the towpath side wall of the forebay of lock 5. A feasible position. Lock 5 is most unlikely to have been built across the portal because differential settlement would have made it unstable. Although it may have been possible to construct lock 5 entirely over fill material, settlement would probably cause cracking in the masonry. A fact the engineer at the time is likely to have been aware of.

16. Upon failure of the Caisson, the large amount of soil required to counter the thrust of the water in the outer chamber must have been removed. (It is no longer obviously visible on the site.) There are three possible reasons for removing it.

a) Embarrassment. Whilst quite likely, if this were the case the resultant spoil heap should be readily visible.

b) It represented an eyesore. Again likely if the Caisson was adjacent to a substantial residence. The level of the Caisson is fixed by the level of the summit of the canal, therefore there are only a limited number of contemporary substantial residences for which this could be the reason for the Caisson's removal!

c) The spoil was required elsewhere. If the Caisson spoil was "quarried" it would be for an engineering task in the near vicinity. The cost of transport precluding moving it any great distance.

DIGGING FOR EVIDENCE OF THE CAISSON

This summer saw the Society's biggest-ever archaeological excavation in search of evidence for the Caisson. A massive tracked excavator was brought in to tear a hole nearly 30ft deep in Caisson Field just above Lock 5. This was not an act of desecration borne of idle curiosity, but a carefull planned and executed culmination of a well-thought-out line of reasoning. — Richard Hignett takes up the story:

I had been interested in the Caisson Lock since starting work with the SCCS whilst still a student at Southampton University, approximately 7 years ago. Much help was forthcoming from Roger Halse and Mike Chapman with maps and information from the Bath Chronicle. I built on their work using my education as a civil engineer to interpret what they had found and supplemented it with information I gathered on the ground myself. I also used information from Kenneth Clew's book "The Somersetshire Coal Canal and Railways".

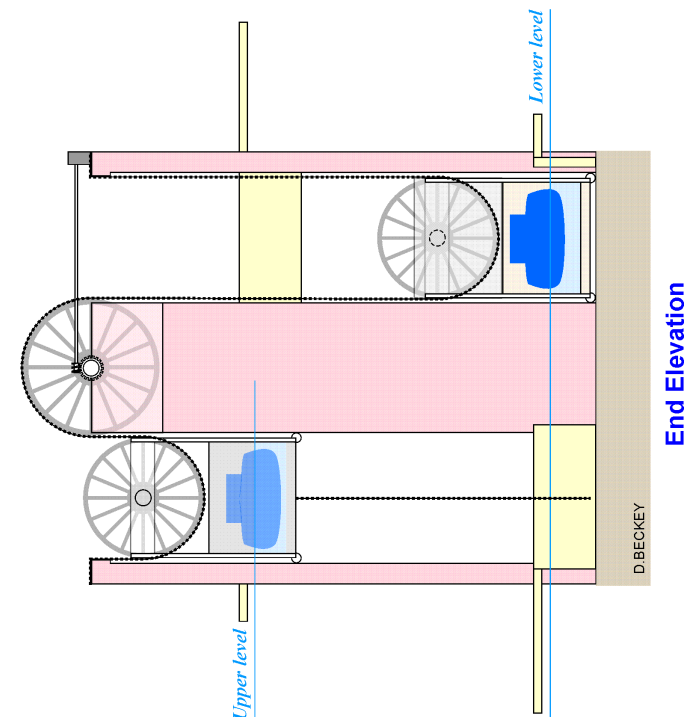
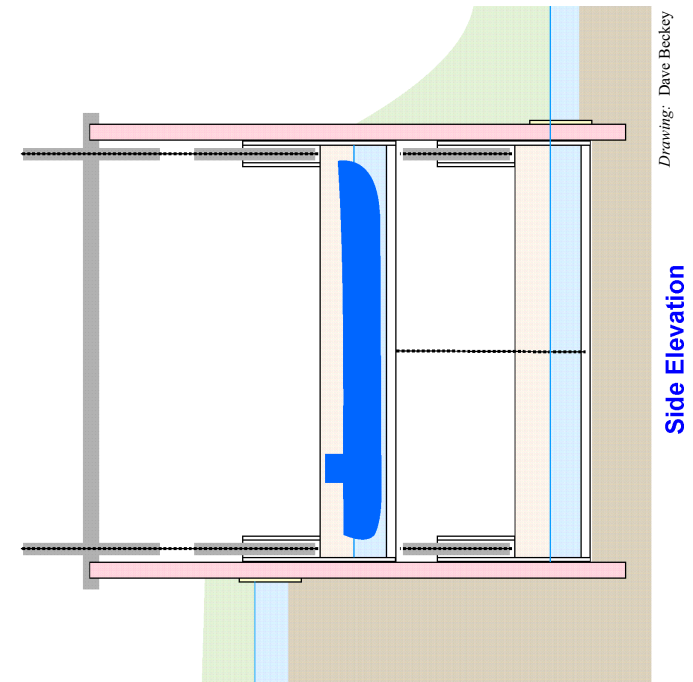
Accumulated Information

I had accumulated the following information, which I hoped would allow the Caisson to be found:

1. I adjusted the scale of the 1804 map on a photocopier to match the 1970 map. I then copied it onto tracing paper and was very impressed with the accuracy of the 1804 map. Whoever made it took some care, and therefore it was reasonable to consider that all of it was accurate including the Caisson and tunnel.
2. The map showed the tunnel at the lower end of the Caisson stopping short of the railway line, which perhaps explains why there was no mention of coming across it during the railway construction.
3. The tunnel passed under the forebay of lock 5, which was acceptable, as from previous calculation I knew that the invert of lock 5 was too deep for the tunnel to have passed underneath.
4. There was a suspicious bit of embankment shown east of the railway, on the 1970 map, which could be the spoil heap from the construction of the tunnel.
5. There was sufficient room on top of the "spoil heap" to build a second caisson lock.
6. There was a stop gate shown on the 1804 map between the summit level and the basin, which was not shown on the 1884 Ordnance Survey map. Stop gates are built to protect the canal in the event of traumatic collapse, particularly at each end of aqueducts and embankments so that, in the event of a breach, the flow of water could be quickly stopped. The summit didn't need protection from the water in the basin, as the basin volume is comparatively small, so the stop gate was probably to protect the basin from the water in the summit level — but what was there about the basin, only in the early years, which could fail catastrophically and which required protecting?
7. Reference to the 1927 railway map showed that the "spoil heap" was very much larger than shown on the 1970 map, and was the sort of size I would expect resulting from the construction of a reasonably large bore tunnel.
8. Study of the map also showed that the land on which the "spoil heap" was built belonged to the canal company until 06/08/1898, thereafter half of it was outside the railway boundary. It seems unlikely that the railway would build such a spoil heap (the wrong shape for railway construction) on land which they did not own. Please form your own conclusion about the chronology this suggests.
9. A site visit on 03/09/2000 showed that the summit of the "spoil heap" was levelled flat and not left humped as if the spoil had been dumped from the barrow, as was the case for the two access shafts to the well adit.
[I hope to include an article on the well adit in the next issue — Ed.]
10. The surface of the "spoil heap" was approximately 3' higher than the railway and the navvies appear to have had to cut through it to get the required grade during railway construction.



Fussell's Balance Lock





THE LOWER CANAL BASIN OF THE FUSSELLS BALANCE LOCK SITE COMES TO LIGHT — October 2003
Inset: BEFORE CLEARANCE — January 2002

Photographs: Adrian Tuddenham