BIAS NEWS AND NOTES

edited by Joan Day

As our society approaches the 10th anniversary of its foundation a small group of committee members are laying the basis of a celebratory programme. We have decided on a series of walks to show some of the facets of industrial archaeology in the centre of Bristol, to which members of the public will be invited. Our secretary will be pleased to hear from BIAS members who would like to act as guides or assist in these perambulations as we hope that this feature of our celebration will be extended in the future. Illustrated leaflets will be produced for sale to those who wish to explore the routes of these trails for themselves. There are also plans to mount a display of industrial archaeology material at the Central Library in Bristol, and at the end of September a weekend Conference will be held in conjunction with the Extra-Mural Department of the University which will focus attention on the docks area of Bristol.

Kennet & Avon progress by John Powell:-

1976 has seen two major steps forward in restoration at the western end of the Kennet & Avon Canal. Firstly, on Friday 4th June, Sir Frank Price, the Chairman of British Waterways Board, came to Bath to officially re-open the Widcombe flight of locks. Originally, the flight consisted of seven locks, numbered 7 to 13, and the restoration of numbers 7 and 10 to 13 was finished some time ago. Locks 8 and 9, however, were demolished as part of a road improvement scheme and replaced by one deep lock. It is this work, financed by Bath City Council, which has only recently been completed. Unfortunately, the flight has seen little use since the re-opening, due largely to the acute water shortage.

Later in the summer, came the news that the part of the canal often known as the 'Limpley Stoke Dry Section', the stretch between Winsley Hill and the western end of Avoncliffe Aqueduct, had been approved as an authorised project under the Manpower Services Commission 'Job Creation Scheme'. This followed a joint application by British Waterways Board, Wiltshire County Council and the Kennet & Avon Canal Trust. The section, which has always suffered badly from leakage, will have the original lining removed and replaced by three layers of material - hard core at the bottom then a Waterproof membrane and, finally, reinforced concrete on top. The scheme will create jobs for about 70 people, many of them school-leavers, over a period of fifty weeks, with the Government providing the wages whilst the Canal Trust pays for materials at an estimated cost of £75,000. In view of this large financial commitment, BIAS decided to make a donation to the fund launched to meet it. Once completed, the project will have eliminated one of the major obstacles to restoration at the western end of the K & A, though other work will still have to be done before boats can pass through to Bradford and on to Devizes.

Claverton pumps again

As BIAS members who attended on 24th August will be aware, restoration work on the machinery at Claverton Pumping Station has now been completed. During 1975, the float and seal boards were added to the second half of the waterwheel, and the last of the 408 oak gear teeth were fitted to the pit wheel. Test runs were carried out in August and September of that year, and following these, the pumps were reconditioned and the pistons re-packed. Difficulties with the sluices were encountered on a number of occasions, but the bowed concrete which was found to be causing the trouble has now been put right. During the summer of 1976 the pump and its restorers played a large part in the successful re-opening of the Widcombe flight of locks in Bath. Running time amounted to no less than 101 hours during the period, with a spell of 62 hours out of a possible 69 between June 3rd - 6th, the pump being manned and operated by night and by day. The total amount of water lifted into the canal was 7½m gallons or 118 lockfulls, and the average power developed throughout was 20⅓ bhp.

In recent months tasks have included re-painting machinery and other paintwork, making a start on the re-flooring of the upper storey, making trays to catch drips of oil and also replacing parts from the hatches which had been vandalised. Current work, all of which is now undertaken by volunteers from the Kennet & Avon Canal Trust, involves preparing the interior of the building for redecoration, and the installation of permanent lighting and power points. Although the lease enabling the Trust to take over the running of the building from the British Waterways Board has not yet been signed, it is hoped that this will occur early in 1977. Once that has happened, it should be possible to open the building to the public fairly soon afterwards, and it is confidently expected that it will prove to be a major attraction to industrial archaeologists from all over the country.

Ashton Windmill, Chapel Allerton

In the autumn of 1975 one of the sail stocks of Ashton Mill was seen to be splitting at the end and by the summer of 1976 the condition of the sails and mill generally began to give cause for concern. In June, John Mosse and Martin Watts visited the mill and made a general report on its condition to the City Museum, with an outline of work required to put the mill back into good repair. The sails, however, continued to deteriorate and the local authority asked that the mill be closed to the public until some remedial work had been under taken. The first phase of this work was obviously to remove the sails before the autmn gales for, although the frames are in reasonable condition, the Douglas Fir stocks, which were put up in about 1958, had rotted badly and there was danger of one of the sails being carried away, with subsequent damage to the others and perhaps the fabric of the mill in general. Mr John Scourse of Cheddar, who undertook the restoration of the mill for the late C.C. Clark in 1958, has since removed the sails, which will be stored in safety for the winter. The stocks will be replaced next year and it is hoped that while the sails are off a certain amount of other repair

work can be undertaken; the cap is seized on the curb and iron work in general needs freeing and lubricating. Also some consideration is being given to putting the mill back in her traditional colours, the tower being white-washed and the sails black. The work will hopefully be financed by historic buildings grants and the backing of the mill owners, Bristol City Museum, and perhaps the end of 1977 will see Ashton Mill once more in a workable condition, 50 years after she stopped work as the last Somerset windmill.

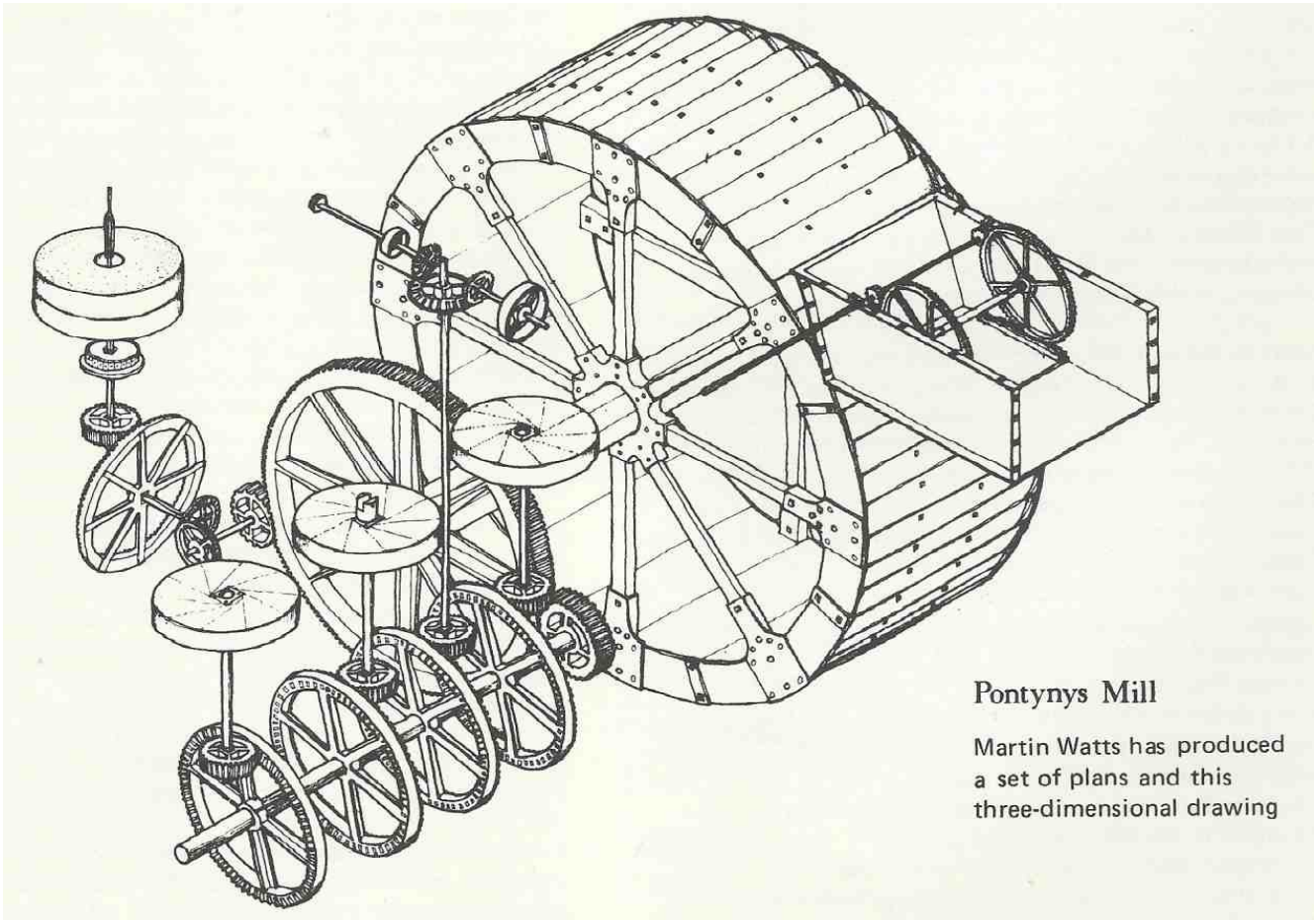
Stothert & Pitt Engines

When in 1975 Stothert & Pitt required additional space in their yard for the erection of cranes they decided to dispense with their two preserved steam engines and offered them on permanent loan to the University of Bath. The University accepted them and is now re-erecting them on its Claverton Down campus. The small compact beam engine has been mounted on a concrete base in Wessex House, where it is under cover but easily visible from the main Visitors' Car Park. Built in 1866 as a show-piece for the Paris Exhibition of 1867, it will when restored make a very elegant feature symbolizing a link with the industrial history of Bath. The other machine, a small horizontal pumping engine, was used in the Royal National Hospital for Rheumatic Diseases until 1952. It will be displayed in the School of Engineering, where it is hoped that students will be able to assist in its restoration

Kings Mill, Oldbury Court

Owen Ward reports the results of the two open week-ends held at King's Mill last season as follows:

The first, in June, was very well supported by a team of excavators who accompanied Mike Ponsford of the City Museum, and with the help of a hired pump a great deal of progress was made in clearing out the wheel pit. The contour of the floor of the pit was uncovered and surveyed for a distance of about twelve feet when it dropped away rapidly and the silt was too deep to be lifted out on that occasion. The floor of the leat is lined with timber, which is nailed down - so far the boards have not been removed to see what is underneath. Later progress through the year uncovered a whole complex of levels at the river end, so on the second 'open day' a small team of BIAS members worked to clear away the topsoil and masonry from that end. This effectively extended the excavated area to cover almost the whole interior of the mill and some more floors and walls have since been located. Excavations will continue, but more help is needed especially now that both the principal operators on this small site are in process of moving away from the immediate area. Anyone able to help should telephone Owen Ward, Bath 6941 during office hours, or get in touch at one of the BIAS meetings.



Pontynys Mill

Martin Watts has produced a set of plans and this three-dimensional drawing

BIAS Survey Group Following last year's Journal article on the mills of the Monnow and Troddi by Gordon Tucker and Stan Coats BIAS members visited a small selection of these Gwent watermills in April, guided by the authors. Watermill enthusiasts of the survey group were particularly interested to see the rather unusual gearing arrangements at Pontys and Pontynys Mills, both near Longtown. Later in the year they made a return visit to Pontynys Mill at the invitation of Mr N Roberts the owner, to measure the machinery which included a series of four bevel gears on a lay shaft on one side of the pit wheel and a further drive through a pinion and bevel gears to an additional stone on the other side of the pitwheel.

The Radstock arm of the Somerset Coal Canal

Following up his interesting article in BIAS Journal 8 on the Combe Hay Caisson Lock Dr Hugh Torrens contributes further geological information on the Somersetshire Coal Canal.

The history of the Radstock branch of the Somerset Coal Canal has been documented by Bluhm (1966) and Clew (1970), who refer to an early plan for a complete water communication from Midford to Radstock along the Wellow Brook. When the idea of using Caissons on both branches was abandoned, an inclined plane was built on the northern branch. This was similarly not a success and plans to use the same on the Radstock branch were abandoned. Locks were instead projected but, because of costs, a railroad, 1 mile in length, was built to link the Upper and Lower levels on the Radstock arm before May 1805 when it was fully operational.

This southern canal from Radstock to Twinhoe was little used and Clew (1970, p. 73) suggests it was probably disused by 1812; this would mean it had a life of only 8 years. The reason for its abandonment after such a short period, has never been satisfactorily explained. Marshall (1938 p.68) seems to have been the first of recent authors to discuss the cause. Atthill (1955 p.9) likewise stated that 'apparently the riparian mill owners lodged objections to the diversion of the water from the Wellow Brook'. Clew (1970, p.77) repeats this.

The actual problem seems certainly to have been a water shortage, but this may have been due to the local geology. The Radstock arm between Radstock and Shoscombe Bottom was cut in basal Keuper Marl closely overlying the rock called Dolomitic Conglomerate which outcrops as near as Midsomer Norton. Of the Triassic Dolomitic Conglomerate Conybeare & Phillips (1822, p. 309-310) stated 'The cavernous structure of this rock forms vast reservoirs of water, but. . . . they are not calculated to afford a constant supply, but when once tapped may soon be exhausted; this was experienced in [the Radstock] branch of the Somerset coal canal near Radstock which was carried through the [Dolomitic] conglomerate in order that it might be fed by these natural reservoirs; their whole contents however, soon ran off; and they defeated instead of answering the intended purpose, by draining off the water of the canal; which was consequently obliged to be puddled along the whole line'. In 1824 Buckland and Conybeare (p.293) further stated when discussing this Radstock arm 'In a few days after the engine pumps had begun to work the water failed since after exhausting the [subterranean] reservoir, an additional supply could only be derived from the slow percolation of rainwater through the incumbent strata. The canal has in sequence become useless and a rail-road has been substituted for it'.

These are clear statements about the cause of the Radstock arm's abandoment, and show how geological observations can help the industrial archaeologist. The second quotation suggests a steam pumping engine was put into operation on the Radstock arm; as was certainly intended in 1801 (Clew, 1970, p.56). This needs confirmation.

The Rev W D Conybeare (1787-1857)_who was the source of this information was from 1805-1814 a student at Oxford University. In August 1819 he moved to Brislington, SE of Bristol, where he held a lectureship. In 1822 he was presented to the Vicarage of Sully, Glamorgan, though not finally settling there until 1827. He would have thus been well informed about local Somerset events. He had in addition made a geological tour of Somerset in 1809. His brother, Rev J J Conybeare (1779-1824) was Vicar of Batheaston near Bath from 1812 to 1824 and was similarly much interested in geology.

To compile these notes Dr Torrens used the following sources:-

Clew, K. 1970, *The Somerset Coal Canal and Railways* David & Charles: Newton Abbot.

Conybeare, W D & Phillips, W 1822, *Outlines of the Geology of England and Wales*, Part 1. W Phillips: London.

Buckland, W & Conybeare, W D 1824, *Observations on the South Western Coal District of England*. Trans. Geol. Soc. Lond. (2) 1, pp.224.

Marshall, C F D, 1938, *A history of British Railways* Oxford Univ. Press.