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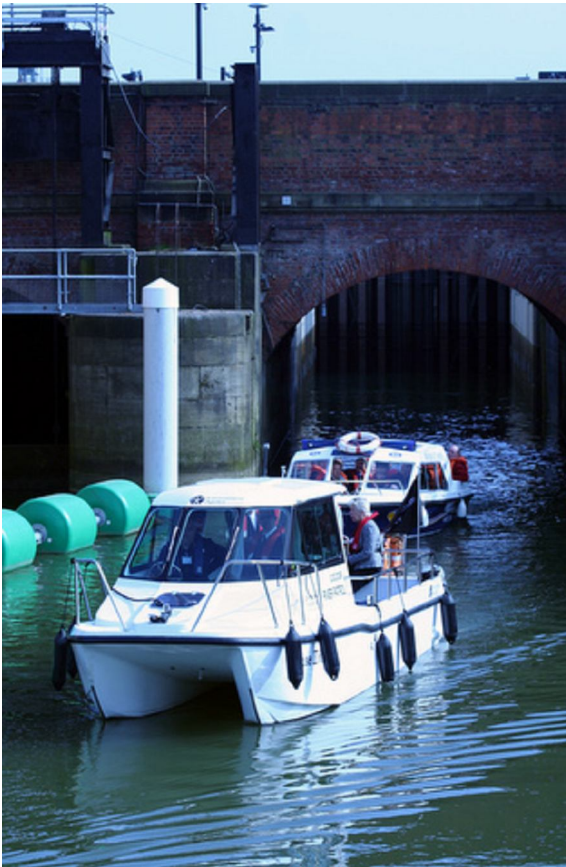
THE NEW BLACK SLUICE LOCK OPENS AT BOSTON



The first boats entering the new lock at Boston from the South Forty Foot River ready to lock up to the river Witham on Friday 20 March. The opening ceremony was performed by the BBC Countryfile presenter Michaela Strachan accompanied by the Environment Agency's Chairman, Lord Smith of Finsbury. Afterwards they unveiled a commemorative plaque on the refurbished lock cottages. ..



This is a project in which this Association can take particular pride for, together with the Lincolnshire Branch of the Inland Waterways Association, we pioneered it in the 1990s, were solely responsible for getting it adopted by the Fens Tourism Group in 1998 and contributed to the cost of the survey undertaken by Bullens, the consultants, that was published in August 2000. Subsequently the Environment Agency took



the project on board and with strong backing from the Lincolnshire Waterways Partnership what is the first major step in creating the Fens Waterways Link has now become a reality.

The work has involved demolishing the former navigation structures at the entrance to the South Forty Foot and constructing a new lock in the tideway, the main contractors being Jackson Civil Engineering with Halcrow Group Ltd as the main consulting engineers. Sub contractors included H. H. Adkins (Contractors) Ltd of Boston who refurbished the lock cottages and erected the new lock control building; Taylor & Sons Engineering of Cardiff who manufactured and installed the mitre and sector gates and Kenneth Grubb Associates Ltd who designed the sophisticated operating and control systems.

As a result the South Forty Foot has now been re-opened having been closed to navigation since 1967. It remained, however, a major drainage channel with a series of twenty-one pumping stations along its banks and much of the channel is wide and deep. The first 12½-mile section of the channel up to Donnington Bridge that carries the A.52 Grantham Road over the navigation has now been reopened to all craft. South from the bridge the channel becomes shallower and narrower and turning places are few and far between, but smaller boats may be able to reach the Black Hole Drove pumping station, which blocks the navigation at 19½ miles from Boston.

South of the pumping station the water in the final 1¼-miles water section through to Guthram Gowt is retained at a lower level in the interests of better land drainage.



The new lock from the seaward side. In the background (right) is the Black sluice Pumping Station, first built in 1946 but extended in the 1960s.

The new lock is 74-feet in length, although craft are restricted to 72-feet so as not foul on the mitre gates, and 20-feet wide. Craft can only lock up to the Witham, or down from the river into the South Forty Foot, because the mitre gates point seawards so as not to compromise the integrity of the flood defences at this site. The cost of the whole scheme, which was completed on 19 December 2008, just inside the end of year funding deadline, was £8.8 million which was somewhat over the original £8m budget due to unforeseen difficulties in building the new lock in the tideway. The Agency has produced a new "*Black Sluice Navigation*" guide – passage through the new lock has to be booked at least 24 hours in advance – phone 01522 785041.

On Sunday 19 April a party from our Association in two groups was shown round the lock by Andrew Usbourne, the Environment Agency's Project Manager, and round the new control room by Andy Woods, the Agency's Lincolnshire Waterways River Inspector. Members also visited the lock cottages alongside the new waterway which provide toilet and shower facilities for boaters and which are also destined to become a visitor centre, cafe and offices, before having a quick look into the Black Sluice Pumping Station with its impressive row of pumps.



Over the Easter Bank Holiday weekend a flotilla of eight narrow boats explored the new navigation. They are shown here at the new mooring at Swineshead but later they passed on to Donnington High Bridge and to Bottom End (Kingston's) Bridge (16½ miles from Boston) where bridge works were taking place. At least one boat penetrated even further south before running out of water.



The Black Sluice Lock control room standing alongside the new lock.

The lock is controlled by sophisticated electronic equipment with a stand-by back-up generator in case the mains electricity supply fails. In this Health & Safety conscious world gone are the days of winding paddles and pushing on balance beams.

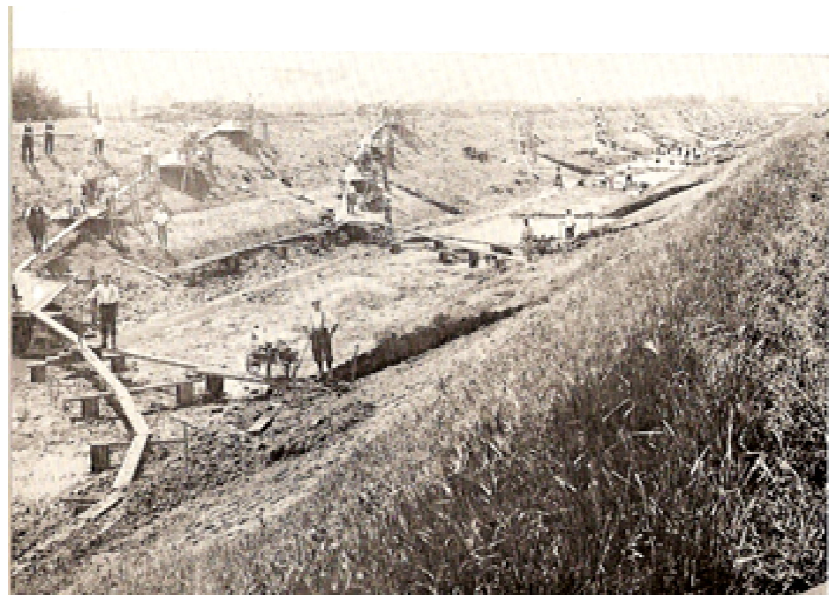
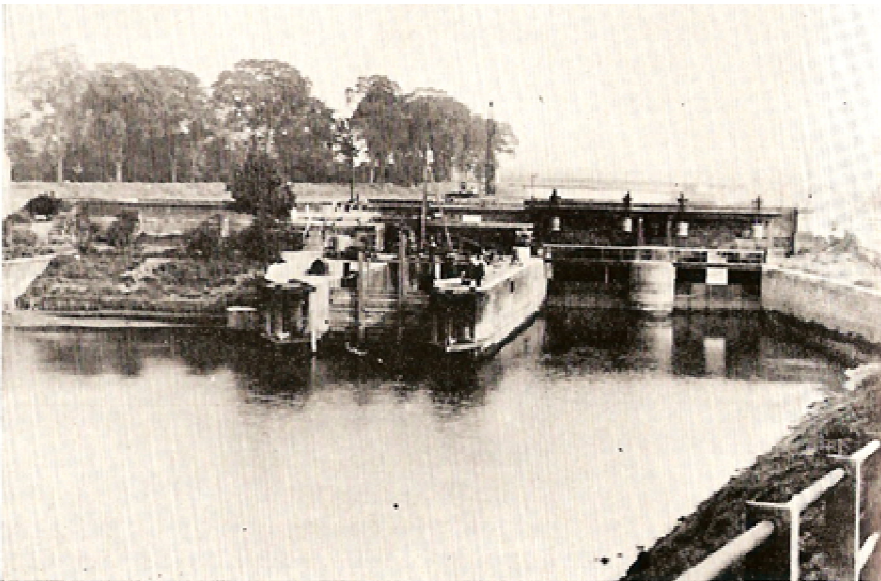
PHOTOGRAPHS

Most of the photographs of the opening of the new lock were taken by Doug Hill, who lives nearby at Frithville and who we were delighted to welcome to our meeting on 19 April.

The lower picture on page two shows the Environment Agency's inspection launch OUSE II with SPALDING GOLD from the Spalding Water Taxi Company and the Lincolnshire Fire & Rescue's boat behind exiting the lock; it was taken by Steve Hayes whilst the picture on page 4 showing the narrow boats at Swineshead is reproduced courtesy of Dave Carnell and Andy Gee.

HISTORIC SCENES OF THE SOUTH FORTY FOOT RIVER

The pictures below show: (Top left) *The Black Sluice in 1931 during the replacement of the sea doors.* The site of the 1638 and 1765 sluices are on the left, this of course being before the building of the Black Sluice Pumping Station in 1946. (Top right & bottom left) *Replacing the sea doors on the Black Sluice entrance lock in 1931.* (Bottom right) *The cleansing of the waterway in July 1910*



HISTORY OF THE SOUTH FORTY FOOT RIVER (also known as THE BLACK SLUICE DRAINAGE & NAVIGATION).

The first section of what became known as the South Forty Foot River was built from Great Hale to Boston, a distance of some 8 miles, between 1635 and 1638 as part of a scheme by the Earl of Lindsay and Sir William Killigrew to drain 36,000 acres of land and make them available for agriculture. The work cost £45,000 and involved the construction of a sluice – the Skirbeck Sluice – to discharge into the river Witham at Boston with water flowing into the river by gravity when the level of the tide allowed. The scheme also involved constructing two small drains southwards from Great Hale towards Guthram... Overall the scheme was described as providing “a navigable river from Bourne to Boston, a distance of 24 miles”. At the same time Clay Dyke was built; it used to lead up to the Old Sleaford Canal and joins the South Forty Foot at Holland Fen, five miles from Boston

The project met with fierce opposition as many of the landowners and fenmen would have lost their rights for fishing, water fowling, and grazing cattle. As a result they got together and burnt down the sluice and damaged some of the earthworks.

Matters then lay dormant for one hundred years until there was a particularly bad flood in 1763. The engineer Langley Edwards, who was involved in several schemes in Eastern England such as the River Nar and the Suffolk Stour, was called in to advise. This was followed by an Act of Parliament that was passed in 1765. It was described as “*An Act for draining and improving certain low marsh and fen grounds lying between Boston Haven and Bourn, in parts of Kesteven and Holland in the County of Lincoln.*” (5 Geo III c.85).

Under the Act commissioners were appointed for the Black Sluice Drainage & Navigation with extensive powers to carry out drainage works and to finance them by raising taxes. Whilst there was still much opposition, the commissioners effectively revived the Earl of Lindsay’s earlier scheme, clearing out and improving the drainage channel from Great Hale to Boston and erecting the Black Sluice to discharge into the Witham at Boston, in place of the Skirbeck Sluice. They also extended the drain a further 13 miles southwards through Donnington and Billingborough to Guthram Gowt and diverted many side drains to feed into this new channel. All this enabled 64,000 acres of land to be drained.

Meanwhile in 1720 the Earl Fitzwilliam had constructed a drain that ran largely parallel with the Witham and discharged at a sluice near the present Grand Sluice. This eased the position north-west of Boston whilst the opening of Boston Grand Sluice on the Witham in October 1766 prevented the tide from passing further upstream, hence protecting much of that land from flooding. Following on from this the Earl of Fitzwilliam’s drain, now known as the North Forty Foot River, was diverted at its eastern end to discharge into the South Forty Foot at Cook’s Lock.

There was further flooding in 1845 and the engineer William Cubitt was called in to make recommendations to improve the situation. As a result the Black Sluice at Boston was re-constructed with two 20-foot sluices fitted with pointing doors on the tidal side whilst alongside a new 72-foot long and 20-foot wide navigation lock was built. The sills of the sluices were considerably lower than previously, and this enabled the gradient of the SFFR to be increased by three inches per mile.

By this time there were a series of windmills which drove scoop wheels lifting water into the drain but from 1846 these started being replaced by steam-powered engines. By 1856 there were nine steam-powered and eight wind-powered drainage engines in use.

Under the River Witham Improvement Act of 1880 alterations were made to the mouth of the river and this led to a significant drop in the low water level at the Black Sluice, which obviously benefitted drainage. By 1910 oil and paraffin engines began to replace the steam and wind engines and by 1935 there were 15 such engines pumping water into the drain. During that year a considerable length was cleared out to improve the flow of flood water. And in 1931 new sea doors were fitted to the navigation lock at the entrance to the drain from the Witham.

A major improvement came immediately after the Second World War when under a £374,000 scheme a large pumping station was built in Boston at the junction of the South Forty Foot and the Witham. Initially this was equipped with three 100-inch Gwynnes pumps powered by a 900-horsepower diesel engine manufactured by Rustons of Lincoln. At the same time the 12½-mile section of the drain from Boston to Donnington High Bridge was widened and deepened.

By now the paraffin and oil engine-powered pumping stations began to be electrified and an additional seven stations were built to improve drainage to an additional 11,000 acres of land. Then in 1972 work started on a £1.4 million scheme to provide two more pumps at the Black Sluice pumping station, to replace several of existing pumps alongside the drain, and to widen of the six-mile section from Donnington southwards to Rippingdale Running Dyke. The works were completed in 1968. With the original three 900hp and the two new 925hp diesel engines the Black Sluice pumping station can pump 800,000 gallons per minute.

Today there are 21 pumping stations along the banks of the South Forty Foot that pump directly into it whilst another, at the Black Hole Drove, was constructed in 1967 right across the channel. Following this the water level southwards to Guthram Gowt has been maintained at a lower level in the interests of land drainage and the station acts as a boundary between that part of the drain managed by the Environment Agency and that managed by the Black Sluice Internal Drainage Board.

It is clear that whilst drainage was the prime motivator behind the construction of the South Forty Foot, it was used for navigation from the earliest times. Commodities such as coal were delivered to wharves such as at Hubberts Bridge, Donnington and Billingborough whilst agricultural produce were taken away. For many years a horse-drawn packet boat carried both people and goods between Boston and Billingborough and this continued into the early 1900s. By this time the navigation function was much reduced and largely confined to between Donnington and Boston and the decline continued until the navigation was closed in 1967 and the entrance lock at Boston was converted into a flood sluice in 1971. Such navigation as remained was confined to small portable craft.

This remained the position until work started on the building of a completely new lock in the tideway at Boston on Friday 8 February 2008 resulting in the opening of the structure on Friday 20 March 2009.

CHAIRMAN'S APPEAL

Ask not what your East Anglian Waterways provides for you, but what you can provide for them. Our past successes are many but the future is a greater challenge.

To succeed in meeting the challenges we need more active members. Join your governing Council, you will find its work varied, interesting and perhaps challenging.

If committees are not your thing, then lobby to promote all aspects of our waterways. Who should you lobby? Your local councillors at Parish, District and County levels, the Environment Agency, the Regional Development Agencies and don't forget your Member of Parliament.

Recruit new members. Why not give a young person, or even an older one, a life membership for that special birthday or Christmas?

YOUR WATERWAYS NEED YOU (With apologies to Lord Kitchener)

(A Life Membership subscription costs £100, but with a lower rate for concessions – Ed)

ANNUAL GENERAL MEETING

After the tour around the Black Sluice Lock at Boston members travelled through the town and alongside the Maud Foster Drain to Cowbridge Lock where they turned off alongside the Frith Bank Drain to reach the Malcolm Arms public house at Anton's Gowt, where tables had been reserved for us to have lunch. We were joined by Andrew Usbourne, our morning's guide, and by Mary Powell, who has been the leading spirit behind the Lincolnshire Waterways Partnership, which involves Lincolnshire County Council, the British Waterways Board and the Environment Agency.

After the meal we are treated to a specially prepared presentation about the achievements of the LWP over the past five years, culminating in the opening of the new lock. The Association is extremely grateful both to Andrew and to Mary for giving up part of their Sunday to take part in our meeting.

The Annual General Meeting followed at which Ivan Cane and Alan Faulkner were re-elected as Directors and Graham Brown was elected as a new Director. Graham is no stranger to the Association having acted as the first working party organiser on the North Walsham and Dilham Canal – the very first session took place at Briggate Lock on Sunday 17 December 2000. These work parties have flourished as evidenced by a progress report from David Revill on the year's achievements illustrated with a PowerPoint presentation by Ivan Cane. This was followed by meeting of the Council to round off a well organised, interesting and enjoyable day.

NEW MEMBERS: We are delighted to give a warm welcome to three new members who have joined since our last issue – Graham Brown of Weston Longville, John Sanders of Norwich and David Mercer of Hemingford Grey.

HERE AND THERE

GREAT OUSE BOATING ASSOCIATION: In our last issue we mentioned that no one seemed to know just when GOBA had been formed. Our new member David Mercer has kindly provided the answer. A meeting of the prospective members was held at the Dolphin Hotel, St. Ives on Sunday 30 November when the Reverend Donald Brown was elected Chairman, Stanley McCombie was elected Vice Chairman, Mrs E. S. Goring was the Secretary and the committee included such well known names as Brian Carter and Laurie Jones. The first formal meeting of this new committee took place nine days later at the Bridge Hotel, Huntingdon.

GREAT OUSE: A considerable amount of repair and improvement work has been carried out on the river over the winter months. The long-standing problems at Cardington Lock have been tackled – here it was becoming impossible to operate the mitre gates without prodigious effort. A large shoal below Castle Mills Lock has been dredged away and major works have been carried out at Eaton Socon Lock including landscaping and installing new footpaths. Brampton Lock has been repaired and changes are being implemented to the channel there. Further down river St. Ives and Brownhill Locks have been attended to and on the Lark there has been work on Isleham Lock and dredging has been carried out from Prickwillow to the intriguingly named Soham Tunnel Mills about a mile upstream.

LITTLE OUSE: The Association has responded to the Thetford Growth Point Team's proposed development proposals for the town by welcoming the plans for the Thetford Loop, a cycle/pedestrian route around the town, as part of this will be beside the river from the Abbey Heath Weir upstream. We also welcomed the plans to transform the central riverside part of the town into an attractive and accessible leisure area, thus building on the good work that has already been done here. Where we were less happy was that there was no mention of improving the river itself. Sadly there seems to be little interest in the town in pursuing the restoration of the navigation and the 2003 consultants' report that indicated the scheme was both practical and relatively straightforward lies gathering dust on the shelf. Meanwhile our Honorary Secretary, Ivan Cane, contributed a fighting letter to the *Eastern Daily Press* on 12 March calling for boats to be brought back to the town.

After its success in establishing the new moorings at Santon Downham last year, the Little Ouse Group is now working to improve the riverside walk between Brandon and Hockwold. Any moves to make parts of this river more accessible can only be welcomed.

WELCHES DAM LOCK: The Spring newsletter of the IWA's Peterborough Branch continues the sad saga of the lack of progress in re-opening this lock, which was closed in the spring of 2006 when water was found to be leaking from the Old Bedford River through the structure. The consultants Halcrow were called in by the Environment Agency and presented a range of options from building a new lock [£1.9m] to doing the absolute minimum [£670,000]. In October 2007 Roy Sutton and Tony Harrison (both well known to us for their sterling work on the North Walsham and Dilham Canal) inspected the lock along with Mike Palmer of the Waterways Recovery Group. From this a scheme was developed that volunteers from WRG could carry out parts of the work, hence reducing the overall cost considerably. Despite the WRG's tried and tested track record throughout the country, for reasons known only to itself in December 2008 the Environment Agency rejected the offer as "*not all the regulatory requirements would be satisfied by WRG at this*

time.” Having blocked the IWA-WRG approach, the EA appears to have no plan of its own to progress the situation and seems happy to keep the route closed despite this being a statutory navigation.

NENE: The Environment Agency used a very large crane over a six-week period to dredge silt from the river, starting near the Carlsberg factory and working down to the flyover carrying the A.45 road in Northampton. Instead of sending the silt to landfill it was put into barges and used build up the flood defences near the A.428 Bedford Road. Here a new 48-hour 40-yard long floating mooring has been established; it is accessed by a floating bridge, the scheme costing some £93,000. Meanwhile further downstream a substantial gravel shoal below White Mills Lock No 9 that had built up over many years has been dredged with the spoil being spread over nearby land.

Also in Northampton approval has been given to create a new marina in Becket’s Park with permanent moorings being established for more than 80 boats on what is currently a rundown and disused rowing lake. The plans, which would include a visitor centre and cafe built in the park, are estimated to cost some £3.3 million.

RIVER GIPPING TRUST: The Trust held its Second Annual General Meeting at its usual meeting place in the Community Centre at Needham Market on Friday 15 May. Meanwhile work continues at Baylham lock, albeit the weather over the winter months did not assist with high water levels at times. A start has been made on demolishing the eastern wall of the lock with the bricks being recovered and cleaned. There should be considerable progress this summer as several groups are coming to assist the on-going efforts of the local team that are led by Restoration Manager Colin Turner.

CHELMER & BLACKWATER NAVIGATION: Major repairs scheduled to be carried out to the isolated Stonehams Lock No 5 were delayed at the beginning of the year due to high water levels and flooding. Eventually work got under way in March when it was found that the whole upper section of the lock chamber wall – five courses thick – needed replacing and this involved having to transport an additional 5,000 bricks to the site in the work boat. In turn this delayed other work in the chamber. The programme included replacing both sets of lock gates, a new lock safety ladder recess, replacing bank edge piling below the lock and installing a longer landing stage. All this meant the lock was closed for somewhat longer than expected. This is the fourth major lock refurbishment that has been carried out since Essex Waterways Ltd took over from the Chelmer & Blackwater Navigation in November 2005.

RIVER BLYTH: The future management of Southwold’s historic harbour is starting to look a bit more secure as the Southwold Harbour Lands Trust has been set up to take over from Waveney District Council, which has run it since the 1970s, sometime next year. The harbour has been the subject of an ownership dispute for many years and there has been mounting concern about the need to carry out major repairs to the north dock walling that protects businesses, roads, a caravan park and marshes from flooding; the work could cost over £3 million. Sections of the wall collapsed in February and divers had to be sent down to inspect the rest of the structure. There is still some work to be done before the new trust can be formally constituted including obtaining the agreement from the Minister of Transport as set out in the 1933 Southwold Harbour Act of Parliament.

BROADS NOTES AND NEWS

CANTLEY SUGAR FACTORY: Despite strong opposition from various quarters including our Association, planning permission was given on Friday 6 February by the Broads Authority for a £35million extension to the riverside factory to enable it to process imported raw sugar from May 2010. This will involve running the factory through the normally closed summer months and will also involve a considerable number of daily lorry movements bringing the sugar cane from Great Yarmouth's outer harbour.

In a small concession to the opponents British Sugar has agreed to provide £5,000 towards a feasibility study into using barges to bring the cane to the factory, but given the company's known hostility to using the river, this could simply be regarded as a sop. And against this British Sugar has offered to contribute £100,000 for road safety improvements.

In an interesting twist, planning permission had to be given for a second time on Friday 3 April. This was because some residents of Cantley complained they were not notified of the date and venue of the first meeting at the Broads Authority's headquarters and hence had lost the chance to put their objections. A special meeting had to be arranged so that their voices could be heard, but the original decision was confirmed.

BROADS AUTHORITY'S BILL: After a protracted passage through Parliament the Bill should be receiving the Royal Assent any time now and become law. Up to the end of March the Bill had cost £397,959 but the final cost is likely to be in the region of £500,000. This will enable some of the key provisions, such as the licensing of hire boats and the requirement to have third party insurance, to be introduced in April 2010.

MILL RESTORATION: On Friday 17 April a new cap, crafted by volunteers and by the Broads Authority's millwright trainees, was craned onto the top of Hardley Mill, which stands beside the river Yare near Hardley village. The stocks and sails were added a few weeks later making the mill the only working drainage mill in South Norfolk. This restoration has been a 24-year labour of love for Norfolk born architect Peter Grix. With a group of committed friends he began restoring the mill, ploughing in over £100,000 of his own money and countless hours of voluntary labour. In 2005 "The Friends of Hardley Windmill" was formed and was granted £326,000 from LEADER+ Broads and Rivers Fund. With other grants, over £500,000 has been invested into this most worthwhile project.

Following on from this the five apprentice millwrights working under the Heritage Lottery supported scheme to combat the shortage of traditional skills are to spend their final year's training restoring the Grade II-listed Stubb Mill which is owned by the Norfolk Wildlife Trust on the Hickling National Nature Reserve. The five have gone through structured job training that has included brickwork, scaffolding, rope-access, lime-mortaring, boat-handling, timberwork, specialist painting, timber preservation techniques, metal work and wildlife conservation. They attend Easton College one day a week and much of the on-site training has been provided by Vincent Pargeter, a millwright from Essex, who will oversee the £50,000 Stubb Mill restoration.

REEDHAM FERRY: Early on the morning of 6 January the popular ferry that takes vehicles across the river Yare between Reedham and Norton was taken downstream, passing through Mutford lock and arriving at Newson's boatbuilding yard in Oulton Broad for servicing and repairs. During the several weeks it was away motorists had to make a

30-mile detour through Norwich or Great Yarmouth but the traffic is always at its quietest at this time of year. The vessel was built at the yard in the 1980s and returns there at regular intervals to maintain her in peak condition. She is operated by David Archer who also runs the Ferry Inn and the neighbouring touring park. His family moved to Reedham in 1949 to take over the pub and what was then a hand-hauled ferry. Today it can carry 16 tonnes, can accommodate three small cars for the short trip across the river and remains a unique and well used feature of the Broads.

MAY GURNEY & CO. LTD: This company, which is based at Trowse on the outskirts of Norwich, is well known to anyone connected with the Broads as for many years it used to perform much of the maintenance work, such as dredging, for the Broads Authority and its predecessors. It was not confined to the Norwich area – for instance it built the new lock at Willington on the Great Ouse in 1975/1976 and for many years it had an active depot at Great Horkesley, just outside Colchester. From April 2009 the company has been awarded a four year £20-million a year contract to maintain the 2,200-mile network of canals and rivers controlled by the British Waterways Board: This involves repairs to the locks, bridges, aqueducts, weirs, reservoirs, tunnels, towpaths, embankments and cuttings that make up the system.

24 HOUR MOORINGS: In April the Broads Authority issued draft plans aimed at gradually extending the number of 24-hour moorings on the network. At present it seems the Authority controls 52 such moorings, with 14 on both the Yare and Bure, 10 on the Ant, 9 on the Waveney and 5 on the Thurne, but other sites are provided, some informally, by various landowners. This is an on-going process, the last major review being in 2006 since when several new sites have been developed such as at St Beets Abbey on the Bure, Polkey's Mill on the Yare and North Cove on the Waveney. A wide variety of new sites has now been investigated and a scoring system has been devised to try and prioritise where action should be taken. These range from Berney Arms, Cantley and Brundall to Salhouse, Horsey and Barton. The development of new sites and work to maintain and improve existing ones can only be good news for boaters.

WHOLE VALLEY APPROACH: In January the Broads Authority launched a new initiative that is aimed to develop the distinctiveness of individual valleys. This will build on partnership activity, balance needs for recreation, conservation and tourism, increase understanding of the area, and bring funding together and strengthen funding bids. The Ant has been chosen for a pilot scheme and we have given our support to the project. This is an area where, hopefully, the North Walsham and Dilham Canal Trust will be able to get actively involved in view of what it has already achieved in its short existence to enhance the river.

ALBION: On 6 May the restored 111-year old Norfolk wherry ALBION was back on public display after major repairs over the winter to cure the deformity in her keel. The work was carried out at the Excelsior Yard on Lake Lothing and involved installing a steel keel in place of the hogged wooden one. This was a major operation with ALBION being slipped on 27 September and the old keel being removed in sections, the vessel then resting on a series of blocks. In a strictly controlled process it was allowed to settle gradually onto the new steel keel over a period of time curing the hog in the process. Whilst it may sound simple, it was a highly technical operation reflecting great credit on all those involved. The opportunity was taken to carry out other repairs, enabling ALBION to be re-launched at the

end of January. Over the past two years the Norfolk Wherry Trust has spend £70,000 on replacing the keel and rotting timbers and there is still further work to do.

JENSEN'S ISLAND: In May 2007 the Association objected to a proposal by the Broads Authority to fill in two navigable dykes at Jensen's Island, on Oulton Broad so that dredgings could be dumped in them. Despite this being contrary to one of the Authority's Local Plan policies and despite a number of objections, the Authority gave itself planning consent. Although the case had seemingly been lost, two objectors – one our long standing member Chris Groves – fought on and received advice from DEFRA about making a complaint about maladministration to the Ombudsman. This procedure was started and although the solicitor acting for the Authority claimed it was not illegal the Authority took advice from a QC and subsequently backed down. Apart from being illegal it would have been ridiculously expensive as it entailed piling across the ends of the dykes for just three weeks dredging. In the event the Authority announced it was tipping elsewhere and it was cheaper with the new site allowing four months dredging work.

Having said this, it has to be acknowledged that the Authority does have serious problems in making arrangements for tipping dredging, not just in the Oulton Broad area but in several other locations.

RIVER ANT: Thirty steel posts, which were installed as a temporary measure on bends of the river to mark the navigation channel between How Hill and Ant Mouth, have been replaced by yacht-friendly floating markers following concern from sailors. Eight posts were removed just before Easter and the rest the week after. The posts, which stood 6-feet above the high water level, were installed to warn boaters about the low banks created by flood defence work until the reed growth was restored. They were deemed to be a hazard for yachts particularly when running with the wind. The work was financed with help from the Broads Boat Hire Federation, several individual boatyards, the Broads Authority and Broadland Environmental Services Ltd, the company that is carrying out the major flood defence works on the Broads.

THE MUSEUM OF THE BROADS: The museum re-opened on Saturday 4 April after the usual winter recess and will remain open every day until 31 October – opening times are 10.30am to 5pm. The museum is well worth a visit to anyone at or near Stalham, where it is situated at The Poor Staithe, NR12 9DA, telephone 01692 581681.

Last November the museum won the *Eastern Daily Press's* "Tourism in Norfolk" award for the "Best Water-based Experience", the award being presented at the Hilton Hotel in Norwich. Meanwhile the appeal to purchase the museum building has attracted three substantial donations enabling no less than £35,000 to be paid off the mortgage.

During the winter the usual programme of repairs and improvements has been carried out by the museum's dedicated team of volunteers. The Discovery Room has several new exhibits and the displays have been rearranged to tell a more coherent story of the Broads. Meanwhile part of the building has been divided off to make a new archivist's area for the accessioning and documentation of artefacts. Thanks to a grant from the Renaissance Museum Development Fund sixteen new interpretation boards have been made and these now cover most of the boats and other displays. They now all have pictures as well as text, thus giving visitors to the museum a much better experience.

MAJOR PROGRESS ON THE SLEA

Kyme Bottom Lock, which is about 1¾-miles from the junction with the river Witham, was restored in 1988, allowing boats to navigate nearly a further 6 miles up to the tail of Cobblers Lock. Since then and despite make-shift repairs, with the general lack of funds it had fallen into a poor state of repair and was facing closure. In December 2007 the Lincolnshire Waterways Partnership came to the rescue and secured funds to enable the bottom mitre gates to be replaced, landing platforms to be installed upstream and downstream of the lock, safety ladders to be fitted in the chamber and stop plank grooves to be installed at the bottom end of the lock.

Work started in June 2008 when the old gates were lifted out and measured with a contract being awarded to Hargreaves Lock Gates of Halifax to build the new ones. The next problem was how to drain the lock. Whilst the guillotine gate provided a good seal at the top end, the bottom end would require some sort of dam – in 1988 sheet steel piles had been used just outside the lock gate recesses. The Black Sluice Internal Drainage Board had been appointed as the contractor and started work on 14 October, but it was found impossible to drive piles where the previous dam had been. Instead a 19½-yard long coffer dam had to be built across the river just beyond the wing walls which involved extra supporting beams and additional expense.

The dam was completed on 29 October enabling the chamber to be pumped out, although high water levels over-topped the barrier on two occasions. The lock safety ladders could now be installed, the vertical grooves being carved in the masonry using a specially designed diamond cutting rig. Likewise the stop planks grooves could be carved out downstream of the gate recesses and a timber bottom cill was installed onto which the planks would rest. Floating pontoons above and below the lock, have been provided accessed by bridges from the lock walls and a new gearbox has been provided for the guillotine gate reducing the large number of turns previously required to operate the gate.

Meanwhile navigation of the isolated stretch of water in Sleaford itself was largely prevented by a footbridge providing totally inadequate headroom. A design was drawn up for a lifting bridge and grants were secured from Lincolnshire County Council, the Eastern Regional Development Fund, the Landfill Communities Fund, the IWA and the Lincolnshire Waterways Partnership. This enabled a contract to be awarded to Britton Fabrications of Hucknall to manufacture the new structure. Meanwhile a water pipe that ran underneath the old bridge had to be diverted – by using a mole device to bore underneath the river – and an electricity cable had to be moved. The old bridge was lifted out on 5 November so that the new abutments could be constructed – this involved temporary dams along the sides of the river to allow the foundations to be excavated and concrete to be poured.

It was not until 29 December, just two days before the crucial funding deadline expired – that the parts for the new bridge arrived on two articulated lorries. This included a jig for the bridge to be assembled on to ensure all of the parts were in the correct alignment for a quick and accurate assembly. First the two ends were put into place to be followed by the lifting deck and then the four joining beams. The bridge was then lifted over some trees by a large crane into its position over the river. And finally the counterweight was hoisted into position to complete the basic structure. This just left the fitting of the lifting mechanism and making good the access walkways on either side to be completed in January.

NORTH WALSHAM AND DILHAM CANAL

Work parties on the canal have continued with a vengeance, often with two sessions being held in the month rather than just on the usual final Sunday. So far in 2009 the sessions have been (working up river) Honing Lock 26 April; Honing Staithe & Canal 29 March & 10 May; Dilham Islands 18 April; Briggate Mill Pond 25 January, 8 February & 14th June; Ebridge 22 February & 8 March and Bacton Wood 5 April & 31 May.

At Honing, where a new fence has been constructed alongside the public footpath, the lock sides have been strimmed and generally tidied up, a concrete obstruction on the west side at the head of the lock has been removed and several fallen trees were cleared from the channel upstream to improve the channel for canoeists.

At Honing Staithe Cut, Tom Moore and his splendid little digger has made a further clearance with the spoil being used to level the ground. Subsequently work was carried out to raise the section of the permissive path running from Weavers Way to the new footbridge as this was very boggy in places. Small branches and brash were used to form a floating base on which many barrow loads of soil were then deposited. On the canal downstream from the bridge the brash left over from last year's working parties has been tidied up and moved away from the water, much being piled up and used to provide shelters for small animals.

The Dilham Islands venture was a new one and was carried out for Mr James Patterson, the owner, to enable the site to be available for an Open Day on 24 May for the first time for many years. These islands form a unique local feature being surrounded by a series of man-made channels and they lie immediately to the south of the canal a short distance upstream of Honing Bridge. The work involved helping to clear some of the paths and removing obstructions from some of the channels.

At Briggate a further clearance of the mill pond was made with a major advance on at the February session as Dr. Tom Moore brought his digger along and this made a great impression, although the soft ground made access to some parts difficult. Meanwhile Norfolk County Council has at long last repaired the parapet wall on the bridge that carries Station Road over the tail of the lock. It was damaged by a vehicle many months ago but the road had to be closed for nearly a fortnight to allow the repairs to take place.

The sessions at Ebridge majored on clearing further lengths of the canal upstream of the lock, removing fallen trees obstructing the channel and generally improving access to the waterway. The work has led to the view from the road bridge upstream being dramatically improved. Unfortunately the water level above the lock is now kept low, with the sluice at the lock being permanently raised, and this is causing its own problems by encouraging rampant reed growth and consequent silting.

At Bacton Wood the lock area was cleared of natural overgrowth and the path from the bridge up to the lock was thoroughly cleared. The previous hazardous bridge – two narrow girders – has been rebuilt by Laurie Ashton, allowing access to the canal above the side-stream to the public footpath 19 that follows north along the west side of the canal from the lock. It is hoped to make this towpath from the bridge to the Lock, a “permissive path” at a later date.

The end of May session saw encouraging progress being made on rebuilding the upstream forebay of Bacton Wood lock, as shown in our picture.



The work party split into two groups each taking one of the wing walls to deal with. Their task was to remove bricks from the face of the wall and from behind, going back as far as solid foundations were reached. Full bricks that could be reused were cleaned and salvaged with broken ones being carted away in a dumper truck. The work extended back past the entrances to the paddle chambers and into the gate recesses. Some of the paddle gear was still in situ and this was carefully removed. This was all carried out to support the encouraging start that Laurie Ashton and his wife Julie and their bricklayer have made, as a preliminary step in their efforts to restore a head of water to the nearby water mill. The mill was restored to full working order some years ago, but the canal is currently dry, the water having been diverted further upstream.

WORK PARTY DATES: David Revill, our Work Party Leader, has set out the programme for the Sunday sessions from June to the end of the year.

28 June	Honing Staithe Cut	27 September	Bacton Wood Lock
12 July	Ebridge	11 October	Ebridge
26 July	Bacton Wood Lock	25 October	Ebridge
16 August	Honing Staithe Cut	15 November	Bacton Wood Lock
30 August	Brigate	29 November	Brigate
13 September	Honing Lock	13 December	Honing Staithe Cut

Sometimes due to circumstances beyond our control changes may have to be made to this schedule. Volunteers are asked to check with David (01603 738648) if in any doubt or if you wish for confirmation of any details.

The CLOSING DATE for copy for the October issue of “*The Easterling*” is WEDNESDAY 30 SEPTEMBER.