

BROAD SHEET



The swing bridge at Somerleyton

PHOTO BY MIKE PAGE

Network Rail's plan of action

The historic Broads swing bridges provide a vital link for boat users and rail passengers alike – but balancing the needs of the two is a tough challenge for Network Rail.

Following refurbishment and repairs to both Oulton Broad and Trowse bridges, the company has pledged a comprehensive review of the 100-year-old Reedham and Somerleyton swing bridges in a bid to improve reliability and further reduce disruption to river craft.

The company owns four swing bridges in the Broads – at Reedham, Somerleyton, Oulton Broad and Trowse - and is responsible for making sure they are safe and reliable for both rail and river users.

Andy Wheele, Network Rail's Senior Structures Management Engineer on the Anglia route said: "We acknowledge that our performance could have been better and apologise for any disruption or loss of

enjoyment this may have caused. The majority of disruption has been caused by our engineers carrying out essential maintenance works. Overall we have improved reliability compared to previous years but we are not satisfied with that and are planning to improve the situation further. In the meantime we have agreed to fund the provision of more lay-up pontoons which we hope will be of use to boaters in the event of any disruption."

Network Rail has fitted signs on the swing bridges to provide a contact telephone number so that in the event of any disruption boaters can make enquiries directly with Network Rail.

In addition Network Rail will issue an operational status report to the Broads Authority each morning. Site notices about bridge closures will be located near to or on the bridge.

Andy said: "I have worked in the rail industry for over thirty years, maintaining and renewing all types of structures.

The works we have carried out to the swing bridges in recent years have presented one of the most difficult challenges I have faced in that time. Maintaining the swing bridges requires involvement from all engineering disciplines. Combine that with running a reliable railway and providing navigation on demand and you start to see why this has been so challenging.

"Reedham, Somerleyton and Oulton Broad swing bridges fascinate me. The operating systems are amazing and when I am on site I never fail to be impressed by the sheer ingenuity of the people who built these structures. They were cleverly designed to operate without the brute force and technology that is available to us now but rely on use of clever (if not fickle) mechanical workings using relatively low forces and the laws of physics. When they are working properly, they are a delight to behold and whilst in need of cosmetic tidying, their silhouette graces the landscape as much as any windmill in my opinion.

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"Operational problems are not a new phenomenon. Our records suggest there were major issues and re-designs in the first decade or so of their existence. Our work over the last year has been like an engineer's equivalent of an archaeological dig, with tell-tale signs of unplanned adjustments and in-situ reworking.

"I suspect therefore that the reliability of these bridges has always been inconsistent and the electronic records we have available suggest we have improved reliability in recent years compared to many in the last decade. I recognise that this is little consolation for those who have been inconvenienced of late and I remain determined to improve this situation further.

"Unfortunately, the structural metalwork, mechanical and plant equipment requires a major overhaul from time to time and this is often in complete conflict with trying to keep the bridge operational for rail and river traffic.

"I often liken these swing bridges to a classic car. Both have lasting appeal due to their history and heritage. The reliability and handling of a classic car are unlikely to compare favourably to a modern car. The amount and frequency of routine maintenance may be quite onerous and inevitably the car will not be available for use. Where our swing bridges differ is that there is an expectation to keep the swing bridges available for service 365 days per year and understandably there is frustration from both rail and river users when one of our "classics" show their age and break down. Imagine trying to use a classic car as a working taxi 365 days per year!

"Network Rail appreciates the continued understanding and patience that the boating community has extended. Not least, the words of support and encouragement our workers have received from passing boat users."

Trowse

Trowse has recently returned to service following extensive repairs after its controls were damaged during a power surge. Network Rail have encountered some problems with minor electronic



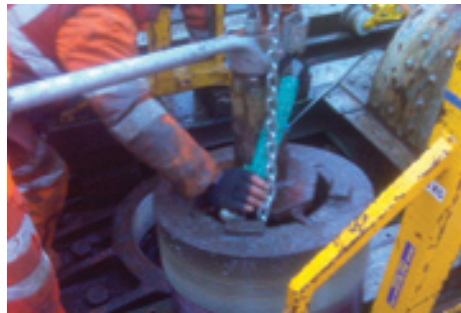
components failing following this long period of inaction but is confident these can be ironed out soon.

Due to the frequency of the train service, operation of this swing bridge is difficult to achieve without disrupting rail services.

Future plans for this bridge are limited to minor replacement of mechanical and electrical parts. There will also be the need to renew track support timbers. No significant disruption to navigation is therefore planned in the medium to long term.

Reedham and Somerleyton

Somerleyton has been the focus of Network Rail engineers' attention for the last few years, having carried out some very difficult steelwork repairs to prevent jamming of the bridge in hot weather. Those have been successful but unfortunately a further problem has been encountered with a track expansion jamming issue this year. A solution to this problem is being developed.



Bearing plug out - the main swing bearing sees the light of day for possibly the first time in 100 years

Andy Merritt, Network Rail's Senior Support Plant Engineer who manages the mechanical plant explains: "Over the last twelve months we have refurbished the main swing bearing and replaced the carriageway wheels and wheel bearings on which the bridge rotates. This was a pre-emptive action to avoid an undetected catastrophic failure at some time in the future. We knew our knowledge and understanding of this component was incomplete and knew we might be opening up a can of worms but after sharing these concerns with the Broads Authority and representation from the Broads users group we decided the pros outweighed the cons and took on the challenge.

"Despite our best efforts and extensive pre-project and contingency planning we had endless unforeseen problems emerge during the works. I am pleased we have now got a chance to catch our breath and reflect before we decide on the long term future of these bridges."

Over the next six months a comprehensive review of Reedham and Somerleyton swing bridges will take place. John Halsall, Network Rail's Director of Building & Civil Engineering says: "Once we have carried out the review, we will have a much clearer understanding of the whole-life maintenance options available to us. We will understand better how much each option will cost and what performance states we can expect with each option. We will then be able to consult with relevant stakeholders and make the right decision about how we maintain these assets.

"This October we expect to be carrying out further essential maintenance and repairs required to maintain safety and reliability. We will be consulting the Broads Authority and will advertise details of any navigation disruption via the local press and by bill board on the affected river itself."

Oulton Broad

Oulton Broad swing bridge received a major refurbishment in 2008. The structural elements were grit blasted, strengthened and painted. An innovative solution to rail expansion problems was introduced to prevent problems with jamming. The "embedded rail" system sets the rails in troughs rather than, traditionally, on sleepers.



Oulton Broad requires further work on the mechanical operation elements (wheels, wedges, winches and jacks). Network Rail also needs to carry out some minor steel work repairs to structural elements of the bridge which were unable to be carried out during the general refurbishment. Refurbishment of the central swing bearing will be considered once we have learned all we can from Somerleyton.

Once again Network Rail thanks you for your patience and support whilst this programme of improvements is delivered.

Trowse Bridge is open five times a day, go to <http://www.broads-authority.gov.uk/boating/navigating.html>

To arrange an opening of Carrow Bridge please contact Broads Control on: 01603 756056

Broads Authority awarded £800,000 for Dredging



Funded by



The island re-creation takes shape as reed starts to populate the disposed sediment

The Broads Authority has been awarded around £800,000 from the European Regional Development Fund to develop innovative dredging solutions for the management of the waterways.

The project, which is called PRISMA (Promoting Integrated Sediment

Management), involves working with Dutch, Belgian and French partners and will help to deliver planned projects highlighted in the Authority's Sediment Management Strategy.

Three of the key projects in the Broads are the extension of the island creation scheme in Duck Broad, dredging the River Bure between Salhouse and Wroxham Broad and using the sediment to reinstate

a bank lost to erosion at the entrance to Salhouse Broad and building a new mud wherry.

Trudi Wakelin, Operations Director, said: "One of the biggest obstacles to dredging of the rivers and Broads is the lack of available sites to dispose of the sediment. We plan to use the fund to develop disposal opportunities across the Broads which will enable us to benefit areas which haven't been dredged in recent years.

"We hope to start extending Duck Island next winter, subject to getting planning permission and Natural England's consent. Our trial project this year to rebuild an area lost by erosion using gabion baskets and geotextile bags appears to have been very successful. This funding will help pay for the construction of a larger island, again using dredged material from the channel leading into Hickling Broad called Heigham Sound.

"Our old mud wherries which are used to carry sediment to the disposal sites were inherited from May Gurney and are rather old. This funding will also help pay for the building of a new vessel, the first of its type in the Broads for many years."

Would you like to become a member of the Navigation Committee?

The Broads Authority is inviting applications for membership of its Navigation Committee.

Eight places are available for members appointed by the Authority after consultation with a range of interests.

The Navigation Committee plays an important role in advising the Authority on its navigation responsibilities and scrutinizing its work. It normally meets six times a year. Two committee members are also appointed to sit on the Broads Authority.

Full information about the application process can be found on the Authority's website, with interviews scheduled to take place in July. The interview selection panel will include the Chair of the Government's advisory body on navigation, leaders from national and local boating organisations and the Chair of the Broads Authority. The appointments will be confirmed in September and are for a three year term. Existing members are eligible to reapply.

Please send applications to:
Broads Authority, Dragonfly House,
2 Gilders Way, Norwich NR3 1UB
by 17 June 2011, 5pm.

New Safety Campaign is Launched

The Broads Authority has launched this year's safety campaign to encourage boaters to take care by the water's edge and drink responsibly – if at all.

The "Stay Alert" campaign continues the message of previous years that one of the biggest dangers on the water comes when getting on and off a boat. Unsuitable footwear and not wearing a lifejacket are also contributors to the chances of a serious accident occurring.

As the summer season fast approaches two eye-catching new posters will be appearing in pubs, yacht stations and other venues around the Broads to highlight the importance of safety on the water.

Wind-up LED torches will be on sale again at just £1 each in the Broads Authority's yacht stations in Norwich, Great Yarmouth and Reedham as well as the visitor information centres at Hoveton, How Hill and Whitlingham to help people embark and disembark safely at night.

Steve Birtles, Head of Safety Management said: "Most reported injuries are caused when people are getting on and off boats. Too often they think it's OK to jump when in fact it's very dangerous. Wooden moorings and boats are often damp and slippery with ropes and other trip hazards and the big danger is of falling between your boat and the quay."

Super Safety Days are also being held throughout the Broads again this summer to offer advice and guidance on a variety of safety issues including the safe storage of fuel and portable gas appliances.



Broad Sheet online

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Broads rangers combine skills for better service

All Broads rangers will now be trained in navigation skills including launch handling, knowledge of legislation, enforcement and pollution control as well as countryside management skills such as brush cutting, chain saw handling and footpath legislation.

Head of Ranger Services, Adrian Vernon said: "By the end of the season we will have rangers sharing responsibilities for both land and water who are able to cover for each other in times of emergencies and sickness. It will give us much more flexibility and makes perfect sense as many of our rangers already possess the full range of skills."

Sixteen rangers will be responsible for five areas in the Broads – Wroxham and Ant, Lower Bure/Thurne, Yare and Whitlingham Country Park, Waveney and Breydon Water.

The Authority's 100 trained ranger volunteers are also taking on a combined role on both land and water.

Broads Control: 01603 756056



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Eilish Rothney



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Robin Allard



Joan Dehre



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Steve Williams



Andy Bartlett



Andy Cullum



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