



GLOUCESTER & SHARPNESS CANAL REMOTE-CONTROLLED BRIDGES

Report on the Public Consultation March-June 2015

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Introduction

This is a report of the public consultation on the Trust's plans to change the operation of its bridges on the Gloucester & Sharpness Canal from keeper-operated to remote-controlled via an app on the boater's smart-phone or a new Bridge Control Centre. The public consultation ran from 19th March to 30th June 2015.

This report summarises the plans for remote-controlled bridges, the feedback from the public consultation, the Trust's response to the issues raised, our conclusions and next steps.

Summary of the Trust's plans for remote-controlled bridge operation

Currently we employ 12 permanent and 18 seasonal staff to operate 14 bridges on the G&S canal. They have to be on site regardless of whether their bridge needs opening or not. Annual staff costs are excessive so we restrict daily opening hours and close 2 days a week in winter.

The plans include lasers, enhanced controls and monitoring equipment, CCTV, speakers and intercom at each bridge, along with automated road barriers and traffic controls including lights and alarms, similar to a railway level crossing. Five bridges would be upgraded from manual to automated operation, reducing waiting times for both road users and canal users. A new Bridge Control Centre would oversee the bridges, providing a single point of contact for highways, emergency services and the public. The overall cost is in the region of £4.5 million. Bridges would be operated in one of two ways:

1. The boater triggers a sequence via an app on their smart phone or tablet (provided there are no opening restrictions in force). The boater can't intervene in the sequence or leave a bridge open. Only licence-holders can download the app which uses our Wi-Fi, not a mobile phone signal.
2. The Bridge Control Centre operates the bridge if contacted by a boater (by phone, VHF radio or bridge intercom point).

Bridges could be held to allow emergency vehicles to pass and to ease road traffic jams. Current restrictions on opening times would remain e.g. road traffic peaks. Other local protocols such as maximum bridge opening duration and bridge operations per hour would be developed with advisory groups for each bridge, comprising representatives of local residents/road users, canal users and Gloucestershire County Council (highways), drawing on feedback from the consultation.

Installation at each bridge would include trials with staff in situ until we were fully satisfied. In the unlikely event of a power, laser or software failure, staff could manually swing a bridge. The new system also enables better detection and diagnosis of most faults. The system meets national safety standards and the technology has been trialled at Sandfield Bridge, with 4,500 successful bridge openings in 7 months, via the app on the bridge-keeper's smart phone.

The benefits of the new system include significant cost savings for the Trust of c. £500,000 a year. The new control centre would improve our overall management of the canal and provide a single point of contact for bridge users and emergency services. The canal could open for 7 days a week all year round and longer hours daily, depending on feedback, which could improve boating access and boost the potential for canal side businesses.

Some bridge-keepers could relocate to the new Bridge Control Centre; some would be in the core maintenance team or mobilised to respond to issues. We also have a growing number of volunteers who provide a friendly presence on the canal and help improve our waterways.

Sandfield Bridge has funding to become fully remote-controlled later next year after further trials. The remaining bridges could be converted to remote-control in two phases (first phase: bridges north of Sandfield; second phase: bridges south of Sandfield) over one or two years but this is still subject to a decision and funding approval from the Trust.

Full information and FAQs are at www.canalrivertrust.org.uk/gsbbridges.

Public consultation programme

The programme started on 19 March 2015 supported by a press release, posters and flyers. Elements of the programme included:

- A dedicated web page with full details and regularly updated FAQs at www.canalrivertrust.org.uk/gsbridges
- Display panels, info booklets and questionnaires at the Cotswold Canals Visitor Centre, Saul
- Cards and flyers were handed out by staff and stake-holders
- 1,035 local homes and businesses were leafleted
- 1,017 boaters and 224 canal stake-holders were emailed
- Focus group meetings were held with representatives from highways and emergency services, 23 local councillors (representing residents, businesses and road users), boaters, boating trade, rowers and farmers
- Individual meetings were held with people who have a specific use of a bridge including Slimbridge Wetland Centre, Berkeley Estates, local farmers and residents at Cambridge Arms Bridge and Purton Bridges.
- Public drop-in sessions on 14th and 16th May saw 80 local people talk to our operational and technical staff
- Online survey ran from 1st to 30th June which received 395 responses (roughly evenly split between canal and road users)
- The first Sandfield Bridge Advisory Group (with councillors, boaters, Gloucestershire County Council (highways) and our operational staff) met on 15 May to discuss operating protocols and traffic issues
- Several parish councils, the county councillor, district councillor and local MP have also been corresponding with us
- Presentations have been made to the Trust's national boating groups



Website



Display panels at Cotswold Canals Visitor Centre, Saul

Feedback from the public consultation – summary of the main points raised

This section provides a summary of the main points raised at different stages of the consultation; click on the blue underlined group name for a link to view the particular meeting note online.

The over-riding themes from the consultation are discussed in full in the next section.

Focus group meetings

- [Highways and Emergency Services](#) – the seven representatives robustly questioned the project team about the system, procedures, resilience/security, contingencies, emergency service priority etc. They were generally satisfied, concluding that “there were many positives.”
- [Boaters and marinas](#) – overall the seven representatives were very supportive since it could increase canal opening hours; they were happy with the alternatives to operation by smart device. They raised a range of practical/system issues that could be addressed, stressed the need for careful planning at Saul Junction and emphasised the need for boater info/education. They were saddened by the potential loss of staff.
- [Boating trade](#) – overall the nine representatives were positive. They focussed on a number of operational issues such as procedures for large craft and communication with the control centre. They raised concerns about canal traffic light protocol. They also highlighted Saul Junction as a potential problem area and were also saddened by the potential loss of staff.
- [Local councillors](#) representing resident communities – 23 councillors from the main parishes/wards affected asked questions about the bridge opening sequence, timings, emergency service priority, project costs and risk assessments. They raised major concern at losing the on-site presence of bridge-keepers who they saw as providing intervention/decisions in road traffic management. They also said that bridge closures exacerbate congestion caused by poorly designed road approaches and unauthorised parking, and that the control centre will not be able to manage these problems, particularly if cameras do not cover road approaches. There were strong objections from some councillors who said that boating for leisure should not take priority over residents’ essential need for road access. There was agreement to establishing advisory groups for each bridge to review protocols. Letters were also received from the parish councils of Elmore, Arlingham, Longney and Epney, plus Neil Carmichael, MP, reiterating the main concerns.
- [Rowers and canoeists](#) – the meeting with four representatives was very positive. They welcomed a proposed new canal traffic light operation for the new system which boaters had developed with us (clearly the rowers don’t need the bridges opening but want to be sure it is safe to proceed under a bridge).

Individual meetings were held with a number of people/organisations who have a specific use of a bridge e.g.

Slimbridge Wetland Centre – they stressed how the plans could impact on their livelihood but were more accepting of the plans provided there would be close liaison and support at peak/problem times. A [meeting with farmers](#) and the National Farmers Union highlighted the needs of several farmers including the movement of large convoys at certain times, harvesting during bridge ‘out of hours’ times and current road traffic problems with narrow road approaches and blocked farm exits. A [meeting with 22 residents at Purton](#) heard of current frustrations with the bridge openings, the role of the bridge-keeper, the need for emergency priority and issues to be considered when the advisory group looks at protocols. We have also met with the Cotswold Canals Trust, Gloucestershire College, Berkeley Estates and several local residents.

Staff meetings have been with those potentially affected by the proposals

The Trust’s Navigation Advisory Group and National Boating Forum have also been consulted

[Public drop-in sessions](#) saw approximately 80 local residents and boaters talk to operational and technical staff who answered many questions and clarified the proposed system. We listened to specific concerns, mostly from residents around the loss of bridge-keepers who they saw as providing road traffic management, the potential worsening of current congestion, traffic management generally and for road users to take priority over canal leisure users. People also wanted reassurance that the control centre would be located on the G&S Canal. Suggestions included highways and parking improvements, retaining bridge-keepers at the busier bridges, retaining current embargos, CCTV on road approaches and suggestions about the bridge operating procedure. We talked at length to some of the residents at Fretherne Bridge and several local councillors. Boaters queried canal traffic light procedures, Wifi signal, usability of the app and highlighted Saul Junction as a potential problem area.

The first [Sandfield Bridge Advisory Group](#) (comprising councillors, boaters, Gloucestershire County Council (highways) and our operational staff) met to discuss operating protocols for the bridge. It was decided that more data and analysis were needed for the protocols and the group focussed on a range of potential road traffic improvements. Members accepted the principle of remote-control but wanted a plan in place to tackle road traffic congestion which takes account of future increases on the road and canal. The group developed a scale of potential improvements.

[An online survey](#) from 1st to 30th June received 395 responses; 191 from canal users and 204 from road users.

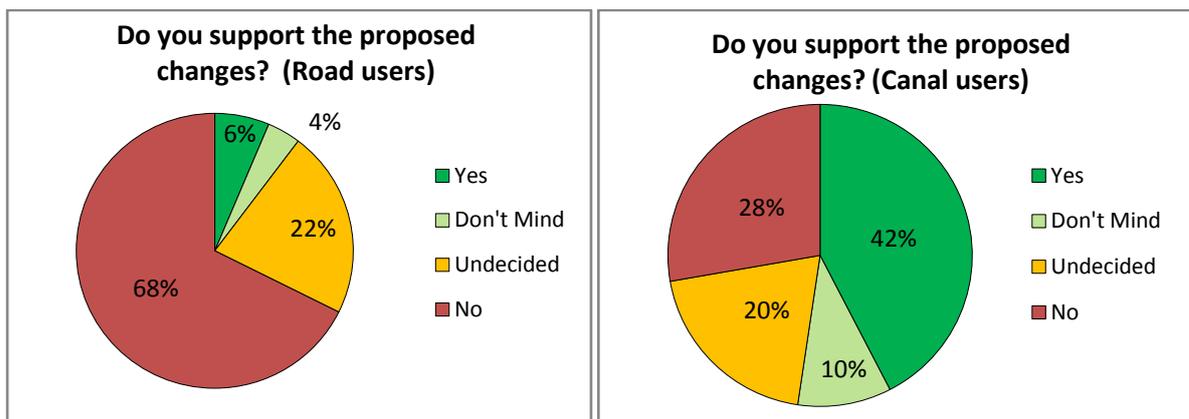
- Of the 395 respondents, 48% (191) do not support the proposed changes, with 31% (121) either supporting or not minding the changes and a further 21% (83) undecided.
- **Do not support:** 68% of road users and 28% of canal users
- **Support / don't mind:** 52% of canal users and 10% of road users
- **Key themes:** negativity about losing the bridge keepers with their helpful presence; concerns from road users about a worsening of current traffic congestion which they believe is currently managed by the keepers and a perception that boaters would have unlimited control of the bridges; support from canal users with the potential to extend canal opening times; general concern about the reliance on technology and management of / response to breakdowns; road users' views that boaters' leisure use should not take priority over residents' essential road use; safeguarding access for emergency vehicles; support from some for the Trust's efficiencies/cost savings vs. concerns and scrutiny of costs from others; boaters' concerns about levels of smart device ownership and reliability; general safety concerns; views that the character of the canal would be changed with the use of technology and/or loss of bridge-keepers; views of boaters that management/operation of the canal would be improved but others had concerns about potential canal congestion or priorities; queries and comments about the bridge opening procedure and, finally, doubts about how well the plans had been tested or thought through.
- **Suggestions for general operating protocols** centred around priorities, restrictions on times when the bridges were available for operation (including suggestions of allotted times), limits to the duration of each bridge opening for boaters, limits to the frequency of bridge openings for boats (and also intervals between these openings) and limits to the number of boats passing through a bridge in one opening.
- **Smartphone or tablet ownership** among boater respondents was 60%. 37% had a standard mobile and 33% had VHF. (Some had more than one means.) Only 7% had no means of communication.
- **App for road users:** 38% of respondents were interested in an app to check the status of each bridge, with a further 16% undecided.
- **Extended daily operating hours** had the support of 84% of boaters for either year round (44%) or just in the main season (40%). 50% of respondents would not use the bridges before 8:00 am. Demand for extending hours until dusk was 51%. 47% would cruise more often in winter if the canal was open 7 days a week; 53% would not. 64% of road users were opposed to the suggestion of extended opening hours.

Support vs. opposition

The plans received 'in principle' support from representatives at the focus groups of highways and emergency services, boaters, boating trade and rowers. In contrast there were concerns raised and objections made by some attendees at the focus group for councillors (representing local residents and businesses).

At the drop-ins we found that once people understood the plans better and realised that many of their concerns had already, or could be, addressed their opposition lessened or they supported the proposals. This included some councillors, residents and boaters. In some cases, their support was subject to the Trust resolving specific concerns.

From the online survey, 48% do not support the proposals, with 31% either supporting or not minding the changes and a further 21% undecided. Views between road users and canal users were understandably polarised as shown below.



Whilst we accept that the survey showed a high level of opposition from road users, we did note that some of the reasons given for opposition were based on incorrect assumptions. For example of the 138 road users who were opposed to the plans, 34 people stated that boaters would have control of the bridges, many believing it would be unlimited, that bridges could be opened on demand and therefore would be opened more frequently. However we had stated from the outset that protocols would be implemented to limit use when necessary. 35 people believed that there would not be sufficient priority or access for emergency services when we had stated that the bridge control centre would provide a single point of contact for emergency services and bridges could immediately held to give them priority.

In summary there were, understandably, mixed and sometimes opposing views. We have explored the issues in depth, discussing them directly with road users and canal users, and within our own project team and specialists. Below we discuss the issues most commonly raised by supporters and objectors, and provide a response, in most cases setting out how we believe the issues can be addressed.

Key issues with our consideration and response

Loss of the bridge-keeper's presence

Issue: Bridge-keepers are well-liked for their friendly, helpful, presence, providing information and security. (Their role in relation to road traffic management is discussed in the next section.)

The Trust's view: We know people value our bridge-keepers but the current set-up is an inefficient way of working and extremely costly for the Trust. Decisions to make changes like this are not taken lightly as we fully understand the impacts they can have for people, and on our staff, but we have a responsibility to operate as efficiently as possible.

Currently, the bridge-keepers are onsite regardless of whether their bridge needs opening or not – in quieter months they may only open a bridge a few times a day. The opportunity for them to do other work is limited since they must stay near their bridge, look out onto the canal and be ready to operate it.

The Gloucester & Sharpness Canal is unusual compared to most other canals on the network which do not have staff permanently located out on site. Clearly the current set-up requires them to be at the bridges and the public benefits from their presence and personal touch which may go beyond their remit in some cases. Many people also talked about them providing safety for the public (e.g. life-saving, single-women walkers, horse riders crossing the bridges) and maintaining and fixing the bridges. However these were incorrect assumptions and have never been part of the bridge-keepers role or the Trust's duties. We are however committed to increasing our numbers of volunteers to provide canal-related information and advice to all canal users.

Priorities and protocols

Issue: Many road users said that boating for leisure should not take priority over residents' essential need for road access. People have also said that road access for emergency vehicles should be safeguarded; other 'non blue light' urgencies and exceptional road traffic movements should be given some priority or at least well managed.

The Trust's view: The Trust and most canal users understand how essential the bridges are for residents' access to and from their communities on a daily basis. Since the bridges are closed to canal traffic by default, this gives general priority to road users. We have stated from the outset that the boaters' use of the app sends a request to the operating system for the bridge to be opened as they approach the bridge – the system would deny the request if any limits were in place; a boater cannot repeatedly open the bridge or any other bridge; the app can only be downloaded by our licence holders and there is minimal potential for misuse (which could be traced to individuals whose app could be disabled).

Where necessary protocols for each highway bridge would be developed using canal and road traffic data (which has now been procured from Gloucestershire County Council along with suggestions provided during the survey; these protocols would be agreed, regularly reviewed and refined by advisory groups comprising councillor, canal and highway representatives. Protocols could, for example, give road users more priority and time during busy periods, set limits on the number and duration of bridge openings to boats (and number of boats that can pass through) and switching to a longer period of road priority after a road queue has built up. Any boats 'jumping' a red canal light when a bridge is closing could be identified and, if they persist, their app disabled. We believe that these protocols would develop reasonable restrictions and limits where necessary. Over 150 people commented on protocols in the online survey alone which provides a good source of ideas.

We have stated from the outset that once alerted to an emergency our staff in the control centre would be able to instantly control bridges so they stay in position for emergency vehicles to cross. If necessary they could be held until the return crossing has been made. The Bridge Control Centre provides a single point of contact for emergency services; there would be a dedicated phone line. This was welcomed by the different emergency services and is more reliable than currently where the emergency services call ahead to one of the 14 individual bridges.

People could also phone the control centre (the public number will be widely available) or contact them via the intercom to request a road bridge to be held for other urgent cases such as a vet on an emergency call to a farm or a patient being rushed to the doctors. We would need to consider the best place for locating the intercom at each bridge but it has been suggested that it is on the 'island' side for residents needing to get off the 'island' in an emergency but we also need to consider boaters' use.

We would also be happy to make arrangements to hold bridges for exceptional road or canal movements such as farm machinery convoys, large lorries servicing businesses across the bridges, cattle crossing or boat flotillas; close liaison will be needed to ensure the bridge is held for the minimum duration and we could use the app to notify people of these exceptions.

Management of road traffic queues

Issue: Bridge-keepers are seen as managing road traffic build-ups which some people believe may not be managed effectively by the system, protocols and new bridge control room. Some people have also expressed concerns that CCTV will not provide views of the road approaches to aid dispersal of road traffic queues.

The Trust's view: It is important for people to understand that our bridge-keepers' role doesn't include road traffic management – they don't have the authority and aren't trained or qualified. Whilst they may sometimes 'choose their moment' to operate the bridge, decisions are made on an ad hoc basis and not always to the advantage of road users. On some bridges they don't have a good line of sight for both road approaches. Our staff have told us they don't do it every day, they may intervene unofficially on busier days, don't like doing it and the public perception of their traffic management may be greater than it actually is.

It should be noted that we do not have a bridge-keeper at Sandfield Bridge between November and March each year – the bridge is operated remotely by the keeper at Saul Junction without detriment to road or canal traffic.

We accept that the opening of bridges for canal traffic (i.e. closures to road traffic) can cause vehicle build-ups and fully appreciate the desire to minimise them. To do this we have a number of measures planned which can be built into the bridge opening system such as minimising the app's trigger distance from the bridge and protocols which set rules for bridge openings to boats (explained in the section above).

We are still considering the request for us to have CCTV coverage of the road approaches at the busier roads for the dispersal of road queues. This is a complex issue since it would effectively require us to intervene in road traffic management (discussed above) and requires the system to continuously take account of the prevailing road traffic conditions before determining whether to accept the next boater's request to open the bridge. To do this requires constant monitoring of the road approaches followed by either system or staff intervention. This has an impact on staffing levels and added costs of a system capable of transmitting CCTV images to the bridge control room.

We are not saying that we would not endeavour to react to traffic build up at bridges. We will assess the pros and cons of CCTV along with other methods such as induction loops, protocols etc. and are also talking to Gloucestershire County Council (highways). We also hope that road traffic measures can be introduced such as restricting parking on bridge approach roads to ease queue dispersal.

It should be noted that the proposed system is the one currently used at all of our automated bridges nationally (including those on far busier roads than the G&S Canal).

Current road traffic problems

Issue: Road traffic is already congested around the busier bridge approaches, with unauthorised parking obstructing the roads and making traffic queues difficult to clear; there is poor or blocked access onto the roads at some bridges and insufficient parking spaces generally. There are also concerns about highway safety and insufficient traffic control measures, for example blind bends, lack of advance warnings and road hatching etc. Some people would be more likely to accept the remote-control proposals if these issues could be addressed.

The Trust's view: It is important to clarify that our responsibilities do not extend to highways control or improvements on the road approaches leading to the bridges, although we realise they are problematic. We are responsible for the measures to control traffic on the bridge i.e. klaxons, barriers and lights. We believe there should be plans for improvements to traffic control on the road approaches and at the bridges. In fact, plans should be developed whether the proposals go ahead or not.

A range of suggestions were made during the consultation and at the first Advisory Group for Sandfield Bridge. We will work with Gloucestershire County Council (highways) and the parish councils to collaborate on potential improvements. It must be recognised that delivering broader highways improvements is beyond our remit but we will identify what we can do with land in our ownership and explore any potential funding sources.

There is no reason for traffic congestion to worsen by switching bridges to remote-control since the new system would simply replace the procedure operated by the bridge-keeper. The automated system would not show any favouritism to boater or driver and operation times should be more consistent and repeatable. Protocols would also be developed to apply fair limits on openings to boats where necessary and can be adjusted in the longer run should boating traffic increase.

Gloucestershire County Council (highways) have confirmed that they are responsible for the surface over highway bridges and are responsible for gritting the bridge deck and road approaches during icy conditions.



Road approach to Sandfield Bridge showing obstructed passing space



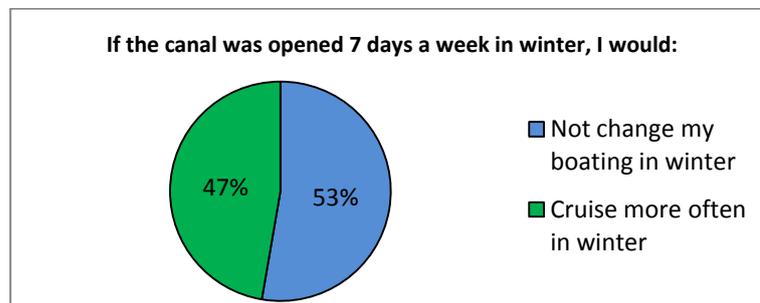
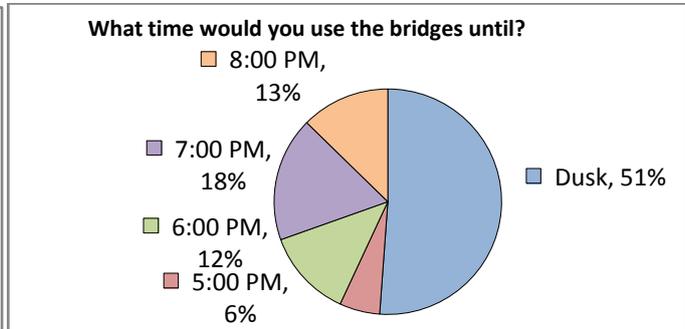
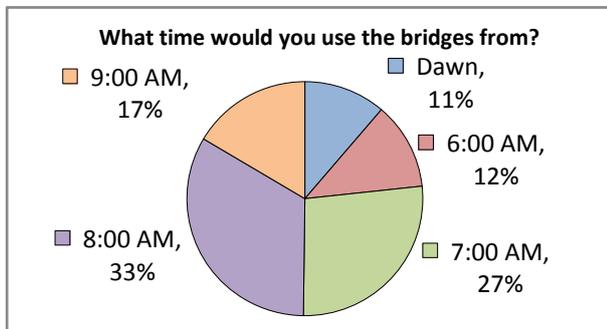
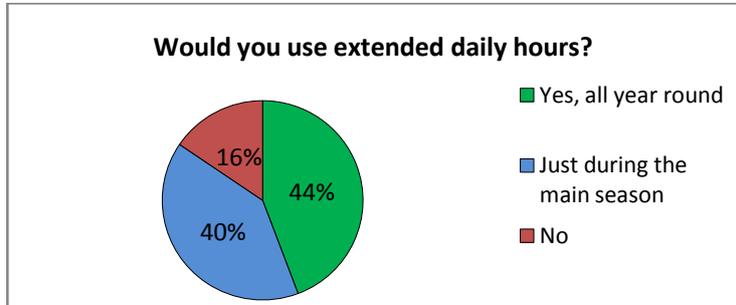
Track along canal showing very difficult left turn onto main road and Sandfield Bridge



Sandfield Bridge showing poor sight of oncoming vehicles over the bridge, no hatching and adjoining track junction on left

Extending the canal opening times

Issue: Canal users strongly supported extended canal opening times, 44% year round and an additional 44% during the main boating season (therefore 84% would use extended hours in the main boating season). 51% wanted canal availability until dusk; 50% of respondents would use the bridges from 8am or later; 27% from 7am. Approximately half would boat more in winter if the canal was open 7 days a week. 64% of road users were opposed to the suggestion of extended opening hours. Several farmers use the 'closed hours' i.e. early in the morning/ later evening to cross bridges for harvesting etc.



The Trust's view: The current limits on navigation availability on the G&S Canal are an exception on our canal network; the great majority of canals are open all hours and all year round (except for planned or emergency repair works). The limits are a major cause of frustration for boaters, boat traders and canal businesses. We also believe that extending the hours would provide potential tourism and local economic benefits. On the other hand we recognise that the limits provide a welcome relief for some road users from road traffic congestion.

The feedback has shown that there is a strong desire from boaters (84%) to extend summer opening times and a reasonable demand (53%) to open 7 days a week year round (i.e. not closed for 2 days in winter). We would trial extended hours on a pattern of 8am to 8pm in the main summer months; reducing to 7pm and 6pm as the summer ends and then 8am to 4pm from November through February (7 days a week). Any protocols or embargoes would of course stand within these hours. Changes would be gradually phased in and only once several bridges had been satisfactorily switched to remote-control. We would carefully monitor the impact on bridge openings.

We would be happy to consider occasional opening embargos early in the morning/ later evening when farmers are undertaking major works such as harvesting and need to cross a particular road bridge multiple times in a short space of time which we would be able to notify to boaters via the app.

Safety, resilience, security, breakdowns

Issue: General concerns were raised about whether the system was safe for road and canal users, along with the reliability and resilience of the software, security from hackers, contingencies for breakdowns and level of testing. People wanted more information on response times to repairs.

The Trust's view: Safety of all users is of paramount importance to us and we have undertaken considerable assessments to get to this stage. The laser technology (i.e. the lasers which detect obstructions and identify when it is clear to lower barriers and open the bridge) is a tried and tested system successfully being used at 49 Network Rail crossings. Our website and summary leaflet, which can be downloaded, explain more about how the lasers are protected and what happens if people or vehicles are detected when the system needs to open/close the bridge. Vandalism on the canal is extremely rare currently and the CCTV would enhance surveillance and act as a deterrent. Risk assessments have been undertaken and would be reviewed regularly before and after installation at each bridge.

The Wifi is a closed system so there is less chance of it being hacked and it has been specified to high security standards. Each bridge would have its own individual Wifi and control system so any problems would not affect other bridges. In the unlikely event that a bridge Wifi or software was unable to function, we would send our staff to operate the bridge manually. The new system would also enable better detection and diagnosis of most faults through the Trust's existing SCADA system (which is used to remotely monitor our other structures such as weirs and sluices). It should be noted that our current bridge-keepers are not qualified to undertake mechanical and electrical repairs so breakdowns with the new system would be dealt with as they are now, by a mobile diagnostic and repair crew.

We have also trialled the system with 4,500 bridge movements in 7 months at Sandfield Bridge. Each additional installation would be phased in and rigorously tested. We would only withdraw the bridge-keeper once we were fully satisfied with the remote-controlled process including the software at each bridge.

The CCTV would be recording bridges 24/7 (but screens will not be monitored 24/7) so that footage could be replayed if there is an incident. Our plans do not currently include vehicle registration plate recognition or good quality recording in the dark but we would be happy to enable this should funding be made available.

Bridge opening procedure for canal users

Issue: Some canal users believed that management/operation of the canal would be improved or that boating would be better, for example, more efficient bridge opening, convenience and ease of navigation, resolving incidents where bridge keepers fail to notice boats waiting to get through, the role of the control centre, checking licence payments etc.

A number of queries/concerns were raised and suggestions made by canal users about the operating procedure such as canal traffic lights, how it would work with several boats, which boats have right of way, the 'trigger point' for the app, concerns about controlling a boat whilst waiting in windy conditions and the need for mooring places whilst waiting.

The Trust's view: The biggest concern was the traffic light procedure (and which boats have priority when approaching in opposite directions) so our operational and safety staff developed a potential new system with a group of boaters to everyone's satisfaction. This new system also met with approval from rowing and canoeing representatives.

The app would provide users with the air draft of an upcoming bridge so they can select "proceed without bridge opening" which would switch the canal traffic light on other side to red and holds any boats in the opposite direction.

We agree with road and canal users that the time a bridge is held open before a boat passes through should be minimised. Whilst it can be set up to 400m away, a better 'trigger' distance would be closer to 150m to 200m. We would consider installing signs at the trigger point; the app can be used any time past this point.

Holding a boat steady in windy conditions whilst waiting for a bridge to open could happen now and the new system should not have any effect on this; priority cannot be given to boats with the wind behind them and boaters would need to allow safe stopping distance as currently.

We would develop a modified version of the app for exceptionally large vessels to give them priority when they make a request to open a bridge, provided that a smaller boat in the opposite direction has not made a prior request and been given a green light to proceed. These boats can also keep in touch with the control centre who may also manage priorities at bridges to enable their priority passage where appropriate.

In relation to providing suitable tying up places near bridges for boaters who have to wait for a green light, we will review where this is needed and what is appropriate.

Various other individual points made in the consultation have been logged and will be considered in development of the app and operating procedure/sequence.



Traffic light procedure meeting with the Trust's operational and safety staff, Cotswold Canals Trust (who operate trip boats) and English Holiday Cruises aboard their vessel the Edward Elgar

Smart devices and the app

Issue: Whilst many boaters were happy to use the app on a smart device, others believed smart device ownership and app usage might be limited among older boaters. Others raised concerns about using their device, for example in the rain or bright sun, whilst boating, not being able to charge the battery and as a single handed boater etc. Some boaters were happy with the alternatives of phone, VHF and intercom for contacting the control centre although mobile phone communications could be unreliable on the canal. Queries were also raised by the boating trade about the app download by their customers and mobile data usage.

The Trust's view: Of the 191 boaters who responded to the online survey, 60% have a smart-phone or tablet. 37% had a standard mobile and 33% had VHF. (Some had more than one means.) It also shows that only 7% have no means of communication on their boat and would need to use the intercom points.

We believe the app would provide a quick, convenient and reliable way of triggering bridge openings. It uses the Trust's WiFi when it comes into range at each bridge and does not rely on the boater's network coverage or use any mobile data allowance. For those without smart devices there would also be several alternatives which, although less convenient, provide a means of contacting the control centre. Local boaters have offered their help as 'boating buddies' to familiarise others with the system, we will provide inductions to boaters arriving at our gateway locks and also run demonstration days.

We accept that it may not be so easy to use a smart phone in some conditions but the app will be designed to be as simple as possible, with legible font or symbols and operable with just one or two clicks. Accessories are widely available to protect them from rain, as are mobile charging devices if a phone runs out of power.

The system would allow multiple app downloads against a boat licensing agent's customer number for boaters buying a visitor licence from them (and who won't have a customer number required for the app download).

Communication with road users and canal users

Issue: Both road and canal users would find it helpful to know when bridge restrictions are in place (regular or ad-hoc) along with any breakdowns or longer closures (to canal or road). It's important to have access to up to date information to help people make decisions about road and canal journeys. A number of options have been suggested.

The Trust's view: For canal users the app would stream live data about a bridge, for example if they need to wait because an embargo is in place, the limit on openings has been reached or an ambulance is coming. Any advance or longer temporary restrictions or closures would also be notified to boaters via the current stoppage notice system (website and email). We would also consider alternative options suggested for boaters without a smart device, for example automated notice boards or a blue light next to the canal traffic lights.

For road users 38% of respondents to the survey were interested (and a further 16% undecided) in a version of the app that streamed information on the bridge status including restrictions and whether it was open to road (although that could change at any time). We would work with road users to review what can be provided and how useful it is. We will also consider their suggestions of automated road signs showing the status of a bridge, working with the parish councils.

Local parishes have also suggested providing information such as regular embargoes and restrictions on their websites and social media, which we welcome.

Costs and savings

Issue: Of those who commented, views were polarised between those supporting the efficiencies and cost savings with others who were unhappy with the cost, some asking for the funding case to be justified

The Trust's view: As we have stated, the current operation is an inefficient and costly way to operate the bridges now that technology is available. The funds are in place for Sandfield Bridge. In terms of the costs, the Trust would be saving approximately £500,000 annually – money that can be invested back into the canal network.

The investment required for all bridges selected for remote-controlled operation is around £4.47m; we have received a European grant of £820,000 (Interreg NWE) towards this and other remote operation projects on the canals. Should the Trust decide to proceed we would be happy to make the financial assessment available, although some elements may need to be redacted for commercial confidentiality.

Other issues

As stated earlier, the sections above highlight the key themes commonly raised by people. In addition many other individual issues and suggestions were raised and these have or will be considered by the project team.

We were asked a number of questions during the consultation and the online survey which were not already answered in the information provided. The FAQs on our website will therefore be updated to provide responses.

Specific points made about each bridge

During the consultation, people provided many comments about specific bridges. We have logged these comments and will give them to the advisory group that will be established for each bridge. In addition to suggestions for protocols and restrictions, other themes that emerged were:

- The high volume of road traffic at Fretherne, Sandfield and Patch Bridges which should be taken into account when considering priorities; requests were also made for the bridges to remain manned.
- The need to carefully coordinate bridge and boat movements at Sandfield and Saul, particularly with boats coming from the marina at Saul Junction, and future-proofing for the future connection to the restored Stroudwater Navigation.
- The need to coordinate between openings of Purton Upper and Lower Bridges to minimise delays for road and canal users.
- A request for the control centre to be located at Fretherne Bridge, or at least elsewhere on the G&S canal.

We also met several residents living directly at, or very close to, a bridge and heard their specific issues. We will discuss plans for the bridge with them directly at the appropriate time, including klaxon noise levels and any individual arrangements that can be made, subject to safety assessments.

Our meetings with a number of people/organisations who have a specific use of a bridge e.g. Slimbridge Wetland Centre and local farmers highlighted their issues and we will ensure that we provide close liaison and support at peak/problem times.

Conclusion and way forward

We'd like to thank everyone who attended our focus group meetings and drop-in sessions, people who completed the online survey and those who have met us or written to us. We received a very broad spectrum of feedback. The project team and their specialists have carefully considered how the issues raised could be addressed as set out above.

Having now reviewed the responses, we have decided the best course of action is to extend the trial period at Sandfield Bridge to better investigate and test some of the issues, concerns and suggestions made, develop bridge opening protocols and monitor the impact on canal and road traffic. At a later stage in the trial we will give the app to a small number of boaters to test the app and operating system, which will have the protocols built-in. We will be working the trial up in more detail with the Sandfield Bridge Advisory Group (which includes local councillors, boaters, highways representatives and our operational staff).

In parallel to this we will be working with Gloucestershire County Council and local parish councils to identify potential highways and parking improvements.

The results of the trial, along with other issues still being explored, will play an important part in our review of the plans and our decision later next year whether or not to proceed with the remaining bridges.

We'd like to thank everyone for their input to the consultation so far and will post updates on our website www.canalrivertrust.org.uk/qsbridges.