



Friends
of the
Gunstool
Brook

Open Public Meeting to be held
in the Winstone Room,
Corinium Museum
11am Monday 8th June 2025

Programme

- **Arrivals, welcome and apologies:**
- **Statutory and other bodies:**
 - Cirencester Town Council – (*Gemma Stevens*)
 - Stronger Together South Cotswolds – flood meetings (*MP's representative*)
 - Gloucestershire Rural Community Council (GRCC) (*Lucy Eccles*)
 - Environment Agency (*Representative*)
- **Activities:**
 - Monthly Monitoring Reports (*Andy Sworn*)
 - Citizen Monitoring & Proposed Citizen Science automated network for Cirencester (*Neil Edwards*)
 - Flood wardens (*Nick Bridges*)
 - Sluice Gate Management and Low Water Flow Testing (*Mike Jones*)
 - Water Health & Riverfly monitoring (*John Tiffney*)
- **Reports and forthcoming events:**
 - Big Lunch (28th June) & Festival (August Bank Holiday) (*Mike Jones*)
 - Cirencester & Churn Waterways & Environment Partnership CCWP (*John Tiffney for Jo Burgon*)
 - Technical Sub-Group – (*John Tiffney*)
 - A view from Siddington (*Jan Bayley*)
- **Forward planning, projects and events:**
- **Presentations:**
 - City Bank Local Nature Reserve, river restoration (*Huw Jones*)
 - Deteriorating water quality – a reflection (*Chris Pogson*)
 - Overview of current water conditions (*Mike Jones*)
- **Questions and AOB:**
- Suggested date for next Open Public Meeting
11am Thursday 26th November, 2026

Apologies

Roz Savage - MP, Amy Herod, Sue Powell, Steve Tuck – Thames Water, William Cooper – Riparian Owner, Dave Whittles, Jo Burgon – Chair of the Cirencester and Churn Waterways Partnership.

Present

Chris Snowden – promoting the People’s Emergency Briefing film at the Royal Agricultural University on 25th June, Nicholas Henderson - Convenor, Jenny Rudston – Communications and Publicity Officer, John Tiffney, Dr Mike Jones, Chris Pogson, Nick Bridges – Councillor – Cirencester Town Council, St Michael’s Ward and Cotswold District Council, Gemma Stevens - Projects Manager, Cirencester Town Council, Ocean Griffin - Cirencester Town Council, Steve, Bill and Jane Irving, Jan Bayley, Gary Marshall – Crudwell Flag, Michael Harris, Paul Berkeley, James Spicer – Environment Agency, Huw Jones – Cirencester Wildlife Group, Chris Weaver, Neil Edwards, Sue Callard, Liz Pill, Lucy Stevens – Bathurst Estate, Andy Roberts – Coln Restoration Group, Anna Giledge, Philip Beckerlegge – Winston Trust, Jane Edwards – Duntisbourne Parish Council, Lucy Eccles – GRCC Gloucestershire Rural Community Council, Tim Clark – Cotswold Rivers Trust, Ellie Pryor – Cotswolds Rivers Trust, George Brooks.

Welcome from Reverend Nicholas Henderson

Statutory and other bodies

Presentation: Gemma Stevens – Projects Officer,

- Cirencester Town Council: Update. Green spaces strategy and Climate and environment action plan.
- Natural Environment Investment Readiness Fund (NEIRF) Project. With FWAG and Jenny Phelps.
- Thames Water grant applications.
- Community Emergency Plan.
- Churn NFM Project.

Apologies from Roz Savage and the Stronger Together South Cotswolds and representatives for being unable to attend.

GRCC: Lucy Eccles

Contact details available, please ask.

Part of ACRE – Action for Communities in Rural England. Cover mental health, digital inclusion, flooding resilience.

Lucy coordinates the volunteer flood warden scheme which is vital for community resilience. They have currently been focusing on exercises to

practice skills, techniques, local knowledge and plans. The aim is to increase confidence and preparedness across the community. This project will be repeated in Tewksbury and Stroud and has been conducted in Lechlade.

GRCC built a good relationship with Severn Area Rescue Association (SARA), the Cotswold centre is focused in Cirencester and the Cotswold. They will look for missing persons and are part of a very large network.

GRCC is also pushing community engagement with other community groups and organisations for flood management. They are engaged in the important task of raising awareness and education around why and how our water courses are changing. Citizen science is a part of this and the GRCC is working to create more opportunities, such as River Naturalness Surveys and to connect like-minded people. Watch out for the exciting projects in the pipeline.

Environment Agency: James Spicer

The Cotswolds and Vale District

James is the Asset Performance Advisor, he oversees assets, watercourse maintenance and meets with local groups.

He is moving to the Team Leader role.

Their work in the environment agency for Cirencester focuses on watercourse maintenance works to assist riparian owners for the Churn, the Gumstool Brook/balancing stream and the Daglingworth Stream.

They are awaiting a decision for funding for a can on the trash screen at Powells school and have requested funding for culvert inspections.

Nicholas raised a concern that the culvert by Hereward gate is in need of involvement.

James reports that in the wider context: There are 2 other programmes needing funding. They have been unable to overhaul a pumping station due to lack of funding. There is a project to upgrade the trash screen in front of the pumping station which also did not receive funding and so was unable to be done.

Nicholas: regarding the Bathurst Estate: Lady Apsley has raised concerns about the Mill Pound and spoke with the EA. Lucy from the office in the Bathurst Estate will follow up, Lady Apsley has not approached the office.

Activities

Monthly monitoring reports

Apologies from Andy Sworn for being unable to attend.

He has asked if the Reverend Nicholas Henderson or Dr Mike Jones could present his advertisement.

Dr Mike Jones presented:

The monthly report contains about 70 photographs from the Daglingworth stream, through Cirencester and down to the Tesco roundabout.

It reports water quality monitoring, riverfly monitoring, a weather update and groundwater levels. It shows how the water situation changes from month to month, from flooding to low flow.

Citizen Monitoring and Proposed Citizen Science automated network for Cirencester for River Monitoring: Neil Edwards (Mathematician):

Neil brought in the aerials to show the equipment.

There is very limited high frequency river monitoring for Cirencester's water courses.

The monthly monitoring is through photographs.

Readings from a board can be quite variable between readers.

Can measure river level by counting bricks.

No overnight observations.

The proposed automated network offers a better solution.

We would like to inform a better water flow management regime and structures. This needs permissions, data and modelling to support it.

Long Range Wireless Area Network (LRWAN) is the answer.

It works in noisy areas, of buildings, trees, cars, other devices on close frequencies. It can upload data every 10-15 minutes, a 'data squirt'. Each item is not too expensive, in case of being stolen or vandalised. On board battery lasts 10 to 15 years.

Aim to measure river level. Could measure temperature and velocity. Water flow would require an upgrade to an ultrasound probe. Could move to measure water quality.

Mike built Emulator software to sense the water height and interacts with a gateway which interacts with the network server.

Put the gateway in Neil's loft and Neil and his son could signal from 1.5 km away from the Barton Mill Pound.

Certain areas failed, that is at the swimming pool entrance and the St Thomas trash screen, where the stone walls blocked the signal.

New kit now available and affordable to add a 3rd instrument using radar: LoRWAN.

They have had success in Austria to visualise water levels up and downstream to a river dam in real time using this system and they have also linked in a weather station. A pressure gauge upstream and an ultrasonic sensor downstream detect the water levels.

The plan is to trial the equipment in low, normal and high flow conditions and build a library of data over several years. This will provide data for future licencing applications.

Funding of this trial based on commercially available equipment is costed currently at £2,000-£2,500. Once the equipment is purchased it can then be used in the network.

There is a grant available from the Winstone Trust, if the case fits their criteria. We can add match funding to this and have approached Matt at the Environment Agency about this.

FOGB are at the cutting edge of this technology. There is another similar project in Oxford and one in Yorkshire.

Andy Roberts from the Coln Restoration Group who is present, has experience of and has some of this technology.

Chris Weaver has also volunteered to help.

Flood wardens: Councillor Nick Bridges

It's fun!

Water flow testing and Sluice gate management: Dr Mike Jones

Links in with Neil's presentation on the proposed automated network to monitor water levels.

We are looking to create a more equitable flow at the Mill Pound and the Gumstool Brook and are meeting with the Environment Agency with Mike, Gemma and Keith Reynolds from Cirencester Town Council (CTC) to gauge support for a future trial.

The Churn is the main river through Cirencester and worth testing in the low flow trial.

Sluice gate management: Lots of changes at a number of sluice gates. The gates are traditionally used for flood management, looking to also consider using them for low flow management. We are looking at modification of the sluices. That is not a small undertaking and the scope of the study needs to be agreed. There is a long way to go, but we are on the path to get there.

George Brooks noted that: the sluice gates were set up to control the water flow to the mills, they were not set up as flood gates.

Water Health and Riverfly Monitoring: John Tiffney (Riparian owner)

John tests for phosphates, ammonia and nitrates and does riverfly monitoring in the summertime when the river flow is lower. In the winter the riverflow is too high to be able to do it.

Our rivers are at acceptable levels for these chemicals and of riverflies.

John has not tested for E. coli for a little while.

As part of the UK water blitz, the technical team monitored 5 sites for Nitrates and Phosphates. It is hard to have consistent results because taking the reading is very subjective, matching it against a colour chart and different people see the colours differently.

All of the results have been incorporated into the monthly citizen science report.

Future Events

The Big Lunch from Cirencester Town Council: Theme: Try something new.

28th June. In the Abbey Grounds.

FOGB, Cirencester Wildlife Trust and Cirencester Wildlife Group are promoting their citizen science for water monitoring. The aim is to encourage some younger people. We will have a Visitors Book for people to sign up and give feedback.

Monday 31st August, following the Phoenix festival, we plan to promote here as well and hope to add video displays.

The Cirencester and Churn Waterways Partnership (CCWEP)

Apologies from Jo Burgon for being unable to attend.

John Tiffney:

CCWEP includes local farmers and riparian owners, some in particular who have studied at the Royal Agricultural College and are keen to be involved in Natural Flood Management Solutions.

Technical sub-group: John Tiffney

The technical sub-group meets every 2 months to discuss monitoring water quality and flow levels.

Recent activities include:

Discovering a public website which has the obstacles in the river plotted, but none of the sluices or culverts were included. John is liaising with them to update these maps.

Conducting one-hour walks: So far this has been done with the leader of SARA and with the leaders of the local U3A group.

Meeting with: Jenny Phelps from FWAG and an Oxford postgraduate researcher; also a Bristol film maker.

A view from Siddington: Jan Bayley

Gloucester County Council (GCC) have drawn up a flood alleviation scheme for Siddington. The local riparian owners are happy with this. The aim is to create a channel with the river to travel east of the village. The South Cerney river is where the swale will start (that is a broad, wide ditch). The idea is to link the existing water meadow systems and to run the ditch for about three quarters of a mile to channel the water away from the village.

There have been 2 funding sources found:

- 1) Thames Regional Flood and Coastal Committee Fund (TRFCCF).
- 2) GCC's Natural flood management fund.

We will hope to have the scheme up and running in the next 12 to 18 months.

Thank you to the Environment Agency – James Spicer, Cotswold District Council – Laurence King and Peter Ciret and the GCC.

Any other forward planning projects and events

Gemma Stevens: Cotswold canal trust currently have a pop-up on their missing branch of the Cotswolds from the Severn.

Presentations

City Bank Local Nature Reserve, river restoration, Huw Jones – Cirencester Wildlife Group

CWG has been working with Cirencester Town Council, running work parties.

They have conducted:

Management of the grassland next to the river:

Taking on the constant battle with scrub and brambles.

We battle to keep the grassland and the scrub and trees but prevent the scrub invading the grassland.

We are cutting it by hand with clippers. Cirencester Town Council have helped with more powerful equipment.

We have managed the grassland over time to make it species rich and cut it once a year. We leave the cuttings to return the nutrients.

Showing a picture of Southern Marsh orchids: These were in long-term decline, now we have over 40 orchids this year!

Management of the river:

We have lost the water voles. The bramble, ivy, and bindweed environment are not good habitat for them.

We had two volunteer work parties from Cirencester Barracks and a third work party with CWG volunteers. We have now created a better environment for the water voles.

We cannot do this work in the winter when there is a higher flow. We have talked with Gemma and John Scrivens from Cirencester Town Council to support the working groups.

The vegetation is coming back, with water crow foot in there. It is much better now that more light can come in. It will take some time but marginal vegetation is now moving back in and providing habitat for fish. This contributes to the structural diversity and managing the river flow.

Photo of Peregrin chicks that have hatched locally!

Deteriorating water quality – a reflection: Chris Pogson.

I have lived in Cirencester for 46 years. I am a great supporter of all the works the FOGB do.

There is a contentious issue about the water quality in Cirencester. My concerns were triggered by a photograph and a walk which I was able to compare with 2 years ago.

During the Water Blitz survey I wondered if the deterioration was related to deterioration in water quality in the river.

Looking at different timepoints bring me to reflect to times past, but also shine a light to see what lies under the surface of our water quality now. It is a complex issue with no easy answers.

I am grateful to guidance from Dr Mike Jones and Neil Edwards.

Consider eutrophication; this is pollution with nutrients leading to algal blooms and decreased biodiversity. The Churn on the Stratton Meadows used to contain sticklebacks. They are no longer present. Now there is a way in for dogs and cattle and there is a dirty riverbed covered in algae.

In April 2026 we looked at the Gumstool Brook by the flats at the back of the Waterloo. Two years ago there was already dirt and algae on the stones; it is much worse and dried out now. The water flow across the winter cleans the stones.

During the freshwater watch from Earthwatch, we took 6 measurements: The results, as referred to earlier, were that phosphate levels were low and pH was normal. However, nitrate levels were moderate. Riverwatch consider this as nitrate pollution.

It may come from slurry, vegetation and decomposition upriver. Half a ton of water per second travels through Bournton Bridge through town.

There is no formal regulatory standard for nitrate levels in rivers.

There are Nitrate pollution prevention regulations that farmers and FWAG will be aware of.

The Upper Churn Valley is designated by DEFRA as a Nitrate Vulnerable Zone and there is guidance for farmers.

The Water (Special Measures) Act 2025 legally forces water companies to publish annual pollution incident reduction plans to reduce sewage pollution.

This means there will be a framework for protecting future water quality.

Overview of current water conditions: Dr Mike Jones

What next, after a very dry spring? The first 4 or 5 days of June, 70% of the monthly average has fallen in those days.

Rainfall in the Churn in 2025 was about 870mm. Above average rainfall started last September and ran until February. That was the wettest autumn on winter, then followed by a dry spring.

What can we expect of the rest of the Summer?

The Met office suggest near average rainfall over the summer, with a light increase of wet weather and a higher-than-normal chance of hot weather.

There has been no suggestion yet about a repeat of last year with a hosepipe ban.

The coloured graph gives a view of long-term groundwater levels in the limestone aquifer. May this year shows a very similar level, just slightly higher levels than May last year. The groundwater comes out of aquifers and contributes to the river flow. Groundwater pumping for public water supply ceases when the groundwater level is low. The current flow level is exceptionally low, as in 2011. This is the picture all across the Churn catchment.

It is challenging to forecast what will happen, but it is important to do those forecasts for the Churn and the Gumstool brook. There is low flow, stagnant water and it is heavily vegetated. The Churn at New Mills on the Eastern Branch was flowing, but it is a low flow. The groundwater was below the level of the riverbed and not contributing.

It is important to keep an eye on the weather: Average rainfall and hot weather will affect the quality of water and wildlife in the Churn. The waterways may dry up.

We can look at improving the resilience of the water environment in the town to provide resilience to low flow events and hot weather.

We can modify the sluices.

Does it need modification where the 2 branches combine at Hereward road and where the 2 branches of the river Churn pass around the Citybank Nature Reserve?

Questions and Any Other Business

None.

Suggested date for next Public Open Meeting: 11am Thursday 26th November 2026.