



Restoring Toddbrook Reservoir

A message from Richard Parry,
Canal & River Trust
chief executive



This month we welcome the Government-commissioned Independent Reservoir Review report from Professor Balmforth which examines the cause of the damage to Toddbrook Reservoir last summer and makes recommendations for the improvement of reservoir safety across England and Wales. Alongside that we have also published our own separate independent report, undertaken by Dr Andrew Hughes, an eminent reservoir engineer.

Both reports identify that serious hidden design flaws, inherent in the concrete auxiliary spillway from the time of its installation in 1970, were the underlining cause of its partial collapse on 1 August 2019.

The events last summer, although happening after heavy rainfall, were unexpected. At no point in the Toddbrook spillway's 50-year history were design flaws identified; successive inspections by independent engineers - from the Government-appointed All Reservoir Panel, in accordance with the Reservoirs Act - did not raise any questions about its design until the most recent independent inspection report. This was received by the Trust only three months prior to the incident and did not identify an immediate threat to safety, or direct that any urgent precautionary measures be taken.

Lessons Learned

The Trust, along with other reservoir owners, has important lessons to learn from the incident.

While the Balmforth report says the Trust was fully compliant with existing legislation, the Trust acknowledges that maintenance of the spillway in some periods of its 50 year life – including pre-2012 under Government-owned British Waterways – might have been more stringent; although both reports acknowledge that the inherent design flaws mean that, regardless of maintenance, it is likely that the spillway would have failed in an extreme weather event.

As a result, we have already put in place a comprehensive range of measures to enhance the management and maintenance of our 72 reservoirs across England and Wales. Keeping local people safe is always our top priority.

For Toddbrook these two reports, along with the other engineering studies we have commissioned, provide vital information for the next phase in the restoration of the reservoir – designing how and where to rebuild the auxiliary spillway.

We have begun preliminary work on Toddbrook prior to its full restoration and we remain fully committed to keeping you up to date as our repair work progresses.

You can read Prof Balmforth's independent report produced for the Government at [gov.uk/government/publications/toddbrook-reservoir-incident-2019-independent-review](https://www.gov.uk/government/publications/toddbrook-reservoir-incident-2019-independent-review)

You can read the full inquiry report from Dr Andrew Hughes at canalrivertrust.org.uk/restoring-toddbrook-reservoir

Thank you for your support

Managing water resources and keeping boats afloat on local canals this summer

The Canal & River Trust has been working hard this winter to maximise alternative water supplies to the Peak Forest and Macclesfield canals to mitigate for the loss of Toddbrook Reservoir.

The two canals form a popular section of the Cheshire Cruising Ring and the Trust is aiming to keep them both operational for boaters throughout the 2020 summer season as far as possible by ensuring they're supplied with sufficient water.

Over the last few months Combs, Bosley and Sutton reservoirs, which are the other main water supplies for the canals, have benefitted from extensive works to their feeder channels, both into and out of the reservoirs. With Toddbrook

unavailable, various maintenance and repair jobs at these and other nearby reservoirs will improve their reliability in the vital task of keeping water supplied to the two canals.

Our team of expert hydrologists have explored a range of additional water resource options for the coming summer. This has involved carrying out extensive modelling to assess how the canal may perform under different rainfall scenarios.

The Trust is also in discussions with the Environment Agency about abstracting additional water from the River Goyt and the River Dane – a measure which is usually only considered during prolonged drought conditions.

As the Toddbrook repair project progresses, we will be consulting closely with our boating customers about minimising the effect of any restrictions which may be required.

Volunteers from the High Peak branch of the national building supplies firm Cemex worked with the Trust to deliver a fantastic job improving footpaths around Combs Reservoir. Big thanks to everyone at Cemex who helped on this project!



Camex volunteers



Before: Footpath by Combs Reservoir



After: Improved footpath



Rossendale Feeder before and after work

Improving towpaths, dry stone walls and vegetation along the Peak Forest Canal

We have just started work on a major community project to improve the towpaths, dry stone walls and vegetation along the Peak Forest Canal. Some overgrown trees and shrubs are being removed to allow damaged sections of walls to be re-built and muddy towpaths to be resurfaced.

We're restoring and re-planting the hedgerow along Buxton Road from the Transhipment Warehouse towards the Tesco entrance and we'll be planting hundreds of new trees, plus wild flowers and fruit trees, along the towpath from the warehouse towards Bugsworth and Furness Vale.

Get Involved. We will be hosting community days on 16 and 17 April – calling for people to get involved with rebuilding the Toddbrook Reservoir boundary dry stone walls. Come and learn a new skill! Keep an eye on the Trust's website for more details.

Update on temporary Dam Spillway works and improving Toddbrook inlet and bypass channel

Our engineers have been working with Kier, our main construction contractor, to make the Toddbrook Dam Spillway more resilient and able to withstand extreme weather events while plans for a permanent repair are prepared. We are currently creating a new waterproof nib wall along the crest of the dam, which will reach down and seal with the dam's clay core. This will ensure that no water from inside the reservoir can penetrate beneath the concrete slabs at the top of the spillway. The spillway crest will be increased in height by just over one metre, at either end, and sturdy waterproof barriers installed on the spillway slope to channel any overflowing water into the central undamaged section.

In late spring this will be followed by work to the Todd Brook inlet and bypass channel, including the installation of a new sluice gate system, which will allow greater control over water flowing into the bypass channel and the reservoir.

Nb During normal weather conditions, while the reservoir remains drained for repairs, all flow from Todd Brook is sent down the by-wash channel – none into the reservoir.

A Big 'Thank You' to Whaley Bridge Athletic Football Club



Canal & River Trust Whaley Bridge engagement manager Gillian Renshaw (back centre) with Whaley Bridge AFC Under 12s team, proudly sporting their new football kit. Whaley Bridge AFC development officer John Hinds is back row far left.

The Canal & River Trust has sponsored new sports shirts for the Whaley Bridge Football Club Under 12's team as a 'thank you' for the club's incredible contribution towards the Toddbrook Reservoir dam repair works.

Part of the club's grounds, off Park Road, have been occupied by construction site cabins, installed by the Trust and its contractor Kier as a base while the damaged reservoir dam wall is repaired.

Trust engagement manager Gillian Renshaw said: "Everyone at Whaley Bridge Football Club has been fantastic and made us feel so welcome. From chinooks landing on their playing fields during the emergency last

August to the inconvenience of the long-term repair project, the club's volunteer organisers and players could not have been more helpful.

"This is a situation that none of us wanted or envisaged but we are trying our best to fix everything – a job which is made so much easier with the understanding and support of the club. We are delighted to show our appreciation of their efforts by sponsoring their Under 12's new kit."

Whaley Bridge AFC development officer John Hind said: "For the Junior Football club, it has been a challenging first season without a pitch and we are indebted to Furness Vale FC and Chinley FC for their help. We have enjoyed tremendous support from the local community who have continued to rally around after the events in August. We would like to thank the Canal & River Trust, Kier and also High Peak Borough Council, 'Ditch your Goretex' 'keep your chinook up' discount football kits, Tesco and Waitrose supermarkets for their donations to the club."

How do I find out more information?

We are posting regular updates on our website at canalrivertrust.org.uk/restoring-toddbrook-reservoir



Gillian Renshaw

Weekly Wednesday Drop-in Sessions

Our weekly surgeries continue to be held every Wednesday at the Transhipment Warehouse by the canal basin, from 11am–2pm where the Trust's community liaison manager for Whaley Bridge, Gillian Renshaw, is available.

Alternatively, if you cannot make it along to the drop-in events, you can contact the Trust by email toddbrook@canalrivertrust.org.uk and we will do our best to respond as soon as we can.

Derbyshire Fire & Rescue Service has warned people against the dangers of exploring the deep muddy bottom of the reservoir. Please don't get stuck in the silt.