

# Annual Report 2023/24



**torrs**hydro  
NEW MILLS



# Torrs Hydro Annual Report, 2023-2024

## Welcome!

The Spring, with its new life and fresh optimism, is a good time to reflect on the joys and sometimes sorrows of Torrs Hydro's and Archie's achievements over the last financial year.

While at the end of last year we marked 15 years of generation, the 2 millionth MWh didn't quite scrape into this year, but we did make the record for the highest gross income to date!

At our AGM in April 2024, Members attending took part in lively, honest and fruitful discussions. We covered the questions of how to manage share withdrawal while retaining membership; how to deal with the situation where a member has become untraceable; and progress towards re-activating the community fund with more involvement from the Torrs Hydro membership and greater focus on environmental benefits. All of these topics have been further discussed by the Torrs Hydro board with policy and procedure documents being developed.

The Torrs Hydro Engineering Advisory Group or THEAG has been formalized as a working group of board members and other volunteers with engineering expertise and interest.

We express our thanks to Tony Ashton who is retiring from the board after six years – perhaps we'll still see you down at the site from time to time, Tony? And we say a very sad farewell to David Cooper, former director and site volunteer who died in June 2024.

As ever our huge thanks to all our Members and volunteers who one way or another contribute to Archie's power generation and the functioning of Torrs Hydro with such steadfast loyalty.

## Plant report



*Inlet trophies – anyone for footie?*

The year saw notable activity relating to the operation and maintenance of Archie.

A constructive step forward was the creation of the Torrs Hydro Engineering Advisory Group (THEAG), which was set up to do just that - to advise the Directors on engineering matters relating to the plant. Consisting of a mix of directors and other volunteers with engineering experience and chaired by Nick Metcalfe, the group met five times during the year and has been instrumental in resolving issues and planning engineering activity.

The plant's control system suffered a significant failure on Sunday 14th April 2024 which led to an uncontrolled speeding up of the screw for approximately 30 minutes, until the situation was brought under control through manual intervention. The incident was subject to a full review by the THEAG, which determined the root cause was failure of the small backup batteries for the control system. A number of



*Large tree brought down by one of the storms rests atop the weir for several months*

follow-on actions were carried out to ensure no repeat of the incident, including upgrading the batteries to higher-capacity units, a resolution to renew the batteries annually, and crucially, updates and modifications to the control system to protect against further failures which were completed in July 2024. The THEAG also recommended that the Directors consider a re-design of the main sluice gate to allow it to close under gravity in the event of complete failure of the control and/or hydraulics. The Board has undertaken to carry out a feasibility study into sluice gate improvements.

The incident damaged the electrical system's DC-AC inverter which was removed, repaired and re-installed by service company Hydro Maintain.

No damage to the mechanical system was identified, however additional analysis of oil samples was carried out to monitor for any evidence of deterioration. While metallic debris was identified in the oil samples, the cause was inconclusive, and the regular schedule of oil sampling and replacement continued.

Replacement of the bottom bearing was considered, and after discussion and evaluation of the risk of failure, the Board took on the recommendation of the THEAG that the bottom bearing should be replaced within a 10-year period. As this period will expire in summer 2026, the Board have planned to make the change in summer 2025, allowing 1 year of contingency if it does not prove possible for any reason.

Archie's Angels as usual provided great support in the usual clearing of debris from the inlet, and in tidying up the area around the plant, clearing weeds and silt and improving the appearance of the site. Thank you Angels.

So while the incidents in the year were not welcome, the overall outcome is a more robust control system and plans in place to further improve the safety and reliability of the plant.

# Financial Report

Our annual generation of over 192 MWh created a new second best, beating last year's performance. With an improved price for the electricity in addition, the sales of electricity has therefore been recorded as £49,908.

This year the repairs and maintenance costs were relatively high, at £11,353. This figure includes the cost of repairs to the control system following the over-speeding incident in April (when the inverter drive had to be removed and taken away for repair), oil changes and improvements to the system monitoring on the control system. The cost of insurance increased by over 8%, but thanks to the huge input of our volunteers, other costs remained close to that of recent years. We also agreed at the AGM in April 2024 to allocate £4,967 to the community fund and paid a total of £4,513 in interest to Members (shareholders).

We are therefore reporting a profit of £13,151 for the financial year to 30th September 2024. The full financial accounts are published on the Torrs Hydro website.

## The work of the amazing volunteers.

It has been another typical year for volunteers at Torrs Hydro. Although many tasks are repetitive and a bit like the painting Forth Bridge (before more durable paint was invented), it doesn't become tedious. This must be because of the camaraderie of volunteers, the desire to keep the generation of renewable energy continuing and just the stimulation of being in the outdoors in all types of conditions. There is such satisfaction in keeping Archie turning!



*Inlet cleared, generation restarted, but still more 'beach' to clear*



*Clearing the fish pass*

The end of the last reporting year (September 2023) had seen the celebration of 15 years of generation but within a month we were on to beach clearing in front of the inlet. Storms Agnes and Babet really made the volunteers work hard and by the end of the year there had been at least 5 working parties. We have become quite skilled at dealing with a blocked inlet. We know the best place to dig channels and when to use a ratchet and chains if the sluice gate is wedged by stone and silt.

Visits have still been part of volunteer duties with primary school and secondary school visits. To make visits green, the groups are using the trains which is great as they can alight at New Mills Central Station and immediately walk down into the Torrs. The One World Festival and open days have also proved productive for passing on information.

New Mills itself has certainly become an attraction for visitors, with groups of families and friends, hikers and cyclists regularly coming through the gorge and Torrs Hydro always proves a popular talking point. People stop to read the interpretation board and the updated engine house notice. If there's something going on then people stop and talk. They want to know what Archie is.

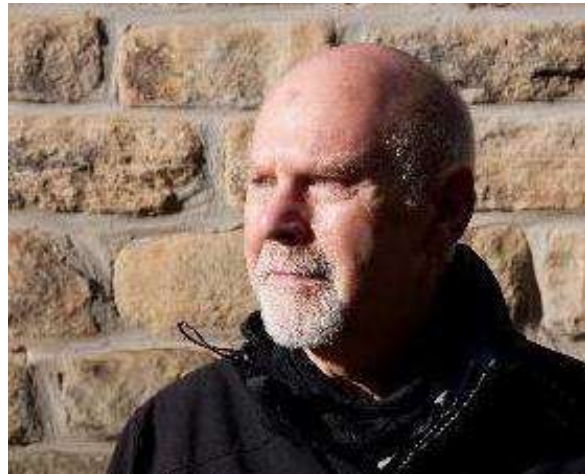
Social media often features Archie and it all helps in the greater education of the visitors who can see the impact that can be made by local communities like ours.

There are new settlers in the area too and this brings new people wanting to become involved. Over this last year we have welcomed several new volunteers although some realise that a regular commitment is not right for them. All sorts of skills are needed by the project; technical, theoretical and social. The Archie's Angels WhatsApp group continues to be a great way of calling volunteers to a work party.

## Sad news

One of our former directors, David Cooper, died on June 30th 2024 aged 76. Dave was a hard working and productive member of the board. In board meetings he was much appreciated for his ability to pick out the key points and clarify our discussions, and propose an effective way forward.

His lasting legacy will be the vandal proof roof for the engine house (featured here on the front cover), a project which he researched and implemented with enthusiasm and success. He retired from the board about a year ago but continued to volunteer for working parties. He will be sadly missed.



*David Cooper at the engine house (Steve Essex)*



*Picnickers in the Torrs beside Archie (Bill Bolton)*

*Photos thanks to Torrs Hydro unless otherwise credited*

Torrs Hydro New Mills Limited is a Community Benefit Society

Website: [www.torrshydro.org](http://www.torrshydro.org)

Blog: [torrs-hydro-newmills.blogspot.com](http://torrs-hydro-newmills.blogspot.com)

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