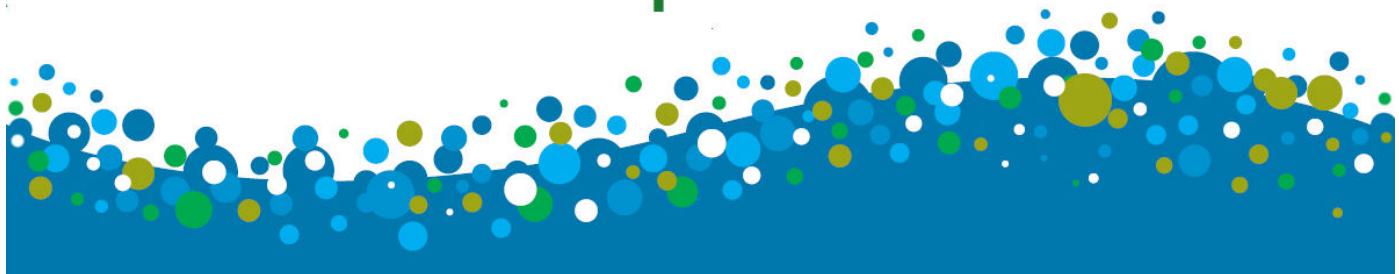
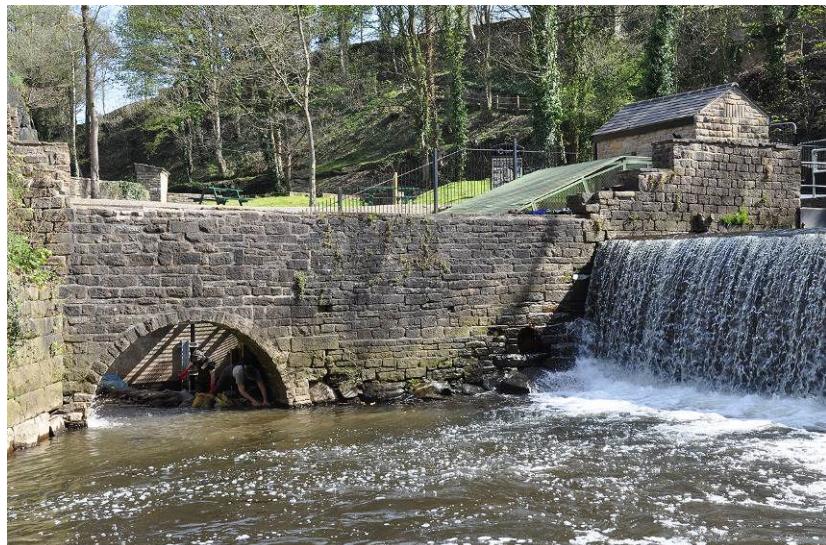


torrs hydro
NEW MILLS

Annual Report 2015/16





Introduction

Welcome to the Torrs Hydro Annual Report for our eighth year of power generation.

No two years are ever the same for Torrs Hydro. Much as last year was near perfect, this year has in many ways been an unfortunate one and Archie (our reverse Archimedes screw in the river Goyt) has had more downtime than there have been Megawatt hours generated. Nevertheless, tackling this year's challenges has brought teamwork and collaboration, enterprising solutions, and better knowledge and set-up for 'doing it again when we need to'. Thanks to a very dedicated team of volunteers who dreamed up innovative solutions and undertook extensive backbreaking work, and the diligence of the directors, Archie is financially and operationally in good health and once again turning and producing power for our local Coop Food store.

So what is this year's story...?

Power Generation

We started our financial year on 1st October 2015 with a serious problem – the lower bearing had just failed (that is the one at the bottom of the screw that keeps Archie spinning smoothly).

This was a most frustrating moment to have such a catastrophic failure. The following months, November 2015 through till April 2016, had near ideal running conditions with good but not excessive levels of water in the river.

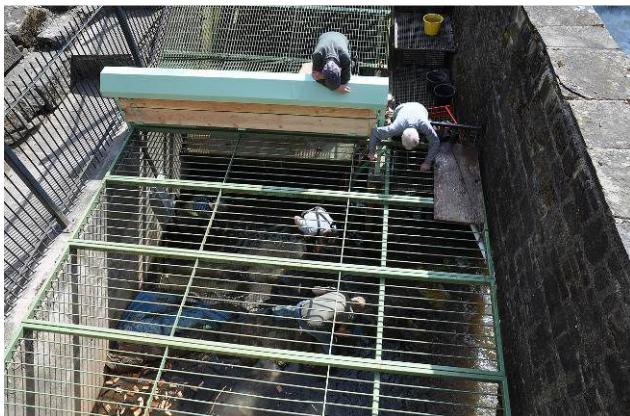
Repairing the bearing proved a substantial exercise and it was not until the dryer summer period that we were able to run again. As a result we only generated 16 Megawatt hours in the financial year to the end of September 2016, compared with an average of around 150 Megawatt hours per year.

Financial Summary

Insurance is the biggest expense we have, and when all is well one might question why we pay for it. This year our insurance policies proved their worth. We were successfully able to claim towards the costs of repair and for the loss of income during the period when the screw was inoperable. This has enabled us to post a profit for the third year in a row.

The headline figures for 2015/16 show an improvement in profits from £6,359 in 2014/15 to £11,501 in this financial year.

Our income for the year was £27,996, up slightly on the 2014/15 figure of £25,837, while general administration expenditure remained similar at £13,160 (£13,124 in 2014/15). Once approved at the Annual General Meeting our annual accounts will be added to the Torrs Hydro website in the 'About Us' section (see www.torrshydro.org)



Something interesting happening in the water...



The silt made good sandbag filling

Plant Operations

As mentioned above our financial year began with the distressing news that Archie's bottom bearing had failed. Planning for its replacement started immediately. Temporary solutions were just that and the plant was unable to generate any power until the end of June 2016. It should be noted that the dry 2015 summer turned into an exceptionally dry autumn with the reservoirs looking low and river levels not sufficient to run until mid-November, by which time we knew that Archie would not run again until the bearing had been replaced.

The multitude of tasks necessary in preparation for the bearing work were carefully planned and executed by our innovative and dedicated engineers and volunteers. The stop plank installation and their storage; the coffer dam at the tailrace built from both silt and sand filled bags; clearing the debris accumulated over the previous seven years from the bottom of the screw; all were key to the eventual successful bearing work. The badly deteriorated 'sealed for life' bearing was replaced with a continuously greased bottom bearing supplied from Germany by Andritz. This was expertly installed by local engineers GW Lomas in early June, who carried out routine power house maintenance tasks – a gearbox oil change and a service for the generator – at the same time.

Finally the big task of clearing the silt from the inlet side of Archie was completed by Hayfield civil engineer Paul Hudson's team and Torrs Hydro volunteers, and the grease pump commissioned. The plant was re-commissioned on 29th June 2016.

Works completed in 2016 have the advantage of leaving the site easier to maintain in the future. We now have experience of separating the plant from the river, have a system of stop planks to isolate the screw and a modified support structure for the decking over the inlet to allow easier access for clearing.

Visitors in 2015-16

Torrs Hydro welcomes visitors at any time and this year we had the usual school visit in November and participated in the One World Festival, Community Energy Fortnight and New Mills Festival with Open Days for each event.

An interesting visit in May was organised by the Co-op group from the Midlands. A coach load of about 30 people were touring a variety of sites and stopped off at Torrs Hydro for an hour.

In September we had a visit from the International Energy Agency (IEA). They are actively working on identifying small-hydro projects around the world that are good examples of projects that are successful from both the financial and social acceptance points of view. The work is being led by the Japanese organisation, the New Energy Foundation (NEF).

Their visit centred on just four sites in the UK, so we were keen to give them a good impression. Questionnaires were completed before the three hour visit. There were requests for follow up details and a report will be published on the IEA website in Spring 2017.

Our website, Facebook page, Twitter account and engine house notice board continue to be updated on a regular basis, sometimes generating questions which we are happy to answer.



Some of the Co-op group from the Midlands outside the Co-op before visiting Archie

Volunteer action on the bearing change



^ Early coffer dam



Stop boards arrive >



Stop boards in place...
< digging out the silt

Pumping >
out the water and
removing silt
from the screw



The silt had sat so long it had got a bit solid >



The old bearing



The new bearing being fitted

And a huge thanks to ...

Not all our volunteers put on waders and dig out the silt build up. Martin Thomas didn't - but he was one of our longest serving volunteers. Martin is a local supporter of Torrs Hydro and once a year for the last eight years he has diligently reviewed our financial accounts (prepared by Richard and Hazel Body), and ensured on our behalf that they correctly reflect the society's financial position.

As a small enterprise Torrs Hydro does not require a formal audit, but the independent review should give confidence to our members, potential members and other stakeholders that the society is being run correctly.

When we first met Martin he had relatively recently taken early retirement after a career as an accountant in the private sector, and had just taken up the role of (volunteer) treasurer with a local charity. He looked slightly overwhelmed at the prospect of tackling the accounts of a Community Benefit Society so soon after getting to grips with charity accounting systems, but over the years we got to know how he wanted the accounts prepared, and his thoroughness and help was much appreciated.

Martin stood down as the reviewer at the AGM in April 2016 and we thank him immensely and wish him well in all his other interests.

Torrs Hydro making a difference in the community

Our big news this year is of the progress with the Solar PV project at New Mills School and Sixth Form. Solar PV panels have now been installed at the school and electricity generation started on Sunday 18th September 2016 from a 21kW array on the roofs of the Maths and Swinburn Buildings.

In 2013 Torrs Hydro contributed £1100 from its Community Fund to the school PTA's Solar Schools fund. The project raised £7,800 towards an initial target of £10,000. However, energies were then diverted when the school faced more pressing challenges. As an alternative to further fundraising, last year the Schools Energy Coop (SEC) stepped in to help (see <http://schools-energy-coop.co.uk/about-us>). The SEC funded the whole process through their most recent share issue, and project-managed the installation from survey to completion. The monies raised for the school's Solar Schools fund have now been invested in SEC. The school will benefit from cheaper electricity, bought from SEC, and the PTA will earn an annual interest payment on the monies invested in SEC.

Work also began in 2015-16 to revise our open share offer with a view to achieving the Community Shares Standard Mark.

The Standard Mark is an initiative of the Community Shares Unit set up with government funding (see <http://communityshares.org.uk/community-shares-standard-mark>). A Standard Mark award



Martin Thomas

demonstrates that the community share offer is genuine and meets national standards of good practice, thereby offering some assurance to potential investors.

So far most Standard Mark awards have been for time-bound share offers where a community benefit society has sought capital for start-up or a specific expansion. Few societies are at the stage of considering the need to cater for investors wishing to withdraw their investment and needing to attract replacement investment. Torrs Hydro effectively has a head start in thinking about this, and our work towards achieving the Standard Mark will hopefully benefit not only Torrs Hydro but also many other societies that use community shares to raise capital.



The generator

Photographs: Richard Body, Steve Essex, Dave Thompson (Stockport Hydro) & Martin Thomas

Torrs Hydro New Mills Limited is a Community Benefit Society

Website: www.torrshydro.org Blog: torrs-hydro-newmills.blogspot.com

Facebook: <https://en-gb.facebook.com/TorrsHydro/>

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