

SHERBORNE STEAM AND WATERWHEEL CENTRE



Trustees

Paul Belliss (Chairman)
Nigel Bartram (Secretary)
John Thompson (Treasurer)
Geoff Ward
Craig Henderson

We reach the end of a successful season of open days and many thanks are due to all the volunteers and supporters who make them possible. There is also much behind the scenes work to open days such as collecting pallets and chopping them up to provide fuel for the boiler. We have been lucky with the weather with exception of the last one which was a bit wet. Next years' programme has not yet been set but will be available for the next newsletter.

The Gala Days

Following the success of our Grand Unveiling Day on the 2nd of June last year, when Kate Adie unveiled our new signage and interpretation plaques, the trustees thought we should follow it up with a Gala Day and, indeed, make it an annual event. In addition, our younger contingent- the steam team - wanted to make it a double open day with live music to encourage a younger audience. So on Saturday the 9th August they arranged an ice cream van and, from around 3pm until 5.00 or 6.00 pm, live music from a local band, Van Rouge.



Find us on our website or on Facebook

<https://www.sswc.co.uk>



Charity No 1099153

All went very well and the band were so enjoying themselves that they stopped briefly at 5pm then after a short break, they restarted and played on until just after 6pm. It has to be said there was a superb atmosphere for that last hour or so, as people all sat around near the picnic area, enjoying

some excellent music and a few glasses of beer from a keg supplied by the steam team.

Sunday the 10th was designated the Gala Day proper, and we commenced another day of superb weather, with music kindly and generously supplied by Ken Greene of Abbey 104 Radio. We also had a stall manned by the local branch of the hedgehog rescue group selling homebakes, hedgehog houses etc, and a stall from Sherborne BeeKeepers' Association, selling local honey and also a stall with a range of food by Pura Poffertjes & Pies.



We were delighted to welcome Kate Adie again, who is a keen supporter, and our local MP, Edward Morello, both of whom were very positive and supportive.



Excellent refreshments were supplied by Ruth and Jenny, our "cafe ladies", with their

supporting team of helpers. The home-baked cakes and cream teas were much appreciated.

All in all a very successful and enjoyable day, which we hope to repeat next summer.

The Annual General Meeting

On October 19th the AGM was held and we are pleased to report some of the key points:

- The existing Trustees agreed to stand again and were voted in except for David Wilkins who is retiring as a Trustee and as the Secretary. He was thanked for his many years' service in that role. Nigel Bartram has agreed to act as Secretary for the future.
- John Stokoe agreed earlier in the year to be President of the Charity.
- It was agreed that membership fees would be increased to £12.00 and that a drive would take place to encourage more supporters to become members.
- John Thompson, our Treasurer, reported on the financial position. Whilst donations were down from the previous year the overall position was satisfactory and sufficient to cover running costs. Our largest annual expense is Insurance and despite efforts by the Treasurer to find alternatives the costs continue to rise year on year. The accounts clearly demonstrated that we are not earning enough to cover any capital expenditure for improvements or unforeseen repairs. A small sum still remains from the grant we received from Dorset County for the interpretation project. This is being held until the Wheelhouse can be made more watertight and then new signage will be installed.
- The Chairman Paul Bellis recorded a successful year of open days and thanked Nigel Bartram for his efforts to make the Gala Day a success. It was agreed to try and repeat this for next year. The efforts of the steam team in supporting open days were also much appreciated.

- The Chairman suggested that the meeting would wish to remember the significant contributions over the years made by Robert Harris and Tom Stewart both of whom had recently died.

Robert Harris

Robert was a trustee and very active Secretary for many years in the period of the major conservation projects. Robert wrote a number of articles about SSWC that were published externally and he gave talks to local entities including schools, helping to raise awareness and support. His expertise as a former solicitor was of value to SSWC on a number of occasions.

Robert was a man of many parts - classic car enthusiast, keen sailor, and a volunteer in a number of other charities in Sherborne including the Samaritans.

Tom Stewart

Tom had been a long-time supporter of SSWC. It is thanks to him that we have the Hindley engine as Tom rescued it from Gillingham brickworks and stored it until it was restored. Besides being a trustee for many years he was also a volunteer and often helped at open days. He also generously supported improvements such as the boiler cladding. Tom had a long association with Industrial history projects. Amongst other things he restored a steam roller and was one of the very early members of what became the Kennet and Avon Canal Trust and was in fact their first membership secretary. He also developed two Marinas on the canal network – one on the Wey Navigation and one on the Kennet and Avon canal besides owning his own canal boat which he and Mary took over a large part of the network.

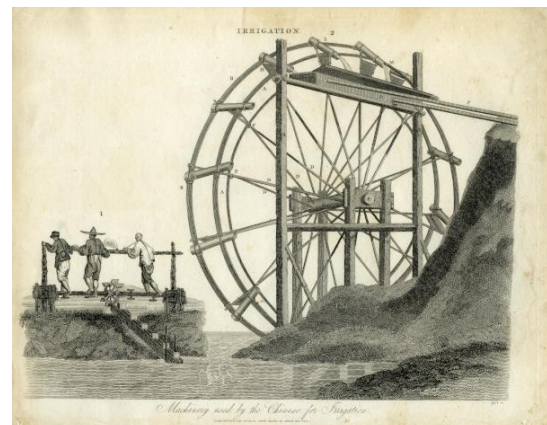
He will be much missed by all of us.

The History of Hydropower

Hydropower can be generated in many different ways. It can come from tides, waves, and rivers, all of which have unique properties that make them suited for generating electricity. Wherever water flows, there is energy.

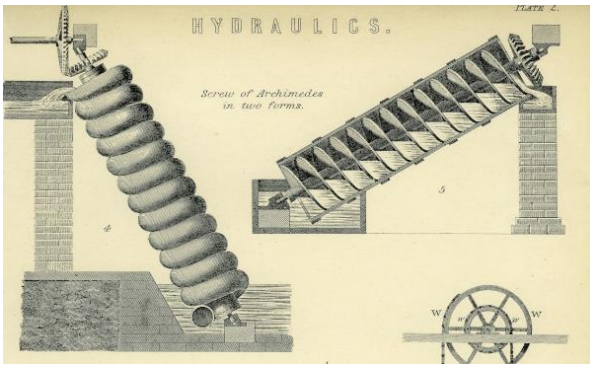
Much like water itself, the history of waterpower has seen many ebbs and flows. Even the word waterpower has subsided in favour of hydropower. Waterpower was used throughout the Industrial Revolution, and global interest in hydroelectricity exploded in the late 19th and early 20th centuries. However, in the UK today, hydropower has seen less implementation than might be expected, especially compared to the growing popularity of wind power.

Early Examples of Waterpower



Water power has historically been used to perform mechanical tasks, such as pounding grain, breaking ore, and producing pulp for papermaking. Examples of historical water power use can be found across the globe. It is difficult to determine when the first waterwheel was invented, but descriptions by classical writers like Antipater of Thessalonica and Pliny the Elder suggest that water-powered devices have existed since at least 300BCE. The horizontal waterwheel is thought to have been developed in Byzantium and the vertical waterwheel in Alexandria. Other early innovations were conceived in China between 202BCE and 9AD.

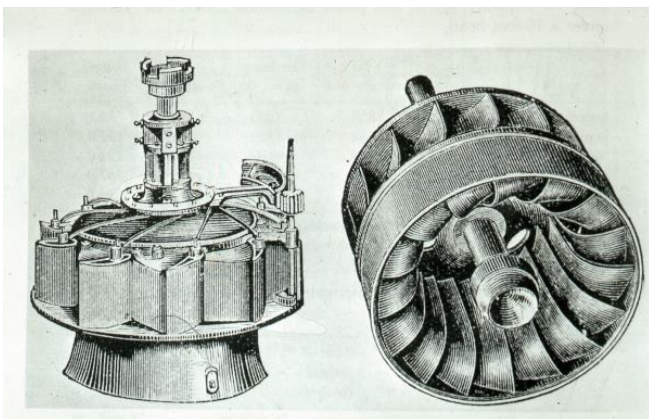
Reinventing Ancient Technologies



19th century engraving of Archimedes Screw - [MCFC-ENG-002](#)

Ancient technologies can teach us a lot about diverse potential applications for waterpower. The Greek polymath Archimedes invented the screw in Egypt in 3rd Century BCE for the purpose of raising water. In the 21st century, this ancient technology has been redesigned to generate hydroelectricity. Rather than pumping water up, hydroelectric screw turbines are turned by fast water entering the screw from the top. A generator attached to the base of the screw then converts the rotational energy from the falling water into electricity.

Improved Water Turbines



"New American Turbine 1894, Hunter" - [RHSC-09-094](#)

Many turbine designs in the late 19th and early 20th centuries sought to improve on the relative inefficiency of the traditional waterwheel. For example, Lester Allan Pelton's efforts to redesign overshot waterwheels led to his invention of an impulse water turbine in 1880 and in Austria in 1913, Viktor Kaplan invented a propeller turbine with adjustable blades.

A major advance in the generation of hydropower came even earlier. In 1849 in Lowell, Massachusetts, British-American engineer James B. Francis developed a new type of reaction turbine for use in the city's textile mills. By creating a sideways waterwheel, Francis was able to improve on the efficiency of earlier turbine designs. A reaction turbine uses changing water pressure to directly move the vanes on the runner. As a result, the Francis Turbine operates best when filled entirely with water. Like Archimedes before him, Francis's turbine was soon adapted to the modern need for electricity generation. To this day, the Francis Turbine remains the most widely used turbine design in the world. Twenty-two are still installed inside the Hoover Dam in Nevada. The world's first hydroelectric project was realised in 1878, when water was used to turn a Siemens dynamo and light an incandescent lamp at Craggside in Northumberland, England. Hydroelectricity's potential did not stop here. Projects would only increase in scale and ambition. In 1895, the Edward Dean Adams powerplant was created at Niagara Falls and was at the time the largest hydroelectric development in the world.

Hydroelectric dams are millponds writ large. While the installation of a watermill would result in changes to smaller watercourses and the creation of loch and quay systems, dams flood entire valleys, storing up enormous gravitational energy. Multiple hydroelectric projects were built under President Roosevelt's New Deal in the 1930s, including the Hoover and Grand Coulee dams.



Grand Coulee Dam. Photo by Gregg M. Erickson, CC BY 3.0 , via [Wikimedia Commons](#)

By 1940, hydropower accounted for 40% of the USA's electricity generation. Larger dams were still to come. Brazil opened the Itaipu Dam in 1984, which initially operated with a capacity of 12,600 MW and has since been upgraded to 14,000 MW.

With thanks and acknowledgement to The Mills Trust for this article

. From the Archives



Ron Pountain and the wheel in the early days. Ron was one of the early pioneers who made the restoration happen.



The pump house before restoration



A replica pump set

Why be a member of SSWC?

People sometimes ask what is in it for me? What is in it is the knowledge that you have helped to ensure the long-term success of SSWC. Open day donations just about cover the running costs but membership subscriptions have the potential to provide an additional source of income to enable us to improve the visitor experience.

You will have the satisfaction of knowing that you are helping to ensure the long-term viability of the project. So please don't just ask what is in it for me but join as a member. £12.00 per year is not a major investment so please just email Nigel and he will do the rest.

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Steam Events

The season is coming to an end, but you might like to consider a day out on the Swanage Railway for the Father Christmas Yuletide Express which is running from 29th November to 24th December. Best to check on their website for up-to-date details.

Some dates for the diary for next year:

Jan1	Weston Zoyland Steam Up
Easter	Crofton Beam Engines steam up
1-4 May	Abbey Hill Steam Rally Yeovil
16-18 May	Shillingstone Steam Rally
13-14 June	West Dorset Vintage Rally Melplash
26-28 June	Roads to Rail Steam Rally Swanage Railway

We appreciate the help given by all our supporters and welcome new supporters.

