

THE FORGOTTEN ACHIEVEMENTS OF MILLING: PART ONE

**Editor's Note:**

Happy New Year to our readers!

Thank you for your continued support, and welcome to Issue #2 of our newest newsletter, Renewable Roots.

Last issue, we presented a brief overview on why, as a specialist mills and milling archive, we have chosen to branch out into the study of renewable electricity generation.

The answer to this question is twofold. Firstly, climate change affects us all, and the industry of modern milling is no exception. An example of this lies in two pressing climate-related food issues in East Africa. These involve the decline in maize production due to drought and rising temperatures; as well as the increased prevalence of food-borne diseases, both of which challenge food security in the region.

Secondly, the evolution of wind and water structures for milling, food and goods production and electricity generation is an intertwined narrative, one that our institution is in a unique position to comment on. We believe exploring this narrative will not only encourage a deeper appreciation of milling, but help comment on global climate issues of our time.

Since our last issue, the Reading EmPOWERed project has worked with undergraduate students to develop an educational pack on British Renewable Electricity Generation in the 70s and 80s, as well as recruiting an intern to create a digital exhibition on the development of renewable energy in Britain vs. overseas. These are (and will be) featured on our website, hopefully proving of great use to our current and future supporters. Watch this space (and note the section under our main article). Now, we will comment on lessons learnt from milling: this issue focuses on The Forgotten Achievements of Milling in light of the fight against climate change.

**A Renewable Energy Case Study: Woodbridge Tide Mill**

The Woodbridge Tide Mill, nestled by the River Deben, is a historical marvel in Suffolk, England. Dating back to 1170, it's one of England's earliest tide mills and remarkably, the last operational one, having run for over 800 years. The mill's ownership varied, including a period under royal possession and with the Seckford family, until its closure in 1957. In 1793, the current structure replaced earlier ones. Restored in 1968, it now operates as a fully functional tide mill and a cultural heritage site.

Visitors can explore its history and workings across several floors. The ground floor offers interactive models and a history panel, illustrating how tidal power is converted into mechanical energy to drive millstones. Upper floors showcase the milling process, detailing each component's role in producing flour. The mill's machinery, combining wood and iron, reflects centuries of technological evolution.

NEW.MILLSARCHIVE.ORG/READINGEMPOWERED

Photos from the Month



Creation of an education pack: Katie and Megan working, and Peter Musgrove interviewing and a selfie with Rachel (the Information and Engagement Manager) and Liz (our Director).



A school visit to Reading Hydro, in collaboration with Reading EmPOWERed.



The Forgotten Achievements of Milling: Part One

The history of mills and milling, as chronicled by our specialist archive, offers a fascinating journey through innovation and adaptation, reflecting humanity's evolving relationship with natural forces and mechanical technology. Here's a broad overview:

- **Early Developments to the Mid-18th Century:** The period up to the mid-18th century saw significant advancements in corn milling technology, changes in land ownership, and a rise in population and living standards. This era was marked by improvements in mill gearing, enabling more efficient use of power sources like waterwheels. The development of the 'treble mill' gearing, where a single waterwheel could drive multiple millstones, was a notable innovation. This period also saw the emergence of different mill types and layouts, adapting to various geographical and functional requirements.
- **Importation and Local Sourcing of Millstones:** Millstones were an essential part of milling, with different types imported or locally sourced, like French burrs or English Peak stones. This reflects an understanding of material properties and the importance of local sourcing for sustainability.
- **Technological Sophistication:** By the mid-18th century, most developments in grain milling machinery had occurred, leading to an era of increased sophistication and the application of more scientific and technical methods.
- **Adapting to New Purposes:** Mills were not just for grain. They were adapted for various uses like timber-framed smock mills initially designed for land drainage and then used for corn milling. The adaptability of mill technologies for different purposes underscores their versatility.
- **Incorporation of Scientific Methods:** The transition to more scientific and technical approaches in milling by the mid-18th century parallels the modern need for advanced strategies in renewable energy development.

continued overleaf...

Local Climate Event

Spotlight: (with us and / or our partners)

Climate Fresk: A Game to learn about Climate Change, Jan 27th & 30th , 18:00-21:00 @ The Rose Inn, 30 Market Place, Wokingham RG40 1AP. Email elizabeth@discom.me to sign up.

Wine Tasting: Old World Vs. New World (exploring the different tastes of wine produced in different climates) Nov 25th, 19:00 - 21:00 @ Laithwaite Wines Reading, RG7 4SW. [Sign up to the event on Eventbrite.](#)

Science, Health and Environment Careers Fair, 12:00-14:30 @ Reading Students Union, the University of Reading.



Reading EmPOWERed Volunteer Callout:

Are you concerned about climate change?

We're looking for volunteers from all backgrounds, particularly those from marginalised communities, to help us understand more about our records on renewable energy - we've got 3 million of them, to be exact.

Tasks can include:

- Cataloguing
- Interpreting our Records
- Creating educational resources
- Writing articles
- Creating artwork
- Working with children
- Having a say on the interpretation of history
- Curating digital exhibitions
- Advising us on topics such as decolonisation, cultural development and climate change
- Implementing SEO on our website

To find out more, email rachel.riddell@millsarchive.org



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This rich history of milling can be a valuable guide in the fight against climate change:

- **Maximizing Efficiency:** Historical efficiency in resource use, like using one waterwheel for multiple tasks, can inspire efficiency in renewable energy technologies (e.g., optimizing wind turbine designs).
- **Adaptation and Innovation:** The adaptability of mills for various purposes suggests the potential for current renewable technologies to find new, sustainable applications.
- **Regional Customization:** Tailoring technology to specific regions, as seen in milling history, can guide the development of region-specific renewable energy solutions.
- **Sustainable Material Use:** The balance of imported and locally sourced millstones indicates the importance of sustainable material sourcing in modern technologies.
- **Scientific Approach:** The shift to scientific methods in milling history aligns with the need for scientifically informed strategies in renewable energy.

In upcoming articles, we will focus on these points, exploring how the lessons from the history of mills and milling can be applied to contemporary challenges in sustainable energy and the broader fight against climate change.

Renewable Energy & Electricity Generation in the 70s and 80s: An Education Pack

A new education pack based on records from our archive has been uploaded to our website: it covers the development of renewable energy for electricity generation during the 1970s and 1980s. It was created by undergraduate students Megan Phillips and Katie Dawson from the University of Reading. Designed for young adults and teenagers aged 13-17, the pack includes handouts, a mock debate, and a two-hour interview with Dr. Peter Musgrove, founder of the British Wind Energy Association (now Renewable UK). Visit <https://new.millsarchive.org/70s80s-educationpack/> to find out more.

Upcoming in this Series...

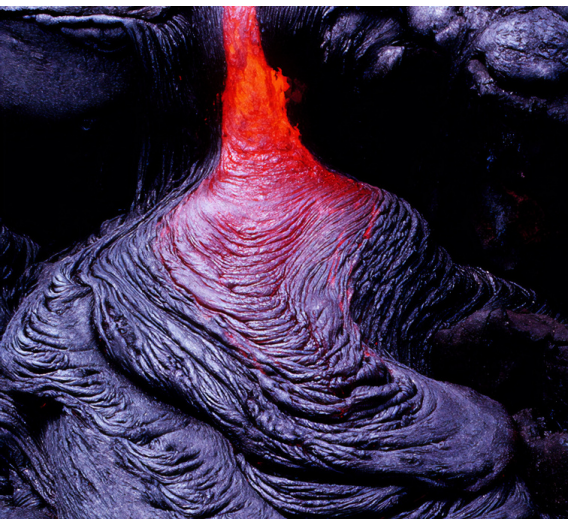
The main article, *The Forgotten Achievements of Milling: Part One*, is the second in a ten part series launching our newest monthly newsletter, Renewable Roots.

In upcoming articles in this series, we will address topics such as:

- A History of Milling in light of Renewable Energy
- The Forgotten Achievements of Milling
- What is Renewable Energy?
- The Pros and Cons of Renewable Energy in all its variations
- Reading's Local History of Sustainability
- How can an Understanding of Milling serve Renewable Energy today?
- Why is addressing the Climate Crisis so urgent?

...as well as highlighting more renewable energy case studies and a new section on monthly sustainable heroes.

If you have any questions or comments, please email outreach@millsarchive.org.



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