

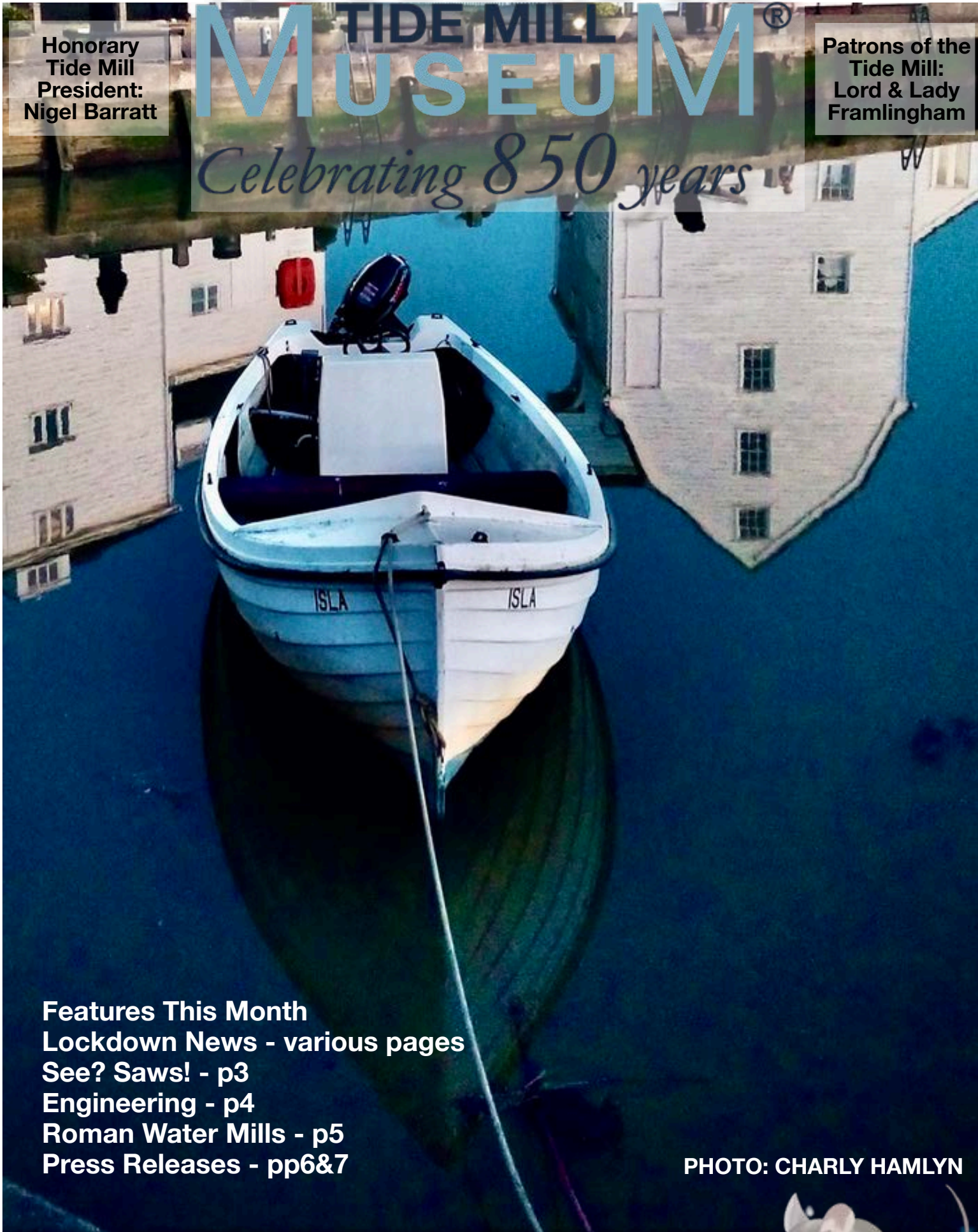
WOODBIDGE

TIDE MILL MUSEUM[®]

Honorary
Tide Mill
President:
Nigel Barratt

Patrons of the
Tide Mill:
Lord & Lady
Framlingham

Celebrating 850 years



Features This Month

Lockdown News - various pages

See? Saws! - p3

Engineering - p4

Roman Water Mills - p5

Press Releases - pp6&7

PHOTO: CHARLY HAMLYN



EDITORIAL

Here's a sad story for you.

As any keen reader (if that's not a contradiction in terms) of the newsletter will know, that your Editor bakes his own bread.

He will be the first to admit that sometimes it is not very successful, but, at other times, it is much worse. However, as he only has himself to please, he persists in this folly. One trick that he has found which invariably produces a better loaf, is to use Tide Mill flour, of course, but that has been difficult in this period of lockdown, when it was decided that the risk was too great to the millers for production to proceed. Now, as reported elsewhere, arrangements have been made to get going again, **BUT**, it is only safe to do milling again, **NOT** to do selling. So our millers can mill and bag-up and deliver to commercial customers, such as The Co-op, but not sell to Friends, or friends.

Even your Editor had to queue up at The Co-op to buy his flour - unfortunately he got there before the delivery had arrived, so was unsuccessful. But he will be able to try again, as you all must, for now.

If you have trouble finding Tide Mill flour in the shops, please let your Editor know and he will try to source some for you, or, at least, find out when deliveries will be made.

Use: [Editor](#)

VIEW FROM THE BRIDGE

We locked the Mill down two months ago because of the Covid-19 pandemic.

We have used the time since then to see how we can reach out better to schools using digital technology to communicate the material we have produced for them for their visits which are unlikely to resume in the near future. This remains work in progress and we await the outcome of a grant application we have made to cover the extra costs of doing this.

The team has also done a fantastic job posting material for children on our social media pages. Take a look.

In the last month, using Zoom, we have had lots of meetings to prepare for the resumption of milling and eventual re-opening to visitors. Health and safety measures are at the top of our list and meeting government requirements. Detailed preparations have been made and, while opening for visitors is not yet in sight, I can announce that we opened for milling again on 13 May. By the time you read this our flour should be available in the Woodbridge Co-op and other outlets. Again the team has done a marvellous job.

Stay safe and I look forward to the time when we can welcome you to the Mill again.

John Carrington,
Chair of the Tide Mill Trust



CONTACT US

Here are live links to send emails to the contacts needed for those readers who want to contribute to the life of Woodbridge Tide Mill by volunteering for one or more of the various interesting, and fun, jobs that need doing...

If you want to put something in the newsletter (or comment on it):

[Editor](#)

If you want to be a Guide:

[Wendy](#)

If you want to be a Miller:

[Dan](#)

If you want to be a Flour Bagger:

[Brian](#)

If you want to be a Warden:

[Dan](#)

If you want to be an Engineer:

[John W](#)

If you want to be an Leafleteer:

[John W](#)

If you want to help with Marketing:

[Simon](#)

If you want to help with something we have not thought of:

[Dan](#)

If you would like to contribute to our Collection or Archive:

[Fraser](#)

If you want to contact our Chair of Trustees:

[John C](#)

If you want to be a Friend of Woodbridge Tide Mill:

[Be A Friend](#)

THE LIMERICKAL MILLER



THERE WAS A TIDE MILLER CALLED GLENN,
WHO STOOD TALL, A MAN AMONGST MEN,
BUT BACK AT THE HOUSE,
HE WAS MORE LIKE A MOUSE,
SO HE MILLED AND MILLED WHENEVER WHEN.

CURATOR'S CORUSCATIONS

By Fraser Hale

See? Saws!

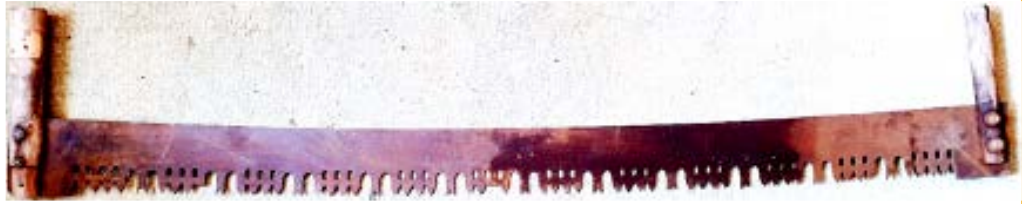
One of the most attractive and engaging aspects of the Tide Mill is its construction. As well as being an instantly recognisable building from the outside, with its hipped roof and cap-à-pie clapboarding, it is a marvel of eighteenth century construction inside.

Built almost entirely from wood, above the waterline, the Tide Mill is an important example of eighteenth century wood frame construction. The mill's existence is due to the skills and energy of the millwrights and carpenters of the time. The Tide Mill stands today (not without a lot of help, it must be said, from dedicated conservators) as a testimony to the techniques and abilities of those eighteenth century artificers.

To acknowledge this debt, and to hopefully provide a new window onto the history of the Tide Mill, there will soon be a new exhibit in the museum. We hope, once we are able to re-open, that our visitors will feel that the display adds to their understanding and enjoyment of this wonderful building.

We have been able, from a variety of sources, to gather together a collection of tools that are roughly contemporary with the construction of the Tide Mill. These include a number of hand tools that would have been used to keep the mill in good running order from day to day – wrenches, mallets, oil cans, etc, as well as the all important stone dressing tools. We also have a few examples of the equipment that the builders of the mill would have used to erect it in 1793.

We have a hand auger, that has featured in an earlier edition of the newsletter, along with other shaping and finishing tools for timber. Fundamental to the assembly of timber buildings, though, is the saw. Our exhibit features two saws from the late eighteenth century/early nineteenth century, though their basic patterns and design are far older.



This fearsome looking object is a two-man, or whip saw. These saws were used to cut large timbers for the frame of the Tide Mill. An example of such a saw can be seen in the bottom left of this image from the 16th century (Museum Item 13). As the design and the name implies, two men were needed to work these saws. Some skill was required, too. In order to keep the blade from snapping it would have to always be under tension whichever way it was cutting. This meant that the blade could never be 'pushed' but always 'pulled'. This required the saw team to work in a perfect rhythm for hour upon hour in order for the sawing work to be completed efficiently.

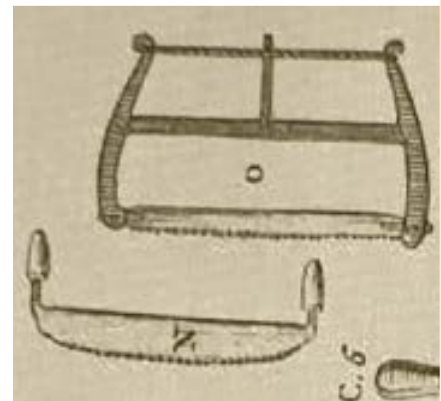


This is a bow saw, this would have been used to cut all of the smaller timbers to length to create the cladding, doorways and windows of the mill. Just like the whip saw, the steel of the blade, in order to be hard enough for the teeth to remain sharp, was rather brittle. The design of the bow saw kept the blade under tension at all times, preventing it from bending and snapping. This

pattern of saw remained popular until early in the nineteenth century.

More advanced steel production techniques allowed saw blades to be flexible whilst still having hardened teeth – the bow saw gave way to the rip saws that we are familiar with today.

A whip saw and bow saw of similar patterns to the items in our collection can be seen in this detail from a 17th century workshop catalogue (they're not drawn to scale).



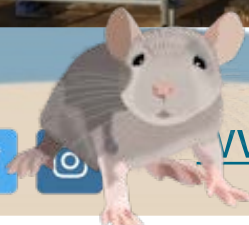
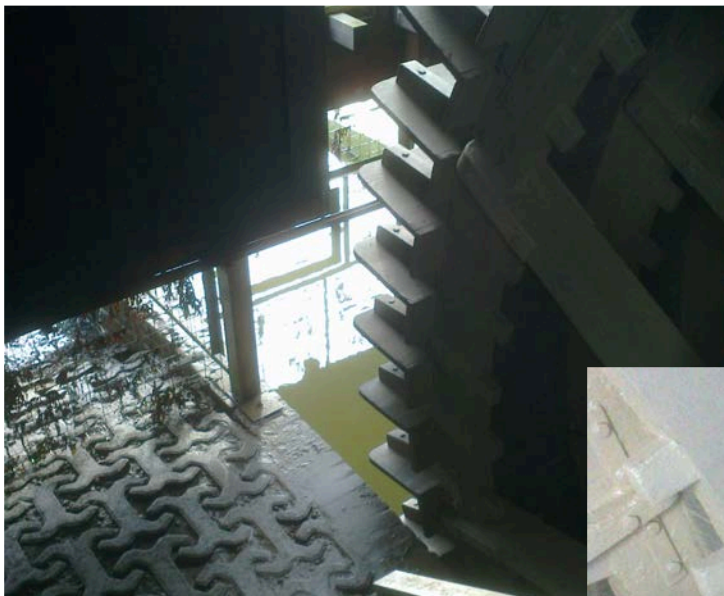
ENGINEER'S GAZETTE

By John Wood

As you all know, milling and all other activities at the Tide Mill were put on hold for several weeks. The most problematic thing about this is that machinery does not like to be out of action for long periods.

The biggest worry in the Mill is that the water wheel itself does not move. If it stays in one position for more than a couple of days the bottom becomes water-logged and the top dries out. This causes a huge imbalance which makes it impossible to mill properly, and very dangerous when we come to work on it.

Luckily, *[By a lot of careful arrangement amongst volunteers! Ed.]* it was moved regularly so all is well. It is very good that the Mill is now back producing flour and we can all look forward to the day when we can get back to normal.



Roman Water Mills

By Keith Bolton

We all know that the Romans were great builders. Without any of the modern sources of power they were able to construct roads, fine buildings, arenas, baths and dwellings on a huge scale. However, water supply was of great importance not only for pure domestic uses, but also as a source of power. It was therefore of importance that a good water supply was available for every town.

Some of you will have visited the fine Roman aqueduct bridge known as the Pont du Gard, near to Nimes in the South of France. The aqueduct carried fresh water from the area of Uzes to the city of Nimes, a



The site of the sixteen overshot wheels as it can be seen today.
Photo: Wikipedia

distance of about 50kms. It is estimated that it could have supplied between 20 and 35 thousand cubic litres of water each day (enough to fill at least a dozen Olympic pools).

The nearby city of Arles, on the East bank of the Rhone, also had aqueducts with water sourced from the Alphilles some 62 kms away with a possible flow of some 45,000 cubic litres per day, but this aqueduct also had an industrial purpose. It was joined by a second aqueduct as it ran along the top of an escarpment a few kms from the town and with this very adequate water supply the steep escarpment was used to construct a big flour mill at Barbegal.

The mill consisted of no less than 16 overshot water wheels. These were arranged in two adjacent rows of eight down the steep escarpment, the water falling from each wheel to the next one below. It is thought that the whole complex could have had an output of some 4.5 tons of flour a day. It is interesting to note that the Roman grinding stones were somewhat smaller in diameter than those in use today. Probably about 70 cms in diameter.

Please note: This article was kindly sent in by Keith Bolton in March, and Ed. repaid this kindness by forgetting about it. Sorry Keith.
If any readers find interesting articles, or just facts, that they would like to see appearing in our newsletter, Ed. Cannot guarantee better service, but promises to do his best.

The site at Barbegal was probably built in the second century AD and still leaves enough evidence for the archaeologists to understand how it worked. It is thought to be the biggest industrial site built by the Romans who used water power to conduct numerous mechanical operations.



Model of the water mills at Barbegal in Musée de l'Arles antique
Photo: Wikipedia

BUSKER'S CORNER

We're all now in lockdown, and don't think it's fun,
The Tide Mill is closed, so the grindstones don't run,
The miller is idle, and so are the baggers,
All helpers stay home, wearing face-masks to gag us;
We must all stay fit, so we're told to go walking,
But keep it all local, no driving to Dorking;
Spare time is on hand, we can catch up with chores,
But not just this minute, there's now time to pause,
Life passes us quickly; can't be more explicit,
So, relax and take stock, and make sure you don't miss it!



WHAT IS THIS, AND WHAT DOES IT DO?
Answer on last page



Here are a couple of Press Releases that may interest you.

PRESS RELEASE

6 May 2020

Woodbridge Tide Mill achieves Gold Level Suffolk Carbon Charter - again

Following a further assessment of Woodbridge Tide Mill the Suffolk Carbon Charter panel has decided to renew its Gold level award of the Suffolk Carbon Charter. The award was first given to the Tide Mill in 2015.

The Carbon Charter is awarded to companies that are monitoring and reducing their carbon emissions; it is intended to provide public recognition of those involved in making Suffolk the Greenest County. The Gold Charter is only awarded to those whose are “an exemplar of low carbon management”, and demonstrating significant reductions in carbon emissions and championing the environmental agenda.

The Panel was impressed with Tide Mill Museum’s significant efforts made and the thought that has gone into managing the Museum in an exemplary way to improve energy efficiency, community engagement and waste management.

John Carrington, Chair of the Woodbridge Tide Mill Charitable Trust, said: “At a time when the Mill, like so many attractions, has had to close and forego valuable visitor revenue this is uplifting news. We’re very proud that Suffolk Carbon Charter has chosen to recognise the Mill for its environmental significance. The Mill is the quintessence of low energy, low mileage, local food production and the Trustees are immensely grateful for the work our team has done to justify this Charter Mark ”

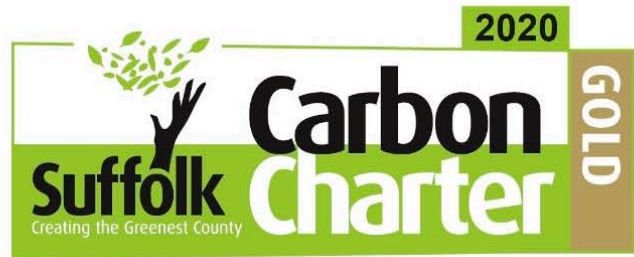
He went on to thank the East of England Coop, one of only two Pathfinder Partners of Suffolk Carbon Charter, who sponsored the Tide Mill for the award, some of whose local stores stock Tide Mill flour.

PRESS RELEASE

(Awaiting Release)

Woodbridge Tide Mill Museum has recently retained its Gold Carbon Charter Award. The Tide Mill is proud of its environmental credentials and works hard to ensure that its use of energy is as efficient and environmentally friendly as possible. We have reduced our energy consumption by over 30% during the last four years, and 100% of that comes from renewable sources. Now we have plans to go further. Thanks to a generous grant from Suffolk Coast & Heaths Area of Outstanding Natural Beauty (AONB) Sustainable Development Fund, the Tide Mill is commencing a project to install a micro-hydrogeneration plant at the Museum. The plant will harvest the energy from the tidal pond that the mill waterwheel

cannot access. Connected to an inverter and battery storage facility, this could reduce the Tide Mill’s dependence on the national grid to zero! The early stages of the project will involve detailed engineering design work, the AONB grant will allow the Museum to use the results of this work as a basis for new Science, Technology, Engineering, Arts & Maths (STEAM) educational packages. These packages will be offered to visiting school groups as well as through digital outreach platforms. Through this project the Tide Mill Museum aims to become an exemplar of green energy management as well as an educator of and advocate for environmental responsibility.



CARBON CHARTER CASE STUDY: WOODBRIDGE TIDE MILL MUSEUM

In April 2020, the Woodbridge Tide Mill Museum was awarded a Gold level Suffolk Carbon Charter in recognition of the wide range of carbon reduction measures the organisation is taking, which have resulted in continued reductions in its greenhouse gas emissions.

The museum is a historic example of a working tide mill. Run on a charitable basis, the museum and visitor attraction produces flour to the local community from local grain. Volunteers regularly demonstrate the mill's process and production to visitor groups and school groups, with a focus on the educational benefits as a working example of sustainable and 'green' tidal energy.

The Mill joined the Carbon Charter in 2015 and in 2018 was awarded its first Gold level award. As a Gold level award holder the Woodbridge Tide Mill Museum has been recognised by the Carbon Charter for the significant efforts made and the thought that has gone into managing the Museum in an exemplary way to improve energy efficiency, community engagement and waste management.



Emissions Reductions and Education:

- LED lighting replaced internal halogen lighting and external floodlights
- 100% renewable energy tariff for electricity
- Sub-metering installed to measure efficiency of grinding
- Sluice-gates re-aligned to increase efficiency and maximise use of tidal energy
- Milling techniques refined to enable milling on a lower tide and reduced reliance on electric motor
- Renewable energy and sustainable food production are key to communication with visitors and school groups



Procurement:

- Grain is bought from local grain merchant Jewers and is sourced from Weston (nr Halesworth)
- Grain is delivered in bulk (1 tonne quantities) in paper sacks which are re-used
- All flour is packed in paper sacks which are purchased from a local supplier in Norfolk
- All products sold in the gift shop are made in Suffolk

Sales and Transport:

- Flour is supplied to local bakeries and retail outlets - delivered on foot by volunteers wherever possible
- Staff, volunteers and visitors are encouraged to come on foot or by bike

Waste Minimisation:

- A bespoke extraction system captures flour dust (previously waste). This is the equivalent of 120kgs (around 88 bags flour). This flour is to be distributed as a new product for restaurants and will no longer be waste.

"Our main source of helpful advice on 'green' issues and sustainability has been through the Carbon Charter. We are so pleased our actions have been recognised again."
 Dan Tarrant-Willis, Head Miller

www.carboncharter.org

www.woodbridgetidemill.org.uk



Don't forget that the best way to ensure that you continue to receive this newsletter (regardless of all the other benefits) is to keep up your membership of

The Friends of Woodbridge Tide Mill.

If you are not already a member, but would like to be one, use this link:

[Be A Friend](#)

THE MILLER'S CHRONICLE

By Dan Tarrant-Willis

dantarrantwillis@yahoo.com

I have had a month of Sundays, yet unlike the popular idiom I have done the things around my house that were proverbially

impossible. For this I am grateful. Yet now the time has come to re-engage for the sake of the mill.

Although the mill has been locked down it has been kept in perfect and serviceable condition. Now we are planning our gradual re-emergence and will start milling operations next week with a very small team and will only be producing flour for our local wholesale customers. For us the challenge is complying and safely operating within the new covid 19 guild lines and regulations. On this point we are sorry not be able to sell flour directly from the mill.

There has been much discussion. Risk assessments and procedures have been formulated and produced by consensual agreement.

The age demographic and health status of our marvellous team has had to be considered for their and the communities benefit. It's been a step leaning curve for all of us yet I am confident that the mill will be operating and producing flour in the right properly safe manner. In the same way we have all had to get used to doing things differently during this difficult time.

The mill as a food processing facility has to adhere to standards of health and safety and food hygiene beyond those of other general places of work. Consequently the mill is effectively still locked down apart from our very

small milling team. This will protect our volunteers, customers and community.

This year's production of our super flour has taken a knock lately. We'll report figures next month.

PURPOSE: The purpose of this newsletter is to support and advance the objectives of the Trustees of Woodbridge Tide Mill. The newsletter provides all supporters a forum of their own, together with information about current and future events and it is hoped it will foster a sense of common interest and shared identity, encourage increased participation and entertain.

EDITORIAL POLICY: The editor has full editorial responsibility for the newsletter. Articles that appear and views expressed are not the official position of the Trustees on any subject unless specifically noted as such. Items submitted for inclusion may be edited for grammar style and/or space requirements and contributors wishing to be alerted of any changes prior to publication must notify the editor at the time of submission.

IMAGES: Unattributed images are by the article author or Ed.

DISCLAIMER: The Glenn Miller gag cartoon, on page two, does not make a comment about any real helpers at WTM.

Diary Dates for 2020

For reasons that you don't need explaining yet again, this column is 'resting'.

For full general mill working times use this link to the website:
[Turning & Milling](#)

Correspondents: all copy for next month to be sent to p.t@gmx.com by the middle of June please.

WHAT IS IT? ANSWER

This is the gearing drive for the button-operated Flour Dresser which can be found on the second floor. The Flour Dresser, although not used now, was installed to sieve out larger pieces of material which were not wanted in the final product.

