

2023

Cambium

April



Publication of the ©Guild of Woodworkers, Wellington Inc.

www.gww.or.nz

ISSN 2463-3755

Issue no.224

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Guild Events

- May 2 AGM - plus woodwork Competition
- 14 Manawatu Expo
- June 6 Guild Meeting – possible woodwork tools
- July 4 Guild Meeting – Turners Group
- Aug 1 Guild Meeting – Carvers

Our Presidents Corner

At the beginning of March, we had a small space to show some of our woodwork items at Hutt Art, sharing the Odlins gallery with a varied range of visual artists. Hutt Art society also said they were pleased to have a number of us there for the “Have a Go” day; when we had activities on the front lawn, to draw people in to try their hand - not only at woodwork, but with weaving, pottery, printing and painting. A big thanks to those came along to take part.



For those of you who missed the Feb Guild meeting - it was decided to forego our chance to exhibit at Thistle Hall in May, as well as not to send a team to the Manawatu Expo. We may still send a table of 10 items, to enter their competition.

We have been considering some ideas (following some thoughts from members). For instance, we could report more on show and tell, which could be included in Cambium, as well as topics that enthuse our members. More varied & practical turning sessions, perhaps on another day. Perhaps more competitions, to share new ideas, as many other Guilds do.

There is still a possible chance to run a joint exhibition with artists at Hutt Art around the end of August. Before that ... we have our AGM in May. We need some new committee members, and a new President; to be elected at our AGM, in order to continue running the Guild. If you are keen to help - now is your chance - your Guild needs you. Later our Guild is coming upon a 40 year anniversary; an event which is worthy of a celebration towards the end of 2023. Cheers, Nick

New Editorial

This will be the last issue of Cambium with me as editor. Hopefully we will have a someone new to help Michael with the next issue. I will be away from 15th June until the end of September initially on a Woodturning cruise (see www.woodturningcruise.com) there are still cabins available if you are interested. After which I will be visiting family in the UK.

John piper and I have just completed another beginner's woodturning class so please welcome Pauline, Simon, Mike (not shown) and Alistair to the Guild.

John and Gordon have recently taken a masterclass with Chris Hooton in Taupo with a view to running more beginners training. We had planned for a couple more volunteers to do the same but unfortunately Chris Hooton is unable to do any more training due to serious medical issues. If any of you can help bring our volunteers up to the skill levels to teach beginners, then please let me know.



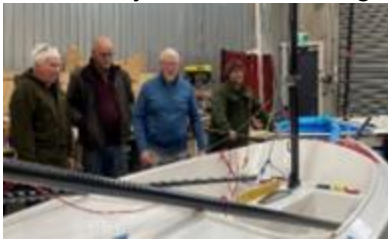
Mark

‘One Good Turn Deserves Another’- A reflection by Don Manning QSM, Trustee & CEO of Sailability Wellington Trust

Like many good ideas, the synthesis of members of the Wellington Guild of Woodworkers and Sailability Volunteers came from a place I have forgotten. I suspect it was as a result of Michael Harrison getting the two groups to talk to one another.

On some Wednesdays, the call of moderate winds and no rain isn't calling us to enabling people with disabilities to enjoy a bit of 'Blue Water Sailing Therapy' that's because it's yet another Wellington howling gale or rain is insinuating its presence upon us.

On those days, we turn our mind to maintaining our craft. Sailability Wellington is by any standards very big, - bigger than many yacht clubs. We own 27 yachts, and three support boats, and they get knocked around from time to time. While some of those tasks just involve a bit of knot tying, there is a lot more to be done. Our small Hansa 303 Sailing dinghies are brought to our Seaview Shed, as are other projects including work on Trolley's Stacking Frames, and of course work on our newly designed ParAble designed yacht. From Sailability's point of view having Wood workers, who not surprisingly have many other skills is a great boon to our program.



Pictured are Brian Williams and David Winthrop*. Alongside are Ray Manning and Kelvin Smith from Sailability's team. Often Michael Harrison will join us, as well as Darrell Smith, a double amputee who is a National Champion and who is

marvellous to us all. The team is pictured here alongside one of the ParAble Class yachts, designed by the late Bruce Askew.

Darrell is equipped with a welding station and can do all sorts of magic with alloy and sparks. He's seen here (below) rigging a ParAble mast. He's also a fine coach and serious sailor. In any other society, people would be grabbing him and offering him employment.



Major tasks the group has been involved in includes making up the 'Harrison Frames' which allow us to stack our little yachts 2 high on beach trolleys. We have also worked in tandem to make a dozen centreboard trolleys. These are needed because they are weighted with a serious amount of lead to prevent boat capsizing! Our friends from the woodworker's guild have built our own little office and

some amazing Trophies for Vision Impaired sailors and general club use have appeared.



<<These trophies will be presented to vision impaired sailors after they have competed and won the right to hold them for a year.

This Trophy>> is for Sailability Sailors and is to become our Annual Achievement Trophy You are most welcome to



visit us, but please call to make sure we aren't our sailing. If you want to know more about information about our the Sailability Wellington sailing program, please go to our website. The Vimeo Clip 'Freedom on the Water' is well worth watching.

sailability-wellington.org.nz

I'm expecting shortly to grant a good turn to the wood workers, a sail in ParAble....."One Good Turn....."

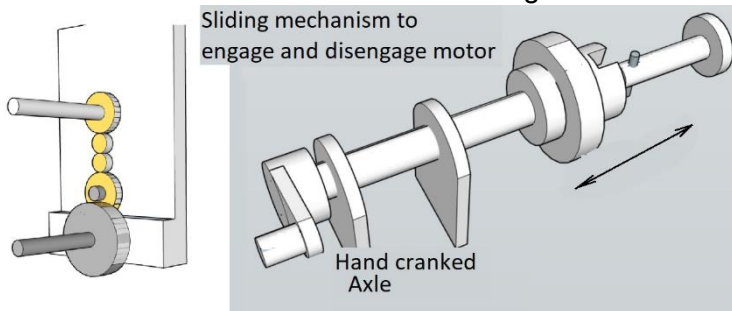
Kia Manuia, Don Manning QSM CEO Sailability Ph. 0272494275

*David and Brian are sailors from way back having owned and raced various yachts from centre boarders to keelboats, they appreciate the importance of timely maintenance and the perils from lack of it. Brian and Dave enjoy giving back to a sport they love and Sailability suits their skills, time, and energy.

Work in Progress – part 2

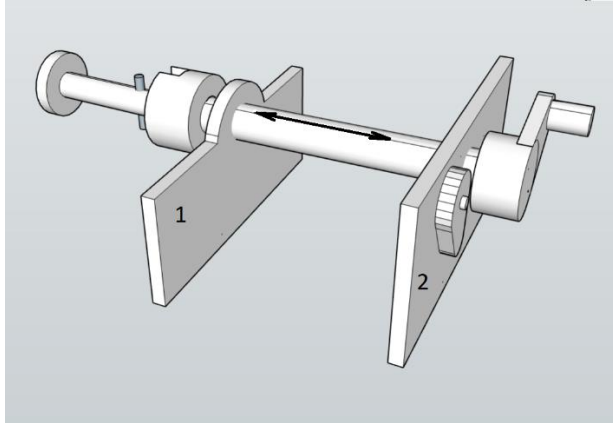
In the last report, about the construction of an automaton, the prospect of having the option of an electric motor to drive the automata and a manual mode was mentioned. A solution has been designed. First – the motor – it is a 4.5v motor scavenged from an op shop (\$2). With the gearing it came with it had two output gears which rotated at about 40rpm; it was decided to reduce the speed of one output and so a trip to Jaycar resulted in two more plastic gears which were used to reduce one of the outputs to 10rpm. A screw with a smooth shank was used to fix the new gear. The torque of the motor seemed adequate. See the diagram below. The motor drives one of the small gears in the middle.

Designing the link between the motor and the axles that rotate the cams that move the mechanism took a bit longer. Here it is.



It is a wooden tube with notches that engage with two brass pins on the drive axle of the motor when in use. To disengage the motor the tube is slid away from the motor's axle using a push/pull mechanism, not shown. Fabricating these items was interesting. The push-pull mechanism, which worked, was big and clumsy.

However, ideas evolve, and a simpler answer is often the best (Google 'Occam's Razor'). The following picture shows a simplified version, here a cam on the outside can be rotated to keep the axle away from the motor's drive shaft.



In this arrangement the disengaging movement of the rotating axle is limited by support 1 and the cam on support 2. Next time – jumping dolphins?

Michael Harrison

The CNC-group

The CNC group meets always on the second Tuesday of the month, 7:30pm, in the Technology Block of Upper Hutt College.

Normally we start with "show and tell". This automatically leads to deeper and often very detailed discussions concerning the applied construction methods and actions. A presentation about a specific design or production method then follows. For example, at our last meeting one of the members gave us a good and very instructive LightBurn training session. Given time, an introduction to FreeCad is

also envisaged. For one of the next meetings a Fusion 360 education is planned.

The project of building a bigger CNC Milling Machine has already started. The first parts - ordered for this machine - have already landed. Even if not practically participating with the building activities, this is an excellent opportunity to get a deep insight into CNC-technology. One of the advisors involved with our Milling Machine project just sent a video showing his latest creation, a lathe module. He has built his own milling machine - shown on the video - and just added some days ago this feature. If interested, have a look at this link:

<https://clipchamp.com/watch/LzNO4ePbNTH>

If you want to get further information concerning the CNC-group activates, just send a message to either Hartmut Kuwilsky <hartmutky@yahoo.com>, or to Grant Miles <grantrx8@gmail.com>.

Anyone interested in this technology sector is warmly invited to come and participate.

Hartmut Kuwilsky

Oak Timber in NZ - Part 2, by Eric Cairns

Oak was commonly planted by early British settlers, and many of these are now mature trees. For various reasons, trees fall down, and NZ wood workers get a chance to put them to good use. Oak species are not all equal and amongst common oak species here, the Turkey oak (Q cerris) is not as highly regarded as others. Pedunculate oak (English or Q robur) is typically a broad spreading tree without much straight trunk. Northern Red oak has a similar form. These wide-spreading trees, subject to stress from wind, lean or uneven crown weight, and full of knots, are not ideal for timber slabs due to movement during drying. But trees with large diameter, straight trunks with even crowns should make good lumber. Ideally, they would be quarter sawn

oversized and dried very slowly. End grain should be sealed to slow drying. Oaks logs will have a substantial defect core, and the heart and shakes should not be included in a slab. Once dry, the wood should be reasonably stable, but you should expect dimensional changes if the item is subjected to wide changes in humidity.

I have heard mixed reports of success with milling oaks, with more complaints from North Island millers, so for what it is worth, South Island grown oak has a more favourable opinion. Some millers say that trees should be older than 60 years before harvest, but fat trees of about 30 years old have been successfully utilised. The sapwood content of young or rapidly growing trees will be larger. Q robur can take up to 20 years before significant heartwood is formed. Sapwood of oak is susceptible to household borer. Also, the native pin hole borer can attack trees under stress.

The fine Woodworking School at Nelson has successfully used fast grown red oak for chairs, so I am encouraged that my mission to develop fast growing land races of NZ oak hybrids will not be in vain.

Oak species worth utilising include robur (English), canariensis (Algerian), palustris (pin oak), rubra (Northern Red), kelloggii, shumardii, pagoda, ellipsoidalis, macrocarpa, prinus, and alba. From Wood Database.com.

ENGLISH OAK



English Oak (Quercus robur)

Common Name(s): English Oak, European Oak

Scientific Name: Quercus robur

Distribution: Most of Europe, to Asia Minor, and North Africa

Tree Size: 80-115 ft (24-35 m) tall, 3-5 ft (1-1.5 m) trunk diameter

Average Dried Weight: 42 lbs/ft³ (675 kg/m³)

Specific Gravity (Basic, 12% MC): .53, .67

Janka Hardness: 1,120 lb_f (4,980 N)

Modulus of Rupture: 14,100 lb_f/in² (97.1 MPa)

Elastic Modulus: 1,544,000 lb_f/in² (10.60 GPa)

Crushing Strength: 6,720 lb_f/in² (46.3 MPa)

Shrinkage: Radial: 4.7%, Tangential: 8.4%, Volumetric: 13.0%, T/R Ratio: 1.8

Color/Appearance: Heartwood is a light to medium brown, commonly with an olive cast, though there can be a fair amount of variation in color. Nearly white to light brown sapwood is not always sharply demarcated from the heartwood. Quartersawn sections display prominent ray fleck patterns.

Grain/Texture: Grain is straight, with a coarse, uneven texture. May have irregular or interlocked grain depending on growing conditions of the tree.

Endgrain: Ring-porous; 2-4 rows of large, exclusively solitary earlywood pores, numerous small to very small latewood pores in radial arrangement; tyloses abundant; growth rings distinct; rays large and visible without lens; apotracheal parenchyma diffuse-in-aggregates (short lines between rays).

Rot Resistance: English Oak has been rated as having very good resistance to decay, and is commonly used in boatbuilding applications.

Workability: Produces good results with hand and machine tools. Can react with iron (particularly when wet) and cause staining and discoloration. Responds well to steam-bending. Glues, stains, and finishes well.

Odor: Has a tell-tale smell that is common to most oaks. Most find it appealing.

Allergies/Toxicity: Although severe reactions are quite uncommon, oak has been reported as a **sensitizer**. Usually most common reactions simply include eye and skin irritation, as well as asthma-like symptoms. See the articles [Wood Allergies and Toxicity](#) and [Wood Dust Safety](#) for more information.

