

A Well Considered Cabinet

After studying woodworking in the UK and then Japan, Harry T. Morris combined influences and aesthetics to make a cabinet in Australia from reclaimed timber that expresses his ethos to the craft.

My passion for traditional tools, materials and techniques grew while studying at West Dean College of Arts and Conservation¹ in England. Surrounded by equally passionate makers and conservators I had 'found my tribe'. During my second year of study I decided that I wanted to not only design and make furniture with a hand tool orientated process that was commercially viable, but also to have an impact on the wider issues in the heritage craft sector.

My goal was to establish a name and a brand before I was 20. I developed a collection of furniture that would reflect my values. The research behind this centred on Japan and the discipline of craftspeople, and the aesthetic philosophies often at the forefront of design.

I exhibited seven pieces as HTMorris Furniture Ltd rather than as a student at The Arts and Crafts Festival held at West Dean. I was awarded 'Young

Artisan of the Year' in wood, from the South England Agricultural show and the 'Trustees award for Craft Practice' from West Dean before graduating.

Although very successful and humbling, this first exhibition highlighted my lack of genuine connection to Japan and reinforced the idea to study there. And so, ten days after graduating from West Dean I flew to Japan to study in Kyoto at Suikoushya International Craft School



where I did a one month carpentry intensive. This was my first experience of the 'discipline' I had been inspired by. We spent weeks learning about Japanese tools and how to sharpen and tune them, before making a toolbox and lots of practice joinery.

After the course I spent another two months in Japan as a journeyman, working and learning. This turned out to be more valuable than I could have imagined. I left Kyoto with a wooden box of tools and sharpening stones and a bag of clothes, and travelled all around Japan meeting traditional craftspeople. I was fortunate to meet swordsmiths, toolmakers, weavers, carpenters, furniture makers and chefs. I worked and lived with carpenters on traditional house constructions, as well as furniture makers and even canoe makers.

A chance meeting with Shane Wiechnik at West Dean early in 2019 then brought me to Sydney where I took up an artist residency at The Bower Woodworks, a workshop which Shane manages for The Bower Reuse and Repair Centre². The focus of my residency was to produce a piece to showcase the value of reclaimed timber. I would draw inspiration from the craftspeople I had met in Japan and the aesthetic philosophies I had seen in practice. Ultimately it would reflect the ethos of The Bower in terms of sustainability and the use of reclaimed materials, combined with my passion for heritage craft.

I settled on making a low sideboard with sliding doors, fabric panels and a stand construction (fig.1). The final dimensions of the cabinet are 1100mm wide x 300mm deep x 375mm high (360mm above floor).

Thoughtful timber selection

The Bower practises furniture repair as well as taking on commissions and teaching classes, all of which use donated reclaimed materials. In the



Three views of *Fuzei 002* in recycled timbers. The cabinet is 1100mm wide x 300mm deep x 375mm high (360mm above floor).



workshop is a large pile of timber salvaged from roadside collections, demolition sites and donations.

I pulled out some old, exterior blackbutt tongue and groove and a 60mm thick architectural beam of old growth Western red cedar and examined it all for natural and manmade defects such as oxidised nail holes and saw marks (photo 1).

First job with reclaimed timber is checking for metal, pulling nails and checking moisture content if possible. Once I was confident I could take a blade to the timber

without the risk of a heartbreaking chip in my plane iron I could skim the oxidised or coated surface to see the raw surface of the timber.

Thoughtful timber selection is very important to me. Making anything out of wood should never be a case of just using the most convenient material; every choice should be justifiable. This consideration becomes even clearer when reclaimed material is used. No longer are you just considering grain orientation and figuring, but also whether defects should be avoided or showcased.



1

The four components of the simple door frames all have the bark side of the tree facing forwards and the centre of the tree in the centre of the door. This is subtle – viewers will not say: ‘I’m glad you considered how you presented the radial cut face in the same way but mirrored on each component, and I’m thrilled the trees are clearly all facing the same direction’...but there is good reason for doing it. Sometimes we see a piece of furniture and think it looks just right but can’t tell you why. This is not achieved by groundbreaking, conceptual design – but by subtle added value that comes from the care taken with every small decision made.

Fuzei

The Japanese concept of *fuzei* often refers to beauty beyond what is usually considered beautiful, finding peace and satisfaction in the imperfect. In this sense, defects may be prominently shown or featured subtly in a more modest manner.

I had one very rippled and weathered board of eucalypt which wasn’t wide enough for the top or sides. With three cuts it was however possible to ‘widen’ the ends with holes with the offcut from the middle (photo 2). With careful selection, the join was invisible and I had two matching boards for the sides. The holes are in the same relative position on both sides and the gum vein feature is mirrored.

The cedar for the doors had many blackened nail holes which I didn’t necessarily want showing, however the timber was stunning and I liked the signs of its previous life. I also want to prove that fine furniture can be made with reclaimed wood and needn’t appear rough, as some may think. As the doors were sliding I left the nail holes visible on the backs; they are only seen when the doors are removed.

Orientating the grain in the door frames was crucial so the radial face of the timber would contrast tight, straight, simple grain with the figure on the sides. The door components were not perfectly quartersawn and had sap wood in some places.

Joinery, grooves and tool care

Once all the boards that needed widening had been jointed with a trusty No.4 and glued up (photo 3), I started to mark out the joinery. The corners of the carcase are joined with half blind dovetails. Dovetails have become a mark of ‘good’ craftsmanship but I don’t think this is a perfect way to show refined work. The Japanese make very little joinery to be aesthetic, every interconnecting surface has a purpose. For me, the half blind tails are a balance – visible only from one side, they are a little more modest than through tails, although with fine pins and a thin lap, they still show a refinement of skill.

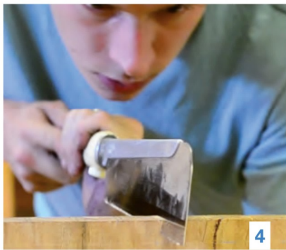
The dovetails were cut with a fine Japanese saw (photo 4), then chopped out with a chisel (photo 5). This was a challenge in the very dense eucalypt as there is no leeway with a timber this hard and brittle. It’s like cutting dovetail in steel: too tight they will not go together, too loose and you have a weak joint with gaps. I enjoyed the challenge of the eucalypt, although physically hard work to cut, it has its benefits – in contrast to a softer timber, you can more easily keep really sharp edges. Rounded edges are common in woodworking. Although these can be applied thoughtfully, often they look clumsy and unrefined. A rounded corner is a good way to hide mistakes.



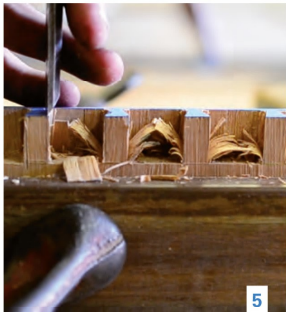
2



3



4



5

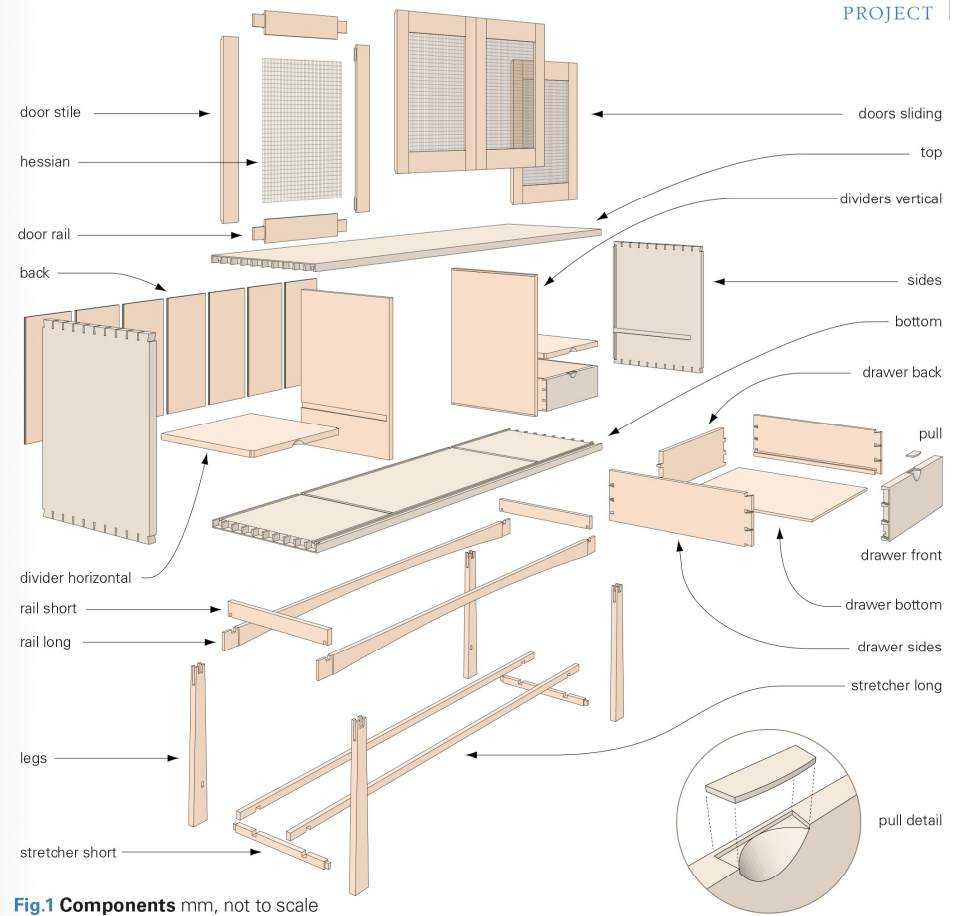


Fig.1 Components mm, not to scale

CUTTING LIST				
PART	QTY	LENGTH	WIDTH	THICKNESS
Carcase				
Sides	2	375	300	16
Top (two boards joined)	2	1100	300	16
Vertical dividers (excl. dovetails)	2	343	260	13
Horizontal dividers	2	257.5	260	13
Back	7	355	152	6.3
Drawers				
Front	2	247.5	80	13
Sides	4	250	80	8
Back	2	247.5	70	8
Bottom	2	240	250	6.3
Doors				
Stiles	8	343	40	12
Rails (excl. tenons)	8	207.5	40	12
Stand				
Legs	4	344	40	16
Top rail	2	288	32	12
Front rail (Curve)	2	1064	40	12
Stretchers (excl. tenons)	2	256	16	12
	2	988/1100 overall	16	12

- The wood used was selected from The Bower’s stockpile of salvaged timber.
- With three cuts it was possible to ‘widen’ the ends with holes with the offcut from the middle.
- The boards were jointed and glued.
- The dovetails were cut with a fine Japanese saw.
- Chopping the pins out with a chisel.



6



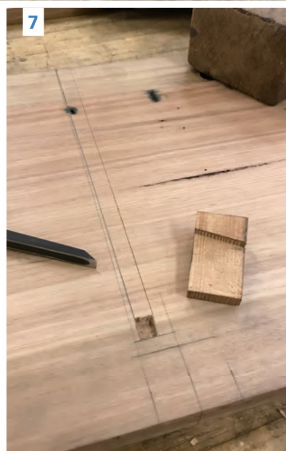
9



10



11



7

I planed the grooves for the sliding doors with a plough plane (**photo 6**). Here two considerations are important. Firstly the condition and set-up of the tool, and secondly the position of the dovetails. As with any tool, a plough plane needs flattening, sharpening and adjusting before use. The groove must sit within the first dovetail, this means the groove does not have to be stopped, but it can be planed right through – this should be considered all the way back when marking your tails.

The vertical dividers within the carcass are joined with barefaced, tapered sliding dovetails. A shallow tapered stopped dado is cut into the carcass by carefully sawing the edges (**photo 7**). The dado is tapered on one side which also has the angle cut to receive the dovetail (**photo 8**). This works much better with a Japanese saw as it's a stopped cut, the saw cutting on the pull helps to remove sawdust. I then used a chisel and mallet to remove some of the waste.

A sharp router plane cuts to final depth and flattens the bottom. The set router plane is used as a marking gauge to mark the shoulder of the dovetail on the vertical divider. As the dovetail is only 4mm deep and the divider is cedar I do not need to saw

this shoulder, I can simply deepen the gauged line with a single bevel knife. I planed the angle of the dovetail onto a scrap and used it as a jig to pare to my knife line; this only works with a chisel with a dead flat back. One side of this jig is dropped down slightly to form the taper.

Surface prep and kanna finishing

Once all the joinery was cut the surfaces could be prepared for finishing. For all the cedar components I attempted a *kanna* (Japanese plane) finish (**photo 9**). I used the *kanna* which I had learnt to make and use in Japan to take fine shavings and leave a glossy, smooth surface – much more pleasant than sanding, although it takes a lot of care for the tool and the material.

The eucalypt however was sanded (**photo 10**). Sandpaper is a tool like any other, and should be treated as such. Surface preparation is something not to be rushed, although this is much easier said than done. Visiting many schools and exhibitions in Australia and England, I noticed finishing seems to be a weak point or even non-existent in many courses. Finishing is part of the making process, as important as the rest; not just something we do at the end to make it look nice.

The type of finish, how it will be applied, and when, should be considered at the design stage. For this piece I chose to use three different finishes and a few different ways of applying them. The inside of the carcass was finished before assembly with amber shellac, brushed on (around seven coats) before being waxed with a hard paste wax (beeswax, carnauba and turpentine).

The cedar parts were brushed in the same way but with an extra blonde shellac as the amber shellac looked a little too orange. The outside of the carcass would be finished with amber shellac again, but after assembly in a very different process.

Raw materials and assembly

Studying historic craft in a conservation workshop at West Dean, I learnt a lot about the importance of reparability. I am concerned with the longevity of my furniture, but beyond the life of the piece I also want it to be easily repairable. A carpenter with basic knowledge should be able to fix it. Too complicated in joinery choices, or things that are hidden and irreversible – these are factors that shorten the potential life span of an object. Partly for this reason



12

I use animal protein glue to assemble my joinery; it is used warm and can be reconstituted with warm water at any time. This is also a safety barrier for me, if something goes wrong in the next day, I still have the chance to take it apart – where as with PVA I would have no chance.

I like to know exactly what I am using, that what I am selling or promising to a customer will last 200 years. This leads me to use raw materials rather than modern synthetic products. I do not know enough about most synthetic adhesives or finishes to understand how they will degrade or exactly how

6. Using a plough plane to create grooves for the sliding doors.
7. A shallow tapered stopped dado is cut into the carcass.
8. Assembly is easier with sliding dovetails that are tapered.
9. Well turned, a *kanna* plane can take fine shavings and leave a glossy, smooth surface.
10. Sandpaper is a tool like any other, and should be treated as such.
11. Assembling the carcass with vertical and horizontal dividers in place.
12. The doors were a traditional construction.

- 13. Fitting the sliding doors.
- 14. After testing, a thick cut shellac was chosen to stiffen the hessian panels.
- 15. The hessian was fixed into rebates with hide glue and a few tacks.
- 16. Some of the joinery cut for the stand.
- 17. A joint based on Japanese temple joinery was used for the rail to leg joinery.

they will act as I use them. With raw materials, the mystery is gone. Hide glue is collagen, proteins. Shellac is tree resin that is excreted by a lac beetle. Beeswax is harvested from the beehive, carnauba wax from the leaves of a palm tree, paraffin wax is derived from petroleum. I don't know what is in chemical stains, so why not use raw pigment and a solvent to colour timber?

After finishing the inside of all components I was ready to assemble the carcass with vertical and horizontal dividers in place (photo 11). The frame around the drawer is just composed of the vertical divider and the horizontal divider above. The drawers do not run on any sort of side runners, just the bottom of the carcass.

The glue up was straightforward because of the tapered sliding dovetails. Without a taper, assembly is a nightmare as this ensures components slide in easily and tighten at the last moment.

Fabric door panels

The doors were a traditional construction (photos 12, 13). I am

experimenting with different textures in my work. In line with The Bower's important objective of reducing waste I wanted the fabric to be recycled. By chance, on my way back from the beach one day I spotted a pile of hessian (jute) coffee sacks on the side of the road – two of these would become my door panels.

I experimented with many ways of stiffening the fabric instead of stretching it. I tested samples with hide glue, PVA, rice starch paste, beeswax, pigmented hide glue, and decided on a thick cut shellac in the end.

The fabric was stretched over sacrificial frames and brushed from both sides with shellac, four or five coats (photo 14). This was then cut with scissors and fixed into rebates in the rear of the doors with thin hide glue and a few upholstery tacks (photo 15).

The doors then had a tongue cut top and bottom with a rebate plane that would be received by the grooves planed into the carcass. The top tongue and groove is deeper than

the bottom, meaning you can lift the doors in and out. Alternatively, the doors could be fixed and assembled in place when the carcass goes together. The doors are the most handled part of the piece and are likely to be the first thing to break, so being removable ensures they are easy to repair.

Stand assembly

The frame was designed to be strong enough so components could be thin but also easy to assemble. The stand features half laps, mortise and tenons and a joint based on joinery seen at the top of corner posts in Japanese temples (photo 16). Technically it is a half lapped, double through bridle joint (photo 17). This joint is self supporting. It relies on mechanical connection rather than adhesion, meaning it needs no clamps to be assembled. The shoulders of the half laps are slightly offset (like a drawbored tenon) so they pull the shoulders tight when assembled.

Drawers

The drawer fronts are off-cuts from the eucalypt and the back, sides and bottoms are the same cedar used for

the back. The sides were taken fairly thin – in combination with the fronts this gives the drawers a satisfying weight. They were constructed with half blind tails on the front and through tails on the back. The bases slide into grooves from the back and adhered only to the fronts.

The drawers are 5mm short of the depth of the carcass and collide with thin stops on the backside of the fronts. A drawer that is the whole depth and is stopped by the back of the carcass is problematic; firstly it's very difficult for that drawer to land in the right place with very little room for adjustment. Secondly, the drawer has opposing grain direction to the carcass; as the carcass contracts in depth the drawer will sit proud, and vice versa for expansion.

French polishing

The final task was to finish the cabinet exterior. I used amber shellac that was mixed from flake to French polish the top and sides; the underside was brushed. I have been practising traditional French polishing for the last two years, self taught and still learning. I polished


the sides to a slightly lesser extent than the top. The compression of the polish in this process gives the grain a depth I have not experienced with a modern finishing technique. The top took around a week to complete. The outside of the cabinet was not waxed.

This cabinet was made to tell a story of my experience and be a showcase of what I believe to be valuable – heritage craft and hand skills, traditional materials and techniques, reparability, longevity, waste reduction and sustainability.

Photos: Harry T. Morris

1. Learn more about West Dean College at www.westdean.org.uk

2. The Bower Reuse and Repair Centre is an environmental charity. The Bower Woodworks is located in Redfern, runs workshops, and creates and sells items made from recycled materials. See www.bower.org.au

 Harry T. Morris is a furniture maker in Bristol, UK. Contact him via www.HTMorris.com and Instagram @HTMorrisFurniture

