Sanding your own floors

Pain or pleasure, DIY or professional

BY ANGELA PETRUZZI

Timber floors have a pleasant and natural feel to them. Although not easy, sanding and treating your floor yourself is rewarding and possible. Hard work but rewarding for some. Would you do it again? Probably not.

Can your floors be sanded?

Most timber floors are solid sawn timber that is milled with a tongue and groove to lock the boards together. They may have been sanded a number of times already making them too thin for further sanding. Do not sand the floor if the timber above the tongue is less than 3mm in depth. Further sanding may cause the top layer to splinter off or to crack and may leave the boards loose. A quick way of checking the thickness to the tongue section is by inserting a thin metal ruler into a groove.

If you have manufactured floors with only a thin timber veneer glued to a plywood base, you may not be able to sand them. The veneer is often too thin and if you have no experience with a belt sander, you may remove all the timber exposing the plywood and ruining the whole floor. Ask a professional floor sander for advice.

Use an edge sander for along the skirting boards to blend the edges flat with the body of the floor. Never use an edge sander in the middle area of a floor as it could leave marks that are difficult to sand out.

Hiring the correct equipment

Get extensive advice from the hire company and pay attention to the manufacturer's instructions. Ask to be shown how the machine works and if there are any special tricks to be aware of.

Belt sander

The large belt sanders are heavy so you will need help to unload. If your new home is not yet completely wired up, check the power supply in the home and that of the machine in question to ensure they are compatible. If you are running extension cords over a distance and have a high demand of power supply this will cause the supply to trip which, when in the middle of working, can damage the floor. To prevent any possible accidents, be aware of where power cords are at all times.

Buy several belts in different grits. With sandpaper, the bigger the number, the smoother the finish on your timber. The lower the number, the coarser the paper will be. What number you start off with depends on the state of your floor. Coarser paper removes the unwanted material faster and with less effort. So if you have an uneven surface, maybe rough recycled boards with Black Japan or heavily varnished

boards, then start off with a 40 grit. If your floor is new and secret nailed with not much height variation, start off with 60 grit.

Check to ensure that you may return any unused belts. The usage of materials depends on the type of timber and the state it is in.

Edge sander

For areas where the belt sander cannot reach, such as around the skirting and doors and under cupboards you will need to hire an edge sander. Again, buy several discs with the same abrasion grades as for the belt sander.

Floor buffer

Depending on the finish that you want to use (refer to *TOB 144 Dec 07/ Jan 08* detailing timber flooring treatment options available), you may also require a floor buffer. This is used with a screen back or sanding paper to achieve a finer finish than the belts will allow. It is especially advantageous if you are using natural oils. Screen backs look like fly screens but also come in different grits and are used to remove sanding marks and give a finer finish, eliminating any scratch marks. If using oils, the machine may also be used at the end of the process to remove excess oil from the floor.

Orbital and triangular sanders

An orbital sander will do the finer sanding and is handy for getting into places where the larger edge sander is unable to sand; ideal also if you have stairs or steps to do.

A triangle sander will do the corners and around door frames easily. If you do not hire a triangle sander, a paint scraper will do. If oiling, ensure that no sanding marks remain as the oil will show up most imperfections, especially if you are using a stain.

Vacuum cleaner

Don't forget a good vacuum cleaner. If you have a large area, it may be worth your while to hire one, as small domestic ones may not cope with the amount of dust created. Even though many machines have dust extractors, there will always be a film of fine dust after sanding. Some hire machines may not be suitably maintained and might not have the vacuum working ideally and therefore not take in as much dust as they should.

Dust masks and hearing protection should also be on the shopping list.

Preparation

The floor to be sanded must be free from all furniture. If the room has built-in cupboards or wardrobes, do these as well, otherwise they will be different to the main part of the floor and may look odd. In the scheme of things, not doing this won't save much time or material anyway.

If you have removed carpet from some of the floor, ensure the carpet ripple bar sits just inside the room. That is, if the door is closed, the carpet cannot be seen. This gives the hallway continuity. If possible remove curtains. If not, wrap in plastic sheeting and raise well above floor level. Remove ducted heating covers and stuff ducts with paper (below floor level). Ensure that metal duct casings are below floor level, if not they will damage the sanding paper when running over the edges. Seal off open doorways with drop sheets. Check the type of masking tape as some may adhere to painted surfaces.

Step 1. Punching and puttying

If your floor is new, it will most likely be secret nailed. The secret nailing process typically involves fixing the boards at each edge with the nails driven at a 45 degree angle. As the name suggests, the nail holes are not visible when the floor is completed. The boards are also glued to the substrate for added strength.

If it is an older floor and the nails are visible then sinking them down with a nail punch and hammer to a depth of approximately 4mm will be necessary. Any nails not sunk will damage the sanding paper and the machine drum.

Vacuum to remove any dust particles in the nail holes and between boards. To ensure a good match with your timber, choose a putty to suit your flooring, or putty can be mixed to achieve the colour required. Do not use an epoxy type of putty if you will be using natural penetrating oils such as the Livos oils – *Timbermate* is a good match. Putty larger holes slightly overfull as putty may sink lower than floor level if the hole is not filled properly. If you have wide gaps in between your floor boards, it is best to get used to them. By puttying along the length of them, with time and floor movement these have a tendency to crack and fall out and will cause an unsightly appearance, more so than having a nice even gap.

Wait till the putty is completely dry before continuing to sand. When oiling, no cutting back is necessary so puttying must be done in the initial stages.

If the flooring contains natural features such as black gum veins, putty these in black while the nail holes are puttied as close as possible to the colour of the timber.

Step 2. Coarse sanding (cross sanding)

This first step of sanding is to provide a level and evenly sanded, bare floor free from any coatings. For new floors, this first step is used to cut the boards level by taking out any ridges or high points. With old floors, it removes the old varnish or paint. If your flooring has a heavy varnish finish or bitumen paint, you may need to start the sanding with a 24 grit belt otherwise 40 or 60 grit will be sufficient.

Start at a point 45 degrees to the floorboards and from which will allow the longest and widest path through the room. When starting the machine ensure that the drum is not touching the boards. Move forward slowly, easing the drum onto the boards. Lowering the drum quickly may leave grooves or 'chatter marks' that may be difficult to sand out. Attempt to sand as close to the wall as possible. Maintain an even pressure and slowly raise the drum as you reach the extremity of the line of sanding. Begin to walk backwards, pulling the machine, easing the drum to the floor. Continue back to where you started from.

When the original starting point is reached gradually raise the drum from the floor. Move the machine to the right or left of this sanded path ensuring an overlap of 50 to100 mm onto the first cut path. Check and replace clogged belts as required.

Continue in this manner until you have reached the limit of accessibility. Go back to the original starting point and work away from the first cut. That means if you went to the left away from centre, then work toward the right side of the room. Much depends though on the room layout.

During this process the need for repair work may become evident. Once the rough sanding has taken place, borer or termite damage may have

been exposed. If repairs are required, do those before you continue with the sanding.

If the floor is in a sad state the second cut can be made in the same manner as above but working at 90 degrees to the first cut. Only do this if absolutely necessary and ensure that the boards are thick enough.

The third cut (or as in most cases the second cut) is carried out in the direction of the boards. As the boards are now mainly level and most of the old coatings removed this cut may be done with a higher grit paper than the diagonal cuts.

Once a new path has been cut, move to the left or right and ensure an overlap of 50 to 100 mm. Continue this process across the room. When the full width of the room is sanded, turn around and sand the other side of room.

Step 3. Edging

Now it is time to use the edge sander. The perimeter needs to be sanded level and blended into the body of the floor. Overlap a distance of some 100 to 150 mm. Care should be taken that the machine is held level so that the edger does not dig groves into the boards. Repeat the sanding and edging gradually working up to a finer grit. Grades of paper used on the edging machine are the same as those used on the belt sander; if you started sanding with a 40 grit and finished with 120 grit then use the same sanding grits for the edging. If you think you can take shortcuts by starting off sanding with 40 grit and then jumping to 100 grit, you will have a badly scratched floor and will need more time and materials to rectify the scratches left by the 40 grit papers.

Never use an edge sander in the middle area of the floor. It could leave swirl marks or deep cuts that may be very difficult to sand out.

Middle sanding

The second sanding removes the scratches left from the previous sanding and creates a finer surface. Repeat the same process, but this time use a finer grit than previously. This time, only move the machine along the length of the boards; no cross cutting is necessary. Again, use the edge sander with the same grit paper that you have just used to do the main part of the floor.

The final sand

The final sand uses a finer grade of paper – once again reducing the depth of the scratching and prepares the floor for the coating system.

Vacuum the floor, not forgetting the window sills and door frames.

Corners

For areas that the edge sander cannot reach use a triangle sander and sand close into the corners and around the doorframes finishing off with at least 120 grit sandpapers. Ensure that all sanding marks have been removed.

If no machine is at hand, use a sharp paint scraper. The scraping action should always be in the direction of the grain. Then sand by hand along the grain of the timber to a fine finish.

If you do not have a paint scraper and your corners are heavily varnished or have paint spills, use a sharp chisel to gently remove the varnish or paint, then sand by hand again along the grain of the timber.

Buffing

If using a synthetic varnish, then this step may not be necessary. If, however, you intend to use natural oils, it is highly recommended. This will achieve a finer finish and a surface that will not require re-sanding when rejuvenation is necessary.

Fit the buffer with a white pad and a 100 grit screen back (sanding screen disc). If you have never used a buffer/rotary sander previously, start in the centre of the room and work it towards the wall slowly. Never let it sit in one place and over sand a spot.

Work around the perimeter of the room. Once back to the starting point move the buffer backwards and forwards across the grain. Overlap each pass generously and sand the entire floor. Move slowly and get close to the edges. Pay particular attention to the area where the belt sander and edger overlapped. One side of the screen back should be enough for a 20m^2 room. Turn the screen back upside down and repeat the procedure, however this time working along the grain of the timber.

Repeat the buffing with a 150 screen back in the same manner as above.

Cleaning

Vacuum thoroughly not forgetting window sills, door frames etc. It is recommended that floors be vacuumed in the same direction as the floorboards. Do not drag the vacuum cleaner along the freshly sanded boards as marks may be left.

The floor should now be scratch free. If using natural penetrating oils these will enhance the colour and structure of the timber but will also highlight any imperfections in the sanding, even more so if using stains.

If using a varnish, then it is imperative to remove all dust and grit from the floor and surrounding areas. If not, the dust will adhere to the freshly lacquered floor and give a gritty look.

Finishing the floor

Apply the floor finish you have chosen once sanding is completed. Do not allow others on the floor as they may have contaminants on their shoes that will only show up once the floor is coated. Follow the manufacturer's instructions and wear protective equipment if necessary to guard against strong vapours. It may be necessary to arrange alternative accommodation for some days.

Sanding floors is strenuous to say the least and you need to weigh up the cost of and accessibility of machines and materials and the time involved. It may be more cost effective to have it done professionally and have someone else accountable for the sanding and finishing.

If you do sand and treat your floor, the sense of achievement will far exceed the aches and pains. ■

Angela Petruzzi is from Anro Floorcare Pty Ltd, a floor sanding company that exclusively uses the Livos natural oil range of products.

www.anrofloorcare.com.au

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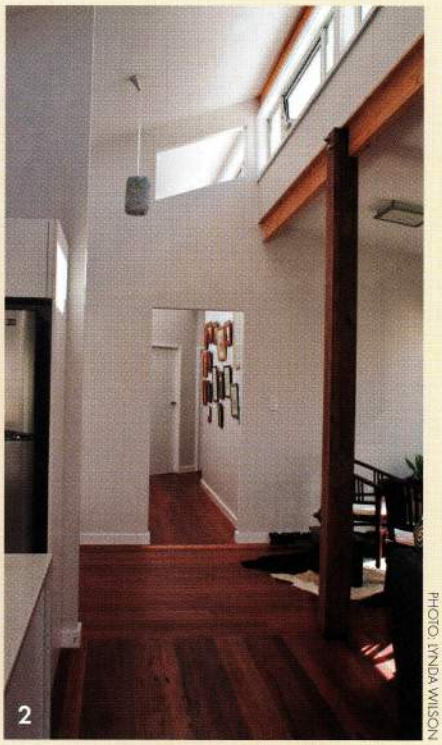

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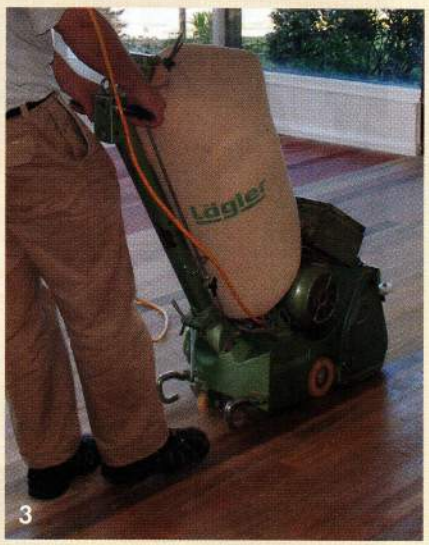

1. *A beautifully oiled blackbutt floor.*
2. *Another stunning floor – this one is of mixed forest red timbers.*
3. *Only start sanding along the floorboards as an initial sand when the floor surface is in very good condition i.e. no cupping and only a light coating to remove.*
4. *A rotary buffing machine may be used for the fine sanding, as well as to remove excess oil from the surface.*
5. *Tasmanian oak floor immediately after carpet was removed...*
6. *... natural features such as gum veins were puttied in black while the nail holes were puttied as close as possible to the colour of the timber...*
7. *...and the floor after the final sanding has come up beautifully.*