



Woodturners Society of Queensland Inc.

Safety Manual

Version number: 6.0

Date: 10 July 2021

Authorised by John Reed, WSQ President

Important Notice: This document may be out of date. For the current version, see WSQ website www.woodturnerssocietyqld.org.au. Up-to-date hard copies of the document are available on request from WSQ Hall, 19 Pine Street Greenslopes, phone 3397 8156.

Contents

- 1 INTRODUCTION 4
- 2 OTHER SAFETY-RELATED DOCUMENTS..... 4
 - 2.1 Workplace Health and Safety Policy 4
 - 2.2 Workshop Code of Conduct..... 5
 - 2.3 Risk Register 5
- 3 SAFETY INCIDENT REPORTING 5
- 4 GENERAL WORKSHOP SAFETY RULES..... 6
 - 4.1 Care when Cutting or Turning Suspect or Dangerous Timbers..... 6
 - 4.2 Lifting Heavy Objects..... 6
 - 4.3 Workshop Tidiness and Cleanliness 6
 - 4.4 Floor Surfaces 7
 - 4.5 Dust Collection 7
 - 4.6 Shavings and Timber Waste 7
 - 4.7 Flammable Liquids – Use, Storage and Disposal 7
 - 4.8 Flammable Liquids – Work Hygiene Practices 8
 - 4.9 Private Equipment and Tools..... 8
 - 4.10 Drugs, Alcohol, Smoking and Medical Issues..... 8
 - 4.11 Emergency Evacuation and Fire Safety 9
 - 4.12 Building Safety and Security 9
- 5 BASIC SAFETY RULES FOR ALL MACHINERY 10
- 6 SPECIFIC MACHINERY SAFETY RULES 11
 - 6.1 Woodturning Lathes..... 11
 - 6.1.1 Sit-Down Lathe 13
 - 6.2 Band Saws..... 13
 - 6.3 Chain Saws..... 14
 - 6.4 Compound Sliding Mitre Saw 15
 - 6.5 Scroll Saws..... 15
 - 6.6 Bench Grinders 16
 - 6.7 Belt and Disc Sander, Bobbin Sander..... 16
 - 6.8 Drum Sander 17
 - 6.9 Drill Press..... 17

6.10	Electric/Battery Drill.....	17
6.11	Routers and Router Table	18
6.12	Thicknesser	18
6.13	Jointer (Planner)/Thicknesser	19
6.14	Compressor and Compressed-Air Tools	20
6.15	Gas Bottle and Blow Torch.....	20
7	OTHER ACTIVITIES	20
7.1	Pyrography	20
7.2	Leather Working	21
8	DEMONSTRATIONS AND EXHIBITIONS	21
8.1	In-house Demonstrations	21
8.2	Visiting Demonstrators	21
8.3	Public Exhibitions.....	22
9	DOCUMENT REVIEW	22
10	VERSION CONTROL	22

1 INTRODUCTION

Woodworking can be dangerous if safe and proper operating procedures are not followed. As with all machinery, certain hazards present themselves as machines are being operated.

Workplace Health and Safety requirements insist that all members achieve an acceptable level of competency for each piece of the Society's machinery.

Safety equipment such as full face shields, dust masks and hearing protection will reduce your potential to have an accident. Ensure you provide these or that they are made available for you to use.

New members will be supported in the induction process by a qualified person (usually a Convenor or Assistant Convenor).

Whilst in the workshop, members are required to take all reasonable care of their own health and safety and that of others who may be affected by their actions or omissions. They must also co-operate with any reasonable instruction given by a Convenor or Assistant Convenor and any reasonable policy or procedure of the Society to comply with the Queensland *Work Health and Safety Act 2011* and Regulations. Always use common sense and exercise caution in the workshop and if anything feels at all dangerous, seek assistance immediately from the Convenor on Duty.

Contained in this manual is information in the form of basic safety rules for all machinery, specific safety rules for various items of equipment, together with some general safety rules which, overall, will give members an understanding of the Society's machinery and equipment, and will assist in promoting a safe and cautionary operation.

2 OTHER SAFETY-RELATED DOCUMENTS

In addition to this Safety Manual, WSQ has three other documents relating to safety issues:

- Workplace Health and Safety Policy
- Workshop Code of Conduct
- Risk Register

2.1 Workplace Health and Safety Policy

- The Society, through its Management Committee, actively manages its safety risks by applying a structured approach to the identification, analysis, monitoring and minimisation of hazards and risks in order to ensure a safe working environment for its members and visitors.
- In the Workplace Health and Safety Policy, the Management Committee sets forth the principles that underpin the Policy such as promoting a culture of safety throughout the Society.
- The Workplace Health and Safety Policy is prominently displayed in the WSQ premises at Pine Street, Greenslopes, and is published on the WSQ web site (www.woodturnerssocietyqld.org.au).
- The Policy is reviewed by the Management Committee every 12 months, or more frequently if required. Members are informed of changes at regular meetings and in the Newsletter.

2.2 Workshop Code of Conduct

The Workshop Code of Conduct sets forth the Society's expectations of members and visitors utilising the club's workshop facilities at WSQ Hall, Pine Street, Greenslopes. To maximise safety of workshop operations, all members and visitors using the Workshop are expected to familiarise themselves with the Workshop Code of Conduct and to comply with its instructions. Key elements of the Workshop Code of Conduct are:

- Observance of the stated workshop hours of operation.
- Signing in and out by members and visitors in the Attendance Book.
- Checking all machinery prior to use and reporting any defects to the Convenor on Duty.
- Wearing of appropriate footwear and clothing, and using appropriate personal protective equipment.
- Prohibition of new members operating machinery unaccompanied unless they have previously demonstrated their competence in this regard.
- Promptly reporting to the Convenor any hazards or dangerous situations detected.
- Recognition that the Convenor on Duty has full authority to control all matters in the Workshop.

The Workshop Code of Conduct is prominently displayed at the front entrance to the workshop areas. It is reviewed every 12 months, or more frequently if required. Members are informed of changes at regular Society meetings and in the Society's newsletter.

2.3 Risk Register

The WSQ Management Committee maintains a risk register, which includes information on the safety risks associated with the use of the Society's machinery and equipment, including appropriate control measures to minimise those risks. Copies of the Risk Register are available from the Secretary.

3 SAFETY INCIDENT REPORTING

Safety incidents are defined as events that cause actual injury or harm to any person, or could potentially have caused injury or harm ("near misses").

- Members experiencing a safety incident when using WSQ machinery or equipment or otherwise participating in WSQ events and activities must report it to the Convenor on Duty, Management Committee member or other authorised person.
- Details of the safety incident must be recorded (including any first aid treatment) on the Society's Incident Report Form, copies of which are held in the Office.
- The Convenor must ensure that details are recorded on the form and that the form is added to the Society's Incident Register
- Safety incidents including "near misses" will be a standing Agenda item for discussion at each Management Committee meeting. The Management Committee will review each reported incident, and take any necessary follow-up action to prevent similar incidents recurring.

- The Management Committee will review the Incident Register at least every 12 months, take any necessary action to correct any systemic safety breaches identified during the review, and inform members accordingly.

4 GENERAL WORKSHOP SAFETY RULES

4.1 Care when Cutting or Turning Suspect or Dangerous Timbers

Extra care should be exercised when cutting or turning timbers where there may be any possibility that the wood contains embedded nails, fencing wire or other foreign objects, or when using stock that has cracks or flaws that could make it unstable and likely to break apart while it is being machined.

Extra care should also be taken when using timbers that may have irritant, sensitising or other toxic properties. For further details in this regard, select the “Timbers and Health” link on the WSQ web page, <http://woodturnerssocietyqld.org.au/wp-content/uploads/2018/05/Toxic-Timbers-V5.pdf>.

4.2 Lifting Heavy Objects

To avoid back injury (or worse), members should observe the following safe handling rules when lifting and shifting heavy objects:

- Plan your lift: make sure your path of travel is clear. Think whether the lift should be broken into stages.
- Size up the load (weight, size and shape): consider your physical ability to handle it. If in doubt get a trolley or other mechanical device or assistance. Check if the weight is stable or will move about e.g. liquid. Avoid the lifting of loads that weigh more than 16 to 20 kg.
- Get a firm footing: place your feet close to the object to be lifted. Adopt a balanced position.
- Bend your knees: bend your knees in a semi squat to a comfortable degree with back relatively straight and get a good handhold (use the palms and fingers, and safety gloves if the object to be grasped is rough, slippery or hard to hold). Lift the load keeping it tight and close to the body. Try to keep the natural curves in your spine when lifting.
- Make use of your body weight: use your stronger leg muscles to lift the load and allow it to rest close to your body in fully extended arms. Lift smoothly and rhythmically. Avoid any sudden jerking action as this can easily cause back injury.
- Move the load: with the load comfortable in your hands and arms and with back straight and upright, move your feet in the direction of travel; don't twist at your hips or shoulders.
- Set down the load: as with lifting, use leg muscles to lower the load by bending your knees in a semi squat to a comfortable degree. Don't let go of the load until it is secure.

4.3 Workshop Tidiness and Cleanliness

Keep the work area clean – cluttered areas and work benches invite injuries. Ensure there is room to work and move safely.

After using a lathe or other equipment, members are responsible for cleaning the machine and the surrounding area. Dust and shavings must be swept from the machine with the brushes

provided. Compressed air may be used to clean less accessible parts of the equipment, but only after the bulk of the waste has been removed by brushing, i.e. care must be taken to minimise the amount of air-borne dust. The floor area around the equipment should be swept with the brooms provided, and waste material collected into plastic shopping bag or similar container. Compressed air must not be used for “sweeping” the floor or for removing dust and shavings from your skin and clothing.

4.4 Floor Surfaces

Precautions must be taken to avoid slippery floor surfaces. In particular, care must be taken when using timber blanks with waxy end-grain sealers. The bulk of the wax should be removed using a chisel or scraper before the piece is mounted on the lathe, taking care that the waste wax is collected and disposed of before turning commences.

If you notice that a floor surface has become slippery or presents other hazards, please report it immediately to the Convenor or Workshop Manager.

4.5 Dust Collection

Airborne dust is a serious potential hazard in the Workshop. The Society aims to minimise levels of airborne dust by using a combination of Micronair dust extraction system, cross ventilation (open windows), mobile air filters, in situ dust extractors, and a ceiling extraction fan. It is the responsibility of all members to ensure that airborne dust is minimised during the operation of machinery and equipment.

Before operating any equipment or machinery in the Workshop, members must ensure that appropriate dust removal procedures are activated, e.g. windows are open, air filters and extractors are switched on, and equipment-specific vents to the dust extraction system are opened. To minimise noise levels and electricity consumption, equipment-specific vents should only be opened during dust-generating procedures, e.g. sanding.

Members should minimise the use of compressed air for cleaning equipment to minimise the amount of dust in the air. Compressed air should not be used for “sweeping” floor surfaces or for blowing down clothing.

4.6 Shavings and Timber Waste

Shavings and sawdust should be collected in plastic shopping bags or similar. Bags of shavings, small off-cuts and other timber waste should be placed in the rubbish bins provided. For projects generating large amounts of waste (e.g. more than one bag of shavings), members are asked to take the waste material away from WSQ Hall to avoid overfilling of the rubbish bins.

4.7 Flammable Liquids – Use, Storage and Disposal

Flammable liquids have a flash point less than 37.8°C and include liquid propane, methylated spirits, mineral turpentine, ethanol, acetone, Danish oil, polyurethane, paint thinners, petrol and aerosol cans.

- Keep flammable liquids away from heat, sparks, excessive temperatures and open flames.
- Keep containers clearly labelled, and closed when not being used.
- Do not use damaged containers.
- Do not cut, heat or weld empty containers, which may contain explosive vapours.

- Store in a cool, dry location that is well ventilated.
- Do not pour flammable liquids down the drain.
- Dispose of containers (empty or full) in accordance with regulations.
- Oil-soaked rags, even after wetting, should not be left rolled up, and should not be disposed of with flammable materials..

4.8 Flammable Liquids – Work Hygiene Practices

- Avoid repeated and / or prolonged skin exposure.
- Do not use cleaning solvent or harsh abrasives on skin.
- Promptly remove contaminated clothing and launder before reuse.

4.9 Private Equipment and Tools

Members may use their own tools and equipment in the WSQ Workshop, provided appropriate workshop health and safety procedures are followed. Members' own electrical equipment must adhere to Australian Electrical Safety Standards, and must be approved by the Convenor-on-Duty; equipment with damaged plugs or electrical leads is not permitted. Private electrical equipment used on a regular basis (e.g. more than six times per year) should be tested and tagged, at owner's expense.

4.10 Drugs, Alcohol, Smoking and Medical Issues

- All members are responsible for their own health. They also have a duty not knowingly to jeopardise the health of other members in any way. For example, members should not attend an open workshop session or meeting when having a heavy cold or flu). They must also observe any warning or cautionary signs attached to machinery or equipment in WSQ premises, e.g. on lathes, hot water boiler.
- Convenors and Assistant Convenors will ensure that no member operates WSQ machinery or equipment whilst obviously under the influence of medications or alcohol, or if there is a suspicion that this may be the case.
- Smoking is prohibited in the building and within 5 metres of entrances to the building.
- The Management Committee will make certain that fully stocked first aid kits are available at all times and that their location is clearly displayed.
- Convenors and Assistant Convenors with appropriate training will provide basic first aid in the event of an accident. If required, they will call for ambulance assistance or otherwise arrange for transport of the patient to the nearest hospital emergency department.
- If a member or visitor collapses and stops breathing, Convenors or Assistant Convenors will call for an ambulance. Those with appropriate training will administer CPR and defibrillator treatment.
- Any medical incident must be recorded on an Incident Report Form and included in the WSQ Incident Register (see Section 3).
- The Management Committee will ensure that a list of members' emergency contact details is maintained and kept in close proximity to the phones in the Office and Library.

4.11 Emergency Evacuation and Fire Safety

- All members must acquaint themselves with the Emergency Evacuation Plan, copies of which are displayed at each entrance to WSQ Hall.
- When an emergency evacuation is declared and the evacuation signal (air horn) is sounded, all persons in the building must evacuate immediately. The evacuation will be done in a calm and orderly manner with priority being given to evacuation of disabled persons. All persons will make their way to the designated assembly area as shown on the Emergency Evacuation Plan.
- The Duty Convenor will, if possible, secure the Attendance Book and together with all Convenors and Assistant Convenors as appropriate, ensure that all parts of the building which are accessible are clear before they evacuate the building.
- The Duty Convenor will also designate one or more persons to check the basement area.
- At the assembly area, the Duty Convenor will call the roll to ensure that all persons known to be in the building and/or listed in the Attendance Book are safe and accounted for.
- If the emergency involves a fire, the Duty Convenor will personally or by direction contact Queensland Fire and Rescue Authority (phone 000) and request urgent assistance. If possible and if personal safety is not threatened, an attempt will be made to put out the fire using the available fire extinguishers or hoses.
- When the emergency situation no longer exists, the Duty Convenor (or Fire and Rescue Authority if attending) will give the all clear and those assembled will be allowed to return to the building.
- To maintain preparedness, at least two emergency evacuation drills (daytime and evening) must be carried out at least annually. Details of the evacuation drills will be recorded in the Emergency Evacuation Management Plan Manual located in the Emergency Information box in the Office.
- Smoke alarms installed in the Auditorium will be checked annually (usually in April) and the batteries replaced (WSQ Management Committee responsibility).

4.12 Building Safety and Security

- The Management Committee will ensure that WSQ Hall is kept safe at all times by way of ad hoc maintenance and a scheduled maintenance program in accordance with Brisbane City Council lease requirements.
- The building will be kept secure at all times when not in use.
- The roller shutter door should be raised and locked when the Auditorium is in use to allow occupants unimpeded exit in event of an emergency.
- The Secretary will establish and maintain the WSQ Key Register in which will be recorded the names of all persons authorised by the Management Committee to hold keys to the building.
- Authorised key holders will be individually responsible for the security of keys in their possession. Any tag or label attached to the key will not identify WSQ or the address of WSQ Hall.

- Loss or theft of the key will be reported to the Management Committee as soon as possible.
- Transfer of responsibility for the key to another person must be notified to the Management Committee.
- Keys will be surrendered to the Secretary immediately on demand.
- Duplicate keys may only be cut by WSQ's authorised locksmith. Two or more Management Committee members will be nominated to authorise the cutting of duplicate keys.
- The Management Committee will regularly review the Key Register (at least every 12 months) to determine the need for new key holders and those persons for which key issue is no longer justified.
- At the conclusion of workshop sessions and other meetings, an authorised key holder will ensure that all windows are closed and locked, the roller shutter doors to Library and Auditorium are lowered and secured, and that entry and grille doors are closed and locked.
- All electrical outlets (except for those on the refrigerator circuit), lights and fans etc will be switched off prior to departure from the building.

5 BASIC SAFETY RULES FOR ALL MACHINERY

- Consider work environment: do not use power tools in damp or wet conditions or in the presence of flammable liquids or gases.
- Do not operate machinery when mentally or physically tired or while under the influence of drugs or medications of any kind.
- Keep non-members away: all visitors should be kept away from the immediate proximity of work areas when machinery is in operation.
- Do not force a machine - it will do a better and safer job at the manufacturer's design speed.
- Use the right machine – don't force small machines to do the job of a heavy duty machine. This could well lead to machine failure due to over stress and resulting costly repairs to the machine and worse, perhaps even personal injury.
- Safety equipment – make full use of personal protective equipment including high-impact face shields for eye and face protection, dust masks to minimise dust inhalation, and ear muffs or plugs for noise reduction.
- Wear appropriate apparel – do not wear loose clothing or jewellery (e.g. ties, bracelets, necklaces) that can be caught in moving machine parts. Roll sleeves above the elbows. Suitable footwear (preferably sturdy boots) is required at all times. Long hair should be contained.
- Power leads – do not carry power tools by their leads or pull the plug out of the socket by the cord.
- Electrical power tools – all power tools (including privately owned equipment brought to the Society's premises) must be tested regularly and comply with Australian Electrical Standards.
- Don't overreach – keep proper footing and balance at all times.

- Secure work piece – use clamps or a vice to secure work piece. It is safer than using hands only and thus frees hands to operate machine.
- Check tools and equipment – inspect all tools and equipment before and after use. Report any defective items.
- Disconnect machines from mains power when not in use, before servicing and when changing accessories such as blades, bits etc.
- Remove adjusting keys and wrenches – form a habit of checking to see that keys and adjusting wrenches are removed from the machine before switching on.
- Avoid unintentional starting: don't carry tools with finger on trigger switch and ensure the switch is off before plugging into the power supply.
- Stay alert – avoid talking to bystanders whilst operating the machine. Concentrate and watch what you are doing.
- Check for damaged parts. Before further use following the discovery of a fault, check carefully to determine the problem, report it to the Convenor of the day and attach an “Out of Order” sign to the machine. Finally, disconnect from power source.
- Observing a machine in operation – don't talk to or distract the operator of a machine; wait until he/she has finished or has turned the machine off.

6 SPECIFIC MACHINERY SAFETY RULES

6.1 Woodturning Lathes

- Ensure you receive proper training in the use of wood lathes and wood turning tools before you use them.
- Ensure all major parts of the wood lathe are in good working order, including head stock, pulleys, tool rest assembly, tail stock, motor and switches. Report any defects to the Convenor on duty.
- Read and thoroughly understand any label warnings on the lathe.
- Always wear a high-impact face shield. Safety goggles and safety glasses are not considered adequate protection because of the risk of wood flying off the lathe and striking the operator or bystanders in other parts of the face or head.
- Use a dust mask and proper ventilation (switch on dust extractor) in dusty working conditions.
- Wear hearing protection during extended periods of operation.
- Use slower lathe speeds for large diameter or rough pieces and increased speed for smaller diameters and pieces that are balanced. If the lathe is shaking or vibrating, lower the speed. If the work piece vibrates, always stop the machine to check the reason.
- Make certain that the belt guard or cover is in place. Check that all clamping devices (locks) such as on the tailstock or tool rest are tight.
- After mounting new stock in the lathe or after rechucking, rotate work piece by hand to make sure it clears the tool rest and bed of lathe before turning the lathe on. Be sure that the work piece turns freely and is firmly mounted, and that the indexing pin is unlocked. Turn the speed control to the lowest setting before turning on the lathe.

- Turn lathe off before adjusting the tool rest. After adjusting the tool rest, rotate work piece by hand to make sure it clears the tool rest.
- Stand to one side of work on lathe when machine is first switched on.
- Exercise caution when using stock with cracks, splits, bark, knots, irregular shapes and protuberances or sub-standard glue joints that may result in the work piece separating or flying apart.
- Don't leave something in the lathe that shouldn't be there, e.g. knock-out bar in headstock.
- Hold turning tools securely on the tool rest and hold the tool in a controlled but comfortable manner. Always run the lathe at slower speed when making roughing cuts until the work piece is balanced.
- Select a head stock spindle speed suitable to the diameter of the work being turned.
- If running the lathe in reverse for any reason, take necessary steps to ensure chuck or faceplate does not unscrew from lathe spindle.
- When using a faceplate, be certain the work piece is securely mounted.
- Keep an accurate check on the depth of the work piece to avoid the screws.
- When turning between centres, ensure the work piece is secure and avoid 'whip' or 'chatter' in long material. Use steadying/centring ring to provide extra support for a long thin work piece. Utilise the tailstock whenever possible – this provides an added level of safety by preventing the work piece from coming off the lathe during a “dig-in” or other. It also provides extra support when turning large, out of balance blanks.
- Always remove the tool rest before sanding or polishing operations (just moving it to one side may not be enough to avoid injury). Place tool rest on floor or someplace where it will not fall off. Avoid finishing with cloth rags as they may become entangled and cause injury; use paper towel instead. Properly dispose of finishing materials and unused finishes.
- Guard against electric shock. Inspect electric cords for damage. Avoid the use of extension leads as much as possible. Be aware of the energy stored by the inverter. Do not touch the live plugs when disconnecting the lathe from the power point.
- Always isolate the wood lathe from the power supply before carrying out any maintenance tasks on the machine.
- Never leave the lathe running unattended – turn power off. Do not leave the lathe until it comes to a complete stop. Disconnect the lathe from power source when not in use.
- Keep tools sharp, clean and properly ground. Grasp the turning tool firmly with both hands. Don't force a dull tool and don't use a tool for a purpose not intended, e.g. roughing gouge on a bowl blank.
- When using a Jacobs chuck, ensure shank morse taper is appropriate for lathe being used. Run lathe at slow speed and use the correct drill bit.
- Consider the work environment. Don't use lathe in damp or wet conditions or in presence of flammable liquids or gases.
- Work areas should be well lit (use additional portable lighting if needed) and kept clean and free of clutter and debris.

- Above all, know your capabilities and limits. Beginner turners, for example, should not attempt advanced techniques and procedures that they may have observed, but which they themselves have yet to master. In such cases, they potentially put themselves and others at risk of injury. Safe and competent wood turning will only result from proper training and education in all aspects of wood turning by those with expertise in this field.

6.1.1 Sit-Down Lathe

The Society's sit-down lathe may be converted to stand-up mode of operation. This procedure must be authorised by the Workshop Convenor, and supervised by the Workshop Convenor or other authorised member. At least two people are required to ensure that the conversion is achieved safely.

6.2 Band Saws

Band saws located in the Society's premises can only be operated by authorised members. These members, whose names appear on a notice near the band saws, have been certified by a person or organisation authorised to carry out the appropriate training and certification and/or by the Society's Management Committee. The following safety rules apply to authorised users of the band saws:

- A 1-metre perimeter around the saw should be kept clear of people, debris and sawdust that could impair traction or footing to avoid slips and falls.
- Appropriate personal protective equipment must be worn, including high-impact face shield, dust mask and ear muffs.
- Remove loose fitting clothing and jewellery, and tie back long hair.
- Check the blade tension and tracking before starting. Make sure that the upper and lower wheel guard doors are closed when running.
- Blade guard must be adjusted to just clear work (5-10 mm clearance).
- All timber, other than commercially milled timber, must be scanned with a metal detector, prior to cutting.
- Only cut timber that has a flat bottom surface, i.e. the timber must lie flat on the table; irregular shaped timber or round logs must not be cut on the band saw unless an appropriate jig is used (e.g. V-block for circular pieces, or clamp block).
- Small pieces of timber that might get jammed should not be sawn on the band saw.
- If the work is too large for one person to handle, get help holding the stock.
- Keep a balanced stance at the band saw.
- After switching on, move timber slowly onto the blade. Do not force a cut.
- Hold the material firmly using push sticks not fingers. Keep hands, thumbs, fingers and arms away from the blade; as a general rule, fingers and hands should be kept at least 10 cm away from the blade.
- Do not attempt to cut circles less than the minimum diameter recommended for the width of the blade being used. When cutting circles or curves, do not turn the work unless this action is accompanied by feed into the blade, otherwise the blade may be damaged beyond repair.
- Do not trap the blade or go backwards through the cut while the blade is running.

- For complicated patterns use multiple cuts at different angles.
- Never clear small pieces while the blade is moving.
- If the blade jams, switch off before moving the work piece.
- Always disconnect the power before changing the blade or performing any other maintenance operation.
- Turn off the band saw and wait until comes to a complete stop. Never stick an object into the blade to stop the machine more quickly. Let it stop on its own.

6.3 Chain Saws

WSQ chain saws can only be operated by authorised members. These members have been certified by a person or organisation authorised to carry out the appropriate training and certification and/or by the Society's Management Committee. The Society's saws must only be used for preparing timber blanks from sawn logs, i.e. they are not to be used for tree lopping or felling. The following safety rules apply to authorised users of the chain saws:

- Chain saws will only be used during official operating hours of WSQ.
- Chain saws must only be used outside the workshop on a flat area. A 2-metre perimeter around the saw must be roped off or temporarily fenced to keep the operation clear of people and debris. The work area should be at least 3 metres from where the saw is fuelled. Prominent signage must be displayed, e.g. "WARNING ! Chain Saw in Operation" (or similar).
- Chain saw operation requires a team of minimum of 3 personnel, i.e. Operator, Operator Assistant and Observer, whose role will be to keep other personnel outside the designated operational area. Additional observers may be required depending on the complexity of the cutting.
- Where there is more than one chain saw in operation, a Convenor or Assistant Convenor must be present to provide overall supervision.
- Appropriate personal protective equipment must be worn, including high-impact face shield, ear muffs, safety hat, and steel toed safety boots. Overalls or leggings are also recommended, together with wearing of Hi-Vis vest. Bystanders should also wear eye and hearing protection.
- Ensure that the log is securely held with suitable jaws, blocks or wedges and is clear from other protruding timber or obstructions.
- Check the blade brake, blade tension and guide bar before starting. Also check that fuel and oil caps are tightened and that there are no leaks. Lock the chain with the chain brake before starting the saw.
- Take special care to maintain good footing at all times when operating the chain saw. Position the saw so that your body is clear of the cutting attachment.
- Always hold the saw firmly with both hands.
- Make sure the saw blade does not touch any foreign materials, e.g. nails, wire, stones. Prior checking with metal detector is recommended.
- Always pull the saw out of the cut with the blade running.
- Cut timber must be placed outside the cutting area and cleared away as required.

- On completion of cutting, the chain saw must be cleaned and stored appropriately, safety enclosure removed, timber removed or stored and if necessary, sawdust bagged and removed from site.

6.4 Compound Sliding Mitre Saw

- It is the operator's responsibility to ensure that when the machine is in use, a 1-metre perimeter around the saw is kept clear of people, debris and sawdust that could impair traction or footing to avoid slips and falls.
- Appropriate personal protective equipment must be worn, including high-impact face shield, dust mask and ear muffs. Remove loose fitting clothing and jewellery, and tie back long hair.
- Before starting, check that the saw is fixed firmly to prevent tipping, the guard is free of defects and operates freely, back fence is accurately located for particular operation, and sliding arms move freely.
- For angle cuts, ensure that the locking screw is tightened firmly.
- Maintain a balanced stance firmly on both feet.
- Always keep hands at least 10 cm away from blade.
- Always allow the blade to get to speed before cutting.
- During the slide cutting operation, first pull the carriage fully towards you, press the handle fully down, then push the saw slowly towards the guide fence.
- Always make sure blade is not in contact with work piece when starting.
- Do not perform any operation freehand.

6.5 Scroll Saws

- Keep your work area clean and uncluttered.
- Wear eye protection at all times when using the scroll saw.
- Select the correct speed and type of blade for the work you are doing. Ensure that the blade is correctly installed, with the teeth pointing downward.
- Make all adjustments only when the machine is turned off and unplugged from the power source. Adjust the blade tension before starting the saw.
- Only cut timber that has a flat bottom surface, i.e. the timber must lie flat on the table. Irregular shaped timber or round pieces must not be cut on the scroll saw unless an appropriate jig is used.
- Never cut timber with nails, staples, or foreign materials. All timber, other than commercially milled timber, must be scanned with a metal detector, prior to cutting.
- The wood must not be in contact with the blade when you turn the machine on.
- Keep your hands, fingers, and body parts well out of the way of the blade. Never have your hand or fingers in the line of cut.
- Give the blade time to do its job. The teeth are small and you must feed your work slowly so you don't break the blade. Don't force your wood into the blade. This is especially true if you are cutting a curve or circle. Don't turn too sharply.
- Move scrap pieces away from the blade with a push stick, not your fingers.

- To back out of a cut, turn off the saw. Slowly and gently move the board to get it off of the blade.

6.6 Bench Grinders

- WSQ tools are only to be sharpened by convenors.
- CBN grinding wheels *Are Not* to be used for re-shaping tools.
- Disconnect the power supply before replacing grinding wheel or inspecting the grinder.
- Appropriate personal protective equipment must be worn, including high-impact face shield.
- Cracked wheels – advise Convenor of the day of this problem and do not attempt to replace unless authorised.
- Adjust tool rest to ensure that it is no more than 2 mm away from the wheel and readjust as wheel diameter reduces through use.
- Ensure wheels rotate freely before switching the power on.
- Stand to one side of the bench grinder when switching the power on.
- Do not operate the bench grinder with the wheel guard removed.
- Do not use anything to overload the grinding wheel.
- Use a wheel dresser only to remove burrs on the grinding wheel.
- Do not push objects in to the wheel to stop rotation.
- Be aware that a rotating grinder may, under fluorescent lights, appear to be stationary.

6.7 Belt and Disc Sander, Bobbin Sander

- Always wear eye protection and dust mask when operating the machine.
- Never leave the machine running whilst unattended and remain at the machine until it has completely stopped.
- Do not attempt to modify the machine or any of its parts contrary to its manufacturer's original specifications.
- Test run the machine before operating to ensure the belt is running true and other functions are safe.
- When sanding, use both hands to hold the work piece. (do not attempt to sand small pieces held in hand – use some form of suitable holding device).When disc sanding, use the part of disc surface which is moving downwards. Also ensure that the dust extractor is operating.
- Disconnect the machine from the power source before changing belts or cleaning.
- Remember to reposition the work piece to the centre line when the table angle is other than 90 degrees.
- Remove all jigs and return the table to 90 degrees when finished using the machine.

6.8 Drum Sander

- Do not operate the machine without doors, covers and guards in place.
- Do not open guard before disconnecting power.
- Use high- impact face shield, goggles or safety glasses to protect eyes.
- Stop the machine before making any adjustments or clearing chips from the work area.
- Keep away from moving parts.
- Be aware that physical contact with rotating abrasive could cause severe injury.
- Keep the floor around the machine clean and free from scraps, sawdust, oil or grease to minimise danger of slipping.

6.9 Drill Press

- Always wear high-impact face shield when operating the machine.
- Never stand, or allow observers to stand, in a position where there is potential for kickback (the grabbing of the work piece by a rotating tool with the work piece then being thrown at high speed in the direction of rotation). If work becomes loose and is seized by drill, step away immediately and switch off power without endangering yourself.
- Never leave the machine running whilst unattended and remain at the machine until it has completely stopped.
- Clamp the work piece securely to the table where possible or ensure the work piece is positioned to the left of the supporting post.
- Buffing and sanding drums must only be in contact with the work piece on the side of the drum moving away from the operator.
- Never move the head or the table whilst the machine is running.
- Before starting, “pulse” the motor switch to ensure the drill bit or cutting tool does not wobble or vibrate. Run at correct speed.
- Use only accessories designed for use in a drill press. Don't use wire wheels, router bits, shaper cutters, circle (fly) cutters or rotary planers.
- Do not use drill bits exceeding 125 mm in length below the chuck
- Strictly follow any safety warnings and / or instructions that appear on the machine.

6.10 Electric/Battery Drill

- When using the electric/battery drill, check that:
 - drill bit and screw heads match
 - lever on the handle is in the correct position for screw travel
 - correct drill speed is selected (by turning button on handle).
- When using the electric/battery drill to fix a face plate to a timber blank, ensure that:
 - the blank is held securely whilst the face plate is being screwed in place.
 - the drill is “pulsed” at low speed whilst fixing screws

- all screws travel full length into the blank to achieve maximum holding power.

6.11 Routers and Router Table

- Keep your work area clean and uncluttered. A 1-metre perimeter around the router should be kept clear of people, debris and sawdust that could impair traction or footing to avoid slips and falls.
- Wear high-impact face shield and hearing protection at all times when using the router. Appropriate dust mask or respirator should also be used.
- Remove loose fitting clothing and jewellery, and tie back long hair.
- Select the correct router bit for the work you are doing and ensure that it is sharp and not damaged in any way. Dull bits tend to overload, causing possibility of bit breakage. Never use bits that have a cutting diameter greater than the opening in the router base.
- When changing a bit make sure that the router is unplugged from the power source.
- Always use the wrenches provided with the machine to make adjustments. Using the correct wrench enables a more secure grip on the tool and may prevent slipping.
- When using a router table, make sure all guards are in place and working properly. Make all adjustments to table and fence before switching on the router.
- Before switching on the router, make sure the collet nut and any other adjustment devices are securely tightened.
- When using hand-held router, ensure that the work piece is securely held in a vice or other clamping device. Hold the machine firmly with both hands.
- After turning on the router, wait until it has reached full speed before starting the cut. Never start the tool when the bit is touching the work piece.
- Always feed the cut against the direction of rotation.
- Never touch the bit during or immediately after use. The bit is too hot to be touched with bare hands.
- Never lay the tool down until the motor and bit have come to a complete standstill.
- When using a router table, keep hands and fingers at least 10 cm from the revolving bit. For small pieces, use a push stick or feather board to ensure hands are kept a safe distance from the revolving bit.

6.12 Thicknesser

- Keep your work area clean and uncluttered. A 1-metre perimeter around the thicknesser should be kept clear of people, debris and sawdust that could impair traction or footing to avoid slips and falls.
- Wear high-impact face shield and hearing protection at all times when using the machine. Appropriate dust mask or respirator should also be used.
- Before starting the machine, adjust work piece gauges and guides, and ensure guards are in place and not damaged.
- Adjust depth of cut for light pass. Always make small cuts – 0.5-1 mm for surface cuts, and 1-2 mm for thicknessing.

- After turning on the machine, wait until the cutters have reached full speed before starting the cut. Never start the tool when the cutters are touching the work piece.
- Always feed the work against the rotation of the cutter.
- Hold work piece in position against the guides. Use push sticks where required for small work pieces.
- Kick-backs can be lethal. Do not stand behind the work piece. Observers should be kept well clear of the kick-back region.

6.13 Jointer (Planner)/Thicknesser

- Keep your work area clear and uncluttered. A 1 metre perimeter around the planer/thicknesser should be kept clear of people, debris and sawdust that could impair traction or footing to avoid slips and falls.
- Wear high-impact face shield and hearing protection at all times when using the machine. Appropriate dust mask or respirator should also be used.
- Using Planner Mode
- When using the Planner Mode (ie top table-open cutter blades) ensure the “Upper” (LH) and “Lower” (RH) Tables are locked down.
- Adjust the Lower Table (RH) to approximately 1mm for a trial cut. Then adjust the cut accordingly to suit required final result. The cut is made from the Lower Table (RH) to the Upper Table (LH). NB. This is against the direction of the cutter.
- Always keep hands a safe distance from the exposed cutter blades.
- Always use a Push Stick where possible for joint cuts or edge cuts.
- Always use a Face Guide.
- Using Thicknesser Mode
- The Thicknesser Mode uses the bottom table with the enclosed cutter blades.
- Lift the 2 pieces of the top Planner table and lock in the upright position.
- Swing over the chip remove cowl and reconnect the chip extractor system.
- Measure the thickness of pre-planed workpiece from above and adjust the height of the thicknesser table to ensure a cut of maximum 1mm.
- The direction of ‘feed’ is always the opposite direction to the Planner mode ie L to R when facing the machine.
- General
- After turning on machine, wait until cutter has reached full speed before starting cut. Never start the machine when the cutter is touching the workpiece.
- Always feed the work against the rotation of the cutter ie R to L in Planner Mode and L to R in Thicknesser Mode.
- Use Guide systems to support workpiece where possible and use Push stick where possible.
- Do not stand behind the workpiece. Ensure observers are kept clear of the machine.
- Shut down and lock power cable at completion of work.

6.14 Compressor and Compressed-Air Tools

- Always wear eye protection when using compressed air or operating compressed-air tools.
- Check periodically that all hoses are in good condition, there are no leaks, all fasteners are tight, safety valves and other pressure relief devices are not obstructed with dirt etc, and that air outlet valves, hoses, couplings etc are in good repair and free of wear or abuse.
- Never use frayed, damaged or deteriorated hoses and only use correct type and size of hose end fittings and connections. Ensure that when blowing through a hose or air line the open end is held securely.
- Air tools (drill, screwdriver, sander etc) should be handled with care (not waved around) and tool speed controlled to avoid excessive speed. Work pieces should be held securely when using the drill or screwdriver. If using sander, care should be taken that there is no possibility of loose clothing wrapping around the sander or the work piece.
- Never play with compressed air. Don't apply it directly to the skin or "shoot" an air stream at people. Do not use compressed air as a "broom" to sweep the floor or to brush down clothing. When using compressed air to clean down equipment, do so with extreme caution (use air gun in short bursts, not a continuous air stream), secure or remove any loose cutting tools, wear a dust mask and eye protection, and continue operating in situ dust extractors, mobile air filters etc for at least 20 minutes after generating dust if building is still occupied.

6.15 Gas Bottle and Blow Torch

- Wear appropriate protective equipment, including tinted safety glasses or face mask, heavy-duty gloves and apron.
- Ensure that there are no grease or oil stains on your clothing. Consider wearing flame-retardant clothes.
- Ensure work area is well ventilated and that a fire extinguisher is located close by. Because of explosion risk, there should be no naked flame if the air is heavily laden with dust.
- Ensure that blow torch is securely connected to gas bottle and that there are no gas leaks.
- Do not turn on the gas nozzle on the blow torch until you are ready to ignite it. Use a striker rather than a match to light the blow torch.

7 OTHER ACTIVITIES

7.1 Pyrography

- To minimise the risk of smoke and dust inhalation, ensure that the work area is well ventilated with one or more fans blowing smoke away from you and windows or doors open.
- Choose woods with relatively low toxicity levels. Avoid using any wood that has been painted, stained, pressure treated, moulded, etc.

- As a general rule, avoid working with any wood that is man-made or man-altered. Man-made woods include MDF (medium-density fibreboard) and plywood. MDF contains formaldehyde and may release toxic fumes when burnt. While some artisans choose to work with plywood, it can be dangerous to your health if you burn through the wood layer and start melting the glue.
- Take care when sanding your work to avoid inhalation of sanding dust. Wear a face mask and appropriate eye protection.
- Consider the health of others who may enter the work area and inhale toxic fumes, smoke or sanding dust.
- Ensure that the pyrography tool does not contact skin when switched on or is cooling down. Serious burns can result. Consider wearing gloves to shield your hands from the heat during long work sessions. Make sure the equipment is turned off and has cooled down before you leave the work area, even for a short time.
- Make sure that the cord of your tool doesn't present a tripping hazard.

IMPORTANT NOTICE: The technique of Lichtenberg high-voltage wood burning is not permitted on WSQ premises. The WSQ Management Committee has determined that the safety risks of the Lichtenberg burning technique are unacceptably high, and advises all members that they should avoid using this technique at all times.

7.2 Leather Working

- Take care when using sharp leatherworking tools such as knives, awls etc.
- Gloves should be worn when using spirit based dyes to avoid contact with skin.
- Gluing of leather pieces must only be done in a well ventilated space.
- Exercise care when using bench grinder (see Section 6.6).

8 DEMONSTRATIONS AND EXHIBITIONS

8.1 In-house Demonstrations

WSQ members presenting a demonstration should adhere to applicable safety procedures and rules described in this Manual during their demonstration. They are also expected to emphasise safety issues during their presentation to increase other members' awareness and understanding of safety procedures.

Lathes or other equipment being used during the demonstration should be fitted with an appropriate safety screen. Members of the audience should be kept at a safe distance from the equipment.

8.2 Visiting Demonstrators

It is expected that visiting demonstrators will be aware of general safety procedures applicable to woodturning, although the Management Committee recognises that they may not necessarily be familiar with specific safety rules described in the Manual. If the Management Committee member hosting the visit is concerned that applicable safety procedures are not being followed (e.g. the demonstrator is not wearing adequate eye protection), he or she should bring the matter to the attention of the demonstrator.

8.3 Public Exhibitions

During public exhibitions, it is the organiser's responsibility to ensure that the appropriate safety procedures are followed, and that safety risks for WSQ members and members of the public are identified and managed.

When moving lathes or other heavy equipment from WSQ Hall to an external venue, a truck with hydraulic lifting mechanism should be used. Members should be aware of the guidelines for lifting heavy objects (Section 4.2).

Woodturning displays should be arranged to provide easy access for all attendees, including those with disabilities. Access to fire exits should not be impeded.

Woodturning demonstrations should be arranged so that members of the public are kept at a safe distance, and safety screens should be fitted to lathes and other equipment.

Demonstrators must adhere to applicable safety procedures, including the use of appropriate personal protective equipment such as eye protection.

WSQ members participating in events or woodturning demonstrations not organised by the Management Committee may be covered by WSQ's Public Liability Insurance provided that approval is given by the Management Committee prior to the event.

9 DOCUMENT REVIEW

This Safety Manual will be reviewed by the Management Committee every 12 months, or more frequently if required. Members will be informed of changes at regular meetings and in the Newsletter.

10 VERSION CONTROL

Version number	Date	Comments
1.0	08-Mar-14	New document based on WSQ Safety Booklet version dated 25-Feb-13.
2.0	14-Mar-15	Revised version based on Annual Review by Management Committee and feedback from members. Major changes: <ul style="list-style-type: none">• Requirement for high-impact face shields to be used when using chainsaws and all workshop machinery (lathes, bandsaws, grinders, routers, thicknesser, compound sliding mitre saw, drill press)• Requirement to rope off or use temporary fencing during chain saw operation (Section 6.3)• New section on leatherwork (section 7.1) Minor changes: Revisions to sections 4.7, 4.11, 4.12, 5.0, 6.3, 6.6, 6.11, 6.12 and 6.13.
3.0	14-May-16	Revised version based on Annual Review by Management Committee. Major changes: <ul style="list-style-type: none">• Section on chain saws substantially rewritten to strengthen safety aspects involved in chain saw operations (Section 6.3)

		<ul style="list-style-type: none"> • New section on safe operation of newly acquired twin drum sander included in Manual (Section 6.8). Subsequent sections renumbered. <p>Minor change: Revision of Section 4.1 to include reference and link to “Timbers and Health” page of WSQ web page.</p>
4.0	8-Apr-17	<p>Revised version based on Annual Review by Management Committee</p> <p>Major Change:</p> <ul style="list-style-type: none"> • Removal of wearing of «heavy duty non slip gloves» as part of personal protective equipment requirements in Section 6.3 (Chain Saws). •
5.0	11-Feb-19	<p>Revised version based on Annual Review by Management Committee</p> <p>Major Changes:</p> <ul style="list-style-type: none"> • Addition of Section 7.1 (Pyrography) and renumbering of subsequent sub-section. • Addition of a boxed warning advising members that the Lichtenberg woodburning technique is not permitted on WSQ premises (Section 7.1). <p>Minor changes: Revisions to sections 4.1 (update of “Timbers and Health” web link), 4.5 (reference to Micronair dust extraction system, only open vents when sanding, and ban on using compressed air for blowing down clothing), 4.8 (deletion of reference to emergency eye wash capability), 4.10 (increase non-smoking distance to 5 metres), 6.1 (start lathe on slowest speed setting) and 6.13 (ban on using compressed air for blowing down clothing).</p>
6.0	10-Jul-21	<p>Revised version based on Annual Review by Management Committee</p> <p>Major Changes:</p> <ul style="list-style-type: none"> • Inclusion of requirement to use a metal detector in Sections 6.2 (Bandsaws) and 6.5 (Scroll Saws). • Inclusion in Section 6.6 (Bench Grinders) that WSQ tools are only to be sharpened by convenors and that CBN wheels are not to be used for reshaping tools. • New Section 6.13 covering recently acquired Jointer (Planner)/Thicknesser. Following sections renumbered.