

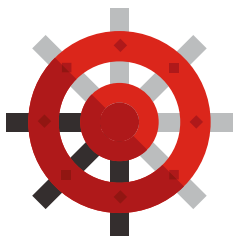
# Plain Sailing

## Reducing risk in the boat building industry

Boat building is a blend of highly skilled craftsmanship and engineering. This means it often uses a wide range of standard and hi-tech materials and includes a number of different processes including woodworking, welding, fibre glassing, and spray painting. All of these have their own hazards and risks, including fire, heat, and dust particles, which can cause problems if not managed well.



## Steer away from danger



A few simple steps can protect your building as well as minimise the risk of vehicle damage

### Best practice

- Protect any parts of the building at risk of impact (like loading docks and parking areas) with sturdy bollards.
- Display maximum height signage to protect building entrances, canopies or overhangs.
- Develop a traffic management plan for large sites which outline how vehicle movements can be managed safely.

### Must haves

- ✓ Control the movement of cranes, cradles, trucks, fork hoists and customer or delivery vehicles onsite to reduce the possibility of collisions and impact damage.

## Simple security tips

---



To stay one step ahead of thieves these simple steps make your boat yard less appealing to opportunist intruders.

### Best practice

- Don't leave the padlock unlocked on the gate during the day (someone may easily swap this for their own lock for which they have a key).
- Ensure CCTV covers both internal and external spaces – ideally high definition, monitored, motion-sensing and infrared to capture images in low light.
- Light up yard areas with powerful spotlights, especially if the boatyard is in an isolated location.

### Must haves

- ✓ Ensure the yard has a high fence and always check the gate is locked before leaving for the day. A heavy chain should be locked across the slipway for waterfront locations.
- ✓ Use a closed shackle padlock or install a protective sheath over the lock to secure gates. This helps prevent the lock from being cut.
- ✓ Install a monitored intruder alarm – sensors should cover all areas of the site not just at entry points.
- ✓ Ensure that Infrared (PIR) alarm sensors have a clear field of view of the protected area, and unobstructed by signs, stored goods etc.

## Raise the alarm on fire protection

---



Having the correct fire protection and equipment in place can reduce the potential for fire loss.

### Best practice

- Install a monitored fire detection system that's fitted with smoke and heat detectors. Choose a detector unit that is suitable for the environmental conditions on your site to avoid false alarms.
- Consider how temporary fire detection can be extended to the inside of the hull/superstructure of large boats under construction. This will allow for early detection of a fire inside the hull.
- Train staff regularly and recap how to use the fire extinguishers on site. This can be done as part of their usual safety and evacuation drills.

### Must haves

- ✓ Invest in an appropriate number and the right type of fire extinguishers. A fire appliance service agent can give you more information on the most suitable units for your site and the best place to locate them.
- ✓ Check and service all fire extinguishers and hose reels annually, so they are ready to use at a moment's notice.
- ✓ Fire protection systems such as automatic sprinklers or fire detection must be regularly checked, tested and maintained.

## Neat ideas for housekeeping

---



Keeping work areas in your boat yard ship-shape doesn't just look good, it makes day-to-day work easier, and could prevent or reduce the risk of accident or fire.

### Best practice

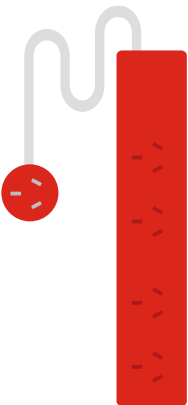
- Where possible have separate areas for the different work processes, such as woodworking, welding and spray painting to minimise the risk and spread of fire.
- Keep external waste and recycle bins/skids away from the building, ideally 10m but where that's not possible as far away as practicable. They should be locked to help prevent arson.

### Must haves

- ✓ Keep areas around switchboards, lights and other ignition sources clear of combustibles.
- ✓ Store raw materials away from operating plant and equipment to reduce the risk of fire.
- ✓ Ensure any spilt resin, hardeners, solvents, paints etc. are cleaned up promptly and disposed of safely.
- ✓ Make sure fire exits and their access routes are not obstructed.
- ✓ Where wood/metal/fibre glass/carbon fibre working is carried out, complete a general sweep at the end of each day at a minimum, and a weekly general clean, with a quarterly vacuum of all horizontal surfaces including exposed roof frame.

## Plug into electrical safety

---



Faulty, damaged or even old electrical/lighting systems can lead to fires.

### Best practice

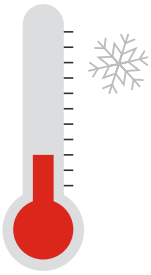
- Replace high intensity discharge (HID) lighting according to manufacturer's timeframes. Switch them off at least once per week for 15 minutes.
- Check that lights and fluorescents are in good working order. Use LED lighting where you can.
- If you notice any recurring problems, have a registered electrician check them out.
- Implement preventative checks such as thermographic imaging for switchboards or undertaking site wide Periodic Verification. These diagnostic checks are ideal where the site uses a lot of electricity, electrical system is over 40 years old, or your plant draws significant current.

### Must haves

- ✓ Keep your electrical system in good working order and fix faults promptly. Ideally organise regular checks by an electrician.
- ✓ Test and tag all portable electrical equipment – and keep the use of extension leads and power boards to a minimum. Don't use damaged leads and boards.
- ✓ Test and tag all portable electrical equipment – and keep the use of extension leads and power boards to a minimum. Don't use damaged leads and boards.
- ✓ Open switchboards should be covered with a non-combustible cover.
- ✓ Check that all unnecessary electrics are switched off when you're locking down at the end of the day.

## Refrigeration tips

---



### Best practice

- Use temperature monitoring to detect any change in the refrigerated temperatures, and consider installing an emergency generator in case the power fails.

### Must haves

- ✓ As Pre-impregnated (Pre-preg) carbon fibre needs to be kept refrigerated, make sure all refrigeration equipment is operated and maintained appropriately.

## Regular maintenance

---



### Must haves

- ✓ Have a regular maintenance programme in place for the building, building systems, plant and machinery. Check the condition of sandwich panel structures (e.g. chillers, spray booths, partition walls) to ensure that there is no exposed inner core. Where damage is identified make repairs using suitable methods as soon as possible.
- ✓ Have a pre-work daily inspection routine for plastic canopies, fabric and shrink wrap structures for structural damage or tears to the covering.
- ✓ Check the roof, spouting and downpipes regularly, especially before winter and after storms.
- ✓ Ensure the integrity of fire walls and doors has not been compromised. Fire doors should be free of obstruction and able to easily open and close.

## Management Controls

---



### Best practice

- Have a site plan which outlines the site boundary, spill kits, fire equipment and emergency exits, as well as where hazardous substances are kept.
- Have procedures in place if your automatic fire protection equipment – like sprinklers – are out of action for more than a few hours.

### Must haves

- ✓ Ensuring there is a robust self-inspection routine in place – a simple look around all areas to see that everything is as it should be.
- ✓ Undertake a final check of your site before leaving for the day.
- ✓ Limit any smoking to a designated area that is free of any waste bins and equipped with proper receptacles for disposing cigarette butts.
- ✓ Follow proper hot work procedures where cutting, welding or grinding is likely, including 30-minute fire watch before site closing. Use welding curtains if you can. Ensure subcontractors follow all hot work procedures on site.
- ✓ Ensure subcontractors have adequate liability insurance cover.

## Spray Coating, baking and fibre-glassing

---



If you carry out any of these on site, you'll need to take the following precautions.

### Best practice

- Ensure that spray booths are certified.
- Check that any ovens used for carbon fibre operations are legally compliant, with suitable safety cut outs e.g. flame out, over temperature etc.
- Ovens are constructed of non-combustible materials.

### Must haves

- ✓ Ensure spray booths comply with Health and Safety at Work Act and Spray Coating Regulations.
- ✓ Regularly clean booths, fans and ducting of overspray.
- ✓ Check sandwich panel spray booth panelling for damage and repair as soon as possible as they're flammable.
- ✓ Make sure electrical and mechanical ventilation systems comply with the relevant standards – and hold on to records of the most recent inspections.
- ✓ Let ventilation systems operate for at least 5 minutes after you've stopped spraying (move next to electrical/mechanical ventilation).
- ✓ Make sure hazardous waste is being safely disposed of, ideally by a specialist company.
- ✓ Use non-combustible floor coverings if you're applying fibreglass with a chopper gun. Keep choppers and spray guns suspended over a container to catch any drips, as spilt catalyst can cause fires.
- ✓ Relieve pressure in the resin and catalyst pressure vessels at the end of the working day.

## Handling hazardous substances

---



### Must haves

- ✓ Ensure all paints, solvents and other hazardous substances are stored, labelled and handled correctly. Secure and restrain upright all gas bottles.
- ✓ Check to see if the type and quantity of substances require certification and other compliance control measures as per HSN0 regulations.
- ✓ Keep small quantities of flammable liquids in dangerous goods cabinets.
- ✓ Store organic peroxides, such as MEKP, away from other substances. Larger quantities need to be in an approved dangerous goods store or separate areas within the building.
- ✓ Ensure all electrical installations comply with hazardous atmosphere zones as per HSN0 regulations.
- ✓ Remember that adequate ventilation of the work area is essential. Maintain ventilation systems according to the manufacturer's guidelines.
- ✓ Make sure that only the required amounts of resins (like epoxy or polyester) and curing catalysts are mixed when working with these substances to reduce the risk of the resin mixture heating up and igniting combustibles. Put mixed resin that isn't being used in wet bins to avoid a fire, and don't dispose of the rubbish until the mix has cooled/cured to a solid.

## Handling hazardous substances (continued)

---



- ✓ Store waste solvent-covered rags in a steel bin with close fitting steel lid to reduce spontaneous combustion risk.
- ✓ Ensure you have a process for the correct disposal of any flammable/toxic, liquid-based waste. Don't pour liquid hazardous waste down the sewer or storm water drains, or even onto bare ground.

## Keep business running smoothly

---



### Best practice

- Consult with a professional to check if your cyber security measures are good enough, especially if you maintain confidential records such as a customer database or bank account details.
- Invest in a business continuity plan to provide a process for prioritising activities, functions or services following an incident that disrupts your business.

### Must haves

- ✓ Back up critical data at least weekly offsite and consider using secure Cloud services.
- ✓ Ensure you've got antivirus protection on your computer and regularly update it.

---

Visit [vero.co.nz/risk-profiler](https://vero.co.nz/risk-profiler) to check out our other advice sheets for more tips and in-depth information about managing risk.

**vero**

**Disclaimer** – The information presented is of a general nature only and is provided only to help you understand some of the physical risks a business may have and what an insurer might expect you do to manage those risks. It is not intended for any other purpose. You should always seek appropriate professional advice about how you manage the particular risks in your business. No representation or warranty, expressed or implied, is made as to the accuracy or completeness of the information and no responsibility is accepted for any loss, penalty or damages (including special or consequential damages) arising out of the use of all or part of the information. The information presented does not replace the need for appropriate professional advice. Reliance on this communication will not affect or influence policy response.