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Recycle

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Don't throw your money away - Recycle

Eco-efficiency for the Marine Industry Fact Sheet

Do you want to

- save on waste disposal costs?
- save valuable natural resources?
- reduce the quantity of waste going to landfill?

Check to see whether you are managing your solid waste efficiently

- Have you investigated whether packaging can be eliminated (e.g. bulk delivery), which can usually reduce raw material costs and packaging waste?
- Do you return your packaging or unused consumables to suppliers for re-use?
- Have you investigated whether other businesses, customers or community groups could use your recyclable material?
- Do you purchase packaging that is recyclable or has recycled content?
- Could you cooperate with other businesses to simplify recycling and achieve economies of scale?

Establishing an effective solid waste recycling system

1. Ensure that all recycling and general waste bins are clearly labelled. Signs using pictures or colours may be useful.
2. To discourage general waste finding its way into recycling bins, try to locate the bins near where the waste is being generated.
3. Involve staff in the planning of the recycling system to encourage commitment and ownership. Provide all staff with training on how to implement the system. Try to keep staff motivated and informed on the outcomes of their recycling efforts, including the economic and environmental benefits to the company.
4. Monitor how well the system is working by checking bins regularly, and keep records of the quantities of recyclables and general waste collected and recycled.

Case study: Riviera reduces waste sent to landfill

Riviera on the Gold Coast produces about 450 luxury boats annually. An audit of Riviera's general waste disposal found that the company was paying about \$20,500 annually for the disposal of wood, metal and cardboard into general waste—material that could be readily recycled! Many still usable consumable items such as filler tubes, glass fibre, tape and brushes were also found in the waste.

The company will now implement a number of waste management initiatives, monitor waste management practices closely and focus upon raising awareness among staff of the importance of good waste management.

An analysis of wood waste recycling found more than \$35,000 in annual savings could be achieved. To improve compaction, wooden pallets are now separated from other wood waste before being recycled. Sawdust from cabinet making is also sent for energy recovery at a nearby power station, and other scraps are diverted to nearby community groups or schools.

Kevin Brown
Health, Safety and Environment Manager
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Case study: Riviera reduces wood waste

Riviera on the Gold Coast produces about 450 luxury boats annually. The installation of a computerised numeric control (CNC) router in 2004 enabled the company to improve productivity, increase tool life and reduce wood waste. Most CNC routers today consist of a motorised router table, a control unit, computer and software.

The CNC software takes a drawn or scanned image of each part and optimises the placement of the pieces so as to minimise waste generation. The electronically controlled router then cuts the parts with a high level of precision, reducing the need for rework.

The CNC router enables three boat kits to be produced in the time it previously took to cut one kit manually, saving the company \$1,500 daily in labour costs. The capital cost for installing the router was \$240,000 and it had a payback period of six months based on labour savings alone.

*Kevin Brown
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What's happening to your waste?

Conduct a waste audit to determine how much recyclable waste (and money) your business is throwing away!

Opportunities to reduce waste and generate revenue—wood waste

Wood waste typically consists of waste moulds, pallets and off-cuts or sawdust from cabinet making operations.

- By modifying parts it may be possible to reduce material usage. For example, could thinner pieces of wood be used for moulds while still maintaining the same structural strength?
- It may also be possible to reposition and cut patterns so as to minimise wood usage. Increasingly, boat builders are looking to automation to ensure precision cutting, which reduces waste and raw material consumption, improves productivity (time and labour), ensures consistent product quality, and can improve working conditions. Precision cutting equipment can be purchased or hired, or parts can be pre-cut and delivered by subcontractors.
- Other applications for robots and automation in the boat manufacturing industry include fibreglass lay-up, spray painting, spot and arc welding and assembling components and moving parts.
- Wood waste that cannot be re-used on site may be a valuable resource for nearby community groups such as schools and charities.
- The use of vacuum systems on woodworking tools not only ensures a healthy and cleaner workplace, but allows sawdust to be collected for recycling. Possible uses for sawdust include absorptive materials (for spills), sludge stabilisers, animal bedding, an additive for compost, packaging filler and fuel for energy.

Ecobiz can assist you to reduce costs and improve eco-efficiency in your business Call 07 3225 1999 for further information.

Use the following tables to determine the type and cost of your site's waste

Boat building waste

Waste	Amount per year	Recycled (on or off-site)	Re-used (on or off-site)	Disposal (on or off-site)	Cost of disposal
Glues					
Thinners					
Scrap metal					
Glass					
Solvents					
Sawdust					
Wood off-cuts					
Paints					
Sludges					
Rags					
Other					

Office waste

Waste	Amount per year	Recycled (on or off-site)	Re-used (on or off-site)	Disposal (on or off-site)	Cost of disposal
Paper					
Toner					
Cartridges					
Computers					
Mobile					
Other					

Packaging waste

Waste	Amount per year	Recycled (on or off-site)	Re-used (on or off-site)	Disposal (on or off-site)	Cost of disposal
Steel drums or cans					
Plastic					
Paper					
Cardboard					
Pallets					
Strapping					
Other					

Case study: Superior Plastech reduces plastic waste

Superior Plastech manufactures rotor-moulded polyethylene pontoons, floating docks, boatlifts and a variety of other products for the marine industry in Queensland. (Picture right)

The company's major raw material is polyethylene, which also comes in polyethylene bags. The company disposes of around eight tonnes of these bags per year. Previously, these bags were being disposed of in mixed waste skip bins.

An environmental consultant put Superior Plastech in touch with a register of plastic recyclers, and now the company is paid \$3,200/y for its polyethylene waste, as well as saving \$1,170/y on mixed waste disposal—a total saving of \$4,370/y, with no capital cost.

'Although we would prefer not to produce the waste in the first place, it's a bonus to receive money for something that we used to pay to get rid of.'

*Mat Caniffe, Manager, Superior Plastech
www.superiorjetties.com*



Photo supplied by Environmental Protection Agency



For further information

Ecobiz can assist you to reduce costs and improve eco-efficiency in your business Call 1300 369 388 for further information.

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