Sustainability and End of Life Recovery Options

Sustainability often goes hand in hand with green initiatives. The furniture industry is not unique in embracing these initiatives in seeking renewable resources. The furniture industry has long held the value and beauty of wood by employing craftsmen who hand built product that still exists today even after 100 years. This furniture is in many homes and offices yet today. It has created and sustained a way of life and become a family or institutional point of pride simply by existing in the same form as it was when originally built.

The past has provided for the future in our industry. Today we seek alternate ways of continuing this heritage. Environmentally friendly practices, renewable resources, minimizing waste and energy, replenishing forests, buying wood from a managed forest, environmentally friendly substitutions in our products and eliminating harmful emissions will help ensure there is a healthy future for this and the next generation. What is practised at work is often translated into home practices. A healthy and environmentally conscious workplace that promotes sustainability will have staff members who embrace these practices in their home life.

Through history and especially post-war, new materials and discoveries which enhanced industry were not necessarily examined for their long-term effects on people or the earth. Plastics, while the miracle discovery of convenience and cost-efficiency do not degrade well and often lay in landfill for decades upon disposal. The long-term cost of convenience came at a high cost to future generations. Many items discarded 50 years ago are still in the landfill in which they were disposed. Seeking alternatives in all areas from cradle to cradle will ensure that sustainability is promoted throughout our industry and that future generations benefit.

Instead of disposing of furniture when you are through with it, there are some simple alternatives.

- Donate the items to a charity
- Donate the items to a school or other learning institution
- Look for community exchange websites
- Repair, refinish or reupholster existing product
- Habitat for Humanity, Salvation Army
- Home Staging companies (Real Estate)
Many individual components can also be recycled or reused. Our goal is 100% diversion from landfill by the year 2020.

**Steel** (Ferrous Metal) (see www.recycle-steel.org for locations)

Steel is a highly sought after commodity for recycling and scrap value. There are numerous facilities all across Canada and the US that will take small or large quantities. As it is expected most quantities would be small, seeking a smaller scrap or recycling facility that offers walk-in/drop-off convenience may offer the best price. Many recyclers or scrap facilities handle only large volumes (bin full, tonnes etc.) but there are many places that welcome all quantities. Everything made of steel, mixed steel commodities (plastic components on metal), washers, nuts, bolts etc. will have value. Steel can be recycled indefinitely from a mill to the end-user to scrap and back to the mill. It is a commodity that has a long history of recycling.

**Aluminum or Zinc** (Non-Ferrous Metal)

Non-ferrous metals have an increased value in today’s recycling and scrap environment. It generally will have a high value of return for your recycling efforts. The majority of ferrous metal recyclers will also accept non-ferrous metals for scrap or recycling. One of the benefits of recycled aluminum is that is requires much less energy to produce as opposed to new aluminum. Typically it only requires 5% of the energy to produce from recycled as new aluminum. Items like handles can also be reused (recycled) or donated to agencies like Habitat for Humanity instead of scrapping.

**Plastics**

Plastic recycling facilities exist in most communities. It’s important to understand the type of plastic you are trying to recycle as not all plastic recycling facilities will accept the same material. Some facilities only accept large quantities, or only a particular type of plastic for further processing into another form. Fillers and dyes used during production may also complicate your ability to recycle plastic. Further processing of plastics typically involves regrinding, shredding and/or extruding whereby it becomes a resalable commodity. So there is a value in recycling your plastic but it’s important to know what type of plastic you have. Many recycling or scrap facilities will help you identify the type of plastic as well. Some of Krug’s plastics are being recycled into beautiful outdoor plastic lawn furniture. It is important to remember that many of Krug’s plastics are “engineered” plastics and may not fall within the typical plastic #1- #6 recycling codes used with commodity grade plastics. However that does not mean they cannot be recycled. We are working with suppliers on an ongoing basis to identify our plastics.
Particleboard

Particleboard (engineered wood) can offer alternatives to adding to landfill. We currently partner with a transport company that accepts our sawdust and small woodchips for bedding for the livestock that they raise and transport.

Particleboard can also be cut down and remachined into other similar or even different sizes of product further extending the life cycle of the product. At Krug we have salvaged our particleboard for years, optimising panels and remachining components into smaller sizes. Hobbyists, Senior’s Centers and schools also are valuable markets in ensuring that particleboard has a value-added use as opposed to sending to landfill. Many non-profit organisations will welcome the donation of components or finished product.

End of Life Recycling or Scrapping to Recycle

Key to maximising your return on recycling or scrapping out components is understanding your materials. Most materials have a recycling stream available although not all are available in all areas.

Metal is probably one of the most recyclable products widely accepted at many recycling or scrap depots. Melting down recycled metal requires approximately 25% of the energy that it takes to make new steel so it is highly desirable.

When exploring your options for recycling or scrapping, some of the terms that you may encounter are “ferrous” metal vs. “non-ferrous” metal. These terms simply refer to the steel or pig iron content (or lack of) in the metal.

Ferrous metals are magnetic and may rust. An example of ferrous metal is steel, chromium or cast iron. These metals are highly recyclable and widely accepted at most metal recycling/scrap facilities.

Non-ferrous metals are not magnetic and generally are resistant to rust. An example of non-ferrous metal is aluminum or zinc.

Another common term is “white goods”. The term itself is an old term used when referring to white porcelain covered appliances. In recycling terms this would refer to appliances such as stoves, refrigerators, washers or dryers.
The challenge often is locating a site that will accept small quantities as opposed to tonnage or a bin of scrap. In most communities there are “drive-up” metal recyclers that will accept any quantity and reimburse you on the spot.

The Dorso chair is primarily metal which has a wide waste stream available. It is noted in our sales literature that the adjustable chair arm is made from die-cast metal. This simply refers to the process by which molten metal under high pressure is forced into steel molds so as to create specific shapes after the metal cools. Die-cast tends to be a stronger process as opposed to a similar sized piece of plastic. The black cantilever arm on the Dorso chair is glass filled nylon which is fully recyclable as a plastic. The Dorso control and gas lift are a mix of metal and plastic with metal being the primary material of these components. Both can be scrapped as a mixed-metal.

The Artemis product line contains a number of components that may be easily recycled or scrapped. Obvious items that are recyclable include handles, screws, bolts, hinges, glides, locks and slides. All are primarily zinc or other metal and will be accepted at metal scrap or recycling facilities.

A more difficult material to dispose of through a recycling stream is particleboard. The material can be ground up and used as livestock bedding as one form of reuse.

End of Life Recovery Strategies

When Krug product reaches its end-of-life, there will be options available in the form of recycling or reuse. Which method you choose may be dependent upon some additional factors such as the condition of the product, what kind of materials and what facilities are located near to the product site that may offer you donation opportunities or recycling sites. You may want to combine strategies in order to maximise the recovery value.

As part of Krug’s commitment to environmental stewardship, we offer several opportunities within our product offering for recovery and life extension of the product.

Reuse

The real value in furniture is that its useful life can often be extended through rework of the product. This may involve re-upholstery, refinishing or repair or even “use as is” in order to gain additional life. Replacement parts can also be obtained from Krug when a unit can be modified to another style or to enhance repair. Often non-profit organisations in your community can benefit from the donation of a chair, desk or other piece that is no longer required by a business.
Recycle

Krug product is varied in style and construction materials allowing for recycling opportunities. Recycling will ensure that additional materials do not enter landfill.

Typically a recycling facility will take small quantities in order to accommodate the general public. In order to maximize the recovery value of an item, larger quantities will yield higher return. As well more common materials such as steel and aluminum are readily taken at scrap metal sites and have the greatest market value.

Considerations for recycling can include logistics to recycling facilities so consider using local or community based recycling sites to reduce travel time and fuel costs to get there. Some of these sites will have community based fund raisers that would allow you to donate the profits to their programs as an option.

Managed Forests

Krug maintains a Chain of Custody number, which enables us to purchase and sell FSC-Certified Mix or Pure product as required.

Indoor Air Quality

Krug can offer many product lines, which meet the Greenguard and ANSI-Bifma Certification criteria.

Resources  (many sites are state by state guides)

- www.earth911.com
- www.thegreenproject.org
- www.oodlesofparts.com
- www.angelsjunkremoval.com (Washington State)
- www.freecycle.org
- www.ogtstore.com
- www.reusenetwork.org
- www.sjrecycles.org (California)
- www.cylex-usa.com (state by state guide)
- www.goneforgood.com (Colorado)
- www.ehow.com
- www.survivalinsight.com
- www.realestatestaging.com
- www.aswdetroit.org (Michigan)
- www.re-store.org
- www.greencoservices.com
- www.moline.il.us. (Illinois)