GREEN TECH THE SERIES COLUMN FOR AUGUST 24, 2016
HEADLINE: RECYCLE THE HOME & RENOVATION WASTE

A number of readers who followed my recent series on building a sustainable home commented about construction waste. Here is my take on this very important issue.

As we begun to realize the sheer volume of waste we produce, recycling of household waste became one of the first “green” initiatives around the developed world. In Ontario, we produced over 12 million tones of solid waste in 2012 alone. Renovation and demolition projects are documented to create 20 to 30 times more waste than new home construction. The levels of new home waste have been broken down with over 40% being wood scraps. Nearly 30% is drywall cutoffs, making these two items close to 70% of all construction waste. Wood scraps can easily be recycled or used for heat. Drywall, however, is a difficult item to recycle. I am only aware of one company in Canada, New West Gypsum Recycling, with plants in Vancouver, Calgary and Oakville that actively receives scrap drywall for recycle. While there are a couple of smaller companies in Western Ontario, I know of no such recycler in Eastern Ontario.

Europe, it seems, leads the way in many facets of home sustainability and this holds true for waste management, as well. By 2020, each EU member must have legislation and management in place to reduce 70% of all construction and demolition waste. Here in Ontario, the program is…..well, there is no program. The Waste Reduction Office was closed nearly 10 years ago, due to lack of funding. Regionally, however, some private companies have picked up the torch. Waste Management is opening a huge facility in Toronto, projected to process 87,000 tonnes of construction waste in its first full year. Some municipalities have started similar ideas and most regions have designated landfill sites for construction waste. The issue is that it’s still going to the land fill, only now it costs more and the sites are limited.

Along with paper and cardboard, home recycling of plastics, cans and glass was amongst the first major municipal recycling. The popularity of separation bins built into kitchen cabinets has risen dramatically over the past 10 years. Today, organizations like “greenbuilder” recommend every home have three areas for recycling. The first designed into the kitchen cabinets with three containers for designated waste; secondly, a recycle holding area for waste that can be taken out for curbside pickup and, finally, a Hazardous Material Storage and Holding Cabinet. The last one is probably the least understood. “Greenbuilder” suggests a metal cabinet with an outdoor vent, installed against an outside wall. The cabinet should be locked and contain shelving strong enough to store paint cans, solvents, oil cans and large containers of cleaning fluids, safely and out of the reach of children.

The residential market has also seen the growth of mid sized trash removal/recyclers. One noticeable company is 1-800-Got-Junk. Started in British Columbia in 1989 by a university student, Brian Schdamore, this Canadian company specializes in household removal. Their code of ethics advertises that they will recycle and donate to charities any items picked up that are suitable for

these purposes. Another similar company with a wide service coverage is called “Justjunk.com” and they advertise they will collect drywall. Organizations like Habitat for Humanities has a proven track record for operating stores that sell donated recycled building materials. Their non-profit mandate to help those who want a home is recognized worldwide. In the US, some states actually have organizations that specialize in recycling. In Pennsylvania, the “Building Materials Reuse Association” has a mandate to help every contractor recycle their new home or renovation waste.

In Ontario, unfortunately, of the estimated 1.2 million tonnes of construction waste created annually, less than 15% is recycled. Compared to Japan, where 98% of construction waste is now waste managed, we have a long way to go to catch the Japanese builders. The largest content of construction waste is concrete, asphalt, metal, wood and gypsum. Of these, concrete and asphalt are effectively recycled. While not near the Japanese levels these materials are in demand for recycling. Scrap metals and wood are showing some improvements, but, by far the most wasted is gypsum or drywall, as it is commonly known. In some areas, like Vancouver, the negative effect of the sheer volume of drywall waste has caused the city to ban disposal of drywall from the landfill sites. It is known that the biological and chemical reactions from long term burial of gypsum board can cause odors and, in extreme cases, serious illness and death. Japan has 293 facilities for recycling gypsum board.

The other reason that this type of recycling is not gaining is the comparative costs for tipping fees at our local landfill sites. In Denmark, you can expect to pay anywhere from $100 to $175, pre ton tipping fees. In Ontario, the rate at many landfill sites is almost half those figures. Until we recognize these issues, develop better technology for smaller regional gypsum recycling, raise the tipping fees and create a market or incentive for using recycled materials, this issue will not correct itself.

That is not to say some builders are not addressing the waste problem during construction. I was in Quebec a while ago and the owner of Alouette Homes, Bradley Berneche, proudly stated that 100% of the gypsum board waste from his modular home company is sent for recycling. They manufacture over 200 homes annually. There are some smaller companies who take recycled construction materials seriously, as well. In Waterloo, Timeless Materials has a huge warehouse facility that stocks recycled and reclaimed materials, based upon supply, nearly everything for a home. Go to www.timelessmaterials.com for more info.

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