

# THE SHAW GROUP Shawp Talk

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NEWS FOR EMPLOYEES AND FRIENDS

April 2010

## Gold in the Dumpsters

# Prestige Visionaries Create Innovative Ways to Divert Waste

**For years,** Joe Gushue, Operations Manager at Prestige Homes, would look at the jam-packed dumpsters outside the plant in Sussex and think that there had to be a better way. “All that excess material just going off to the landfill every week,” he says. “I always felt if we could just sit down and brainstorm a solution, we could be doing something to reuse that material.”

And that’s just what happened. Joe, in concert with a few other dedicated souls, have worked tirelessly to change the way Prestige uses their lumber and oriented strand board (OSB) sheathing material. Together, they have reduced the material deposited in landfills by 20 metric tonnes. Per month! Since July 2009, when this “waste diversion project” got started, they’ve saved over 150 tonnes of material from the landfill.



*Process Improvement Coordinator Adam Spinney checks the contents of a Prestige dumpster. They're not as full as they used to be.*

### DUMPSTER DIVING

Meet Bryant Almon. He’s what Joe refers to as Prestige’s “catalyst for change.” He’s been with Prestige for 23 years and is a specialist in the carpentry and paint shops. He was raised to reuse things instead

of throwing them out. Seeing the overflowing dumpsters heading to the landfill was hard. “Every time I walked by the dumpster, I would look at it and say ‘there’s probably a place and a purpose for all of

*continued next page*



Above, Bryant Almon, Prestige's "catalyst for change."

Below, Ryan Williams prepares wire shelving. Under the new system, he precuts in the shop for the whole home.

those materials somewhere.”

It's one of the reasons he started experimenting with reusing what he could in the shop. "We just started dabbling a little bit. Dipping into the dumpster to see what we could reuse. We thought of it as a 'work smarter, not harder' thing and it just caught fire." Joe was so impressed with what he saw Bryant and his colleagues Richard Walton and Ryan Williams doing, that he immediately began expanding on the idea.

"As a company, we started to look at how to reduce the overall amount of material we were disposing in the landfill," says Joe. "The drivers were twofold: doing our part to help the environment and also saving money by recycling what we used to think of as waste materials." The cost saving is impressive and will only continue to grow. Prestige not only saves on the cost of new materials by using what was previously waste, they also save on dumping costs at the landfill.

### OPTIMIZING MATERIALS

Enter Jeff Vail. He's Prestige's Materials Supervisor, overseeing the flow of all materials needed to build Prestige's homes. That's a big job to begin with, even before you add on a special project like this one. Thankfully, he's a high-energy guy and he's passionate about this worthwhile project.

"Traditionally our teams were optimizing for their area of expertise and their work area," says Jeff. He cites the example of a crew who best utilizes the material needed to build part of the home and throws away the rest, even though other crews working in other parts of the plant use the same materials. "What we're doing now is optimizing the use of a whole piece of material."

Sounds logical, right? Sure, and it takes a heck of a lot of work to pull it off. The new way of doing things means that Prestige now has a centralized work station where the raw material starts and



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# A Special Message from Bert Frizzell

Welcome to a special “green” issue of *Shawptalk*. As you’ll read in these articles, The Shaw Group has been caring for the environment in any number of practical and innovative ways since its inception 150 years ago.

Our company takes pride in the fact that we consistently factor environmental considerations into every business decision. In fact, our environmental policy requires us to monitor all our operations stringently with reports on any incidents going directly to the Board of Directors.

It’s impossible to cover every environmental measure the company has taken, but this issue will give you an understanding of a number of our key initiatives. Witness the stunning and inspirational story of Prestige Homes’ Waste Diversion Project which has saved over 150 tonnes of material from ending up in the landfill. Consider our community development arm – Clayton Developments – that is building one of the greenest communities in Canada. And note how Shaw Resources has leapt into the growing field of



biomass energy with pellet production and is supplying both North American and international customers with green energy.

Over the past few years, there have also been a variety of changes made to our operations that have led to less fuel being consumed and less fossil fuel exhaust emitted. Of course, when it comes to the environment and the crisis of global warming, every individual and company has a renewed opportunity each day to

reduce waste and fossil fuel emissions. We look forward to enhancing and deepening our commitment to the environment in the future.

Savings for our bottom line and for the environment most often require creative and innovative ideas. I want to thank each and every employee at The Shaw Group who has ever said, “There must be a better way to do this.” That’s how our company has grown to be the successful and well regarded business it is today.

Congratulations to all Shaw employees on these green achievements.

—Bert Frizzell, President and CEO

is then parcelled out to the areas in the plant that need it. The station produces the exact products needed by various teams in the building.

“It allows the experts on the line to focus on doing their work – framing, plumbing, or wiring a house,” says Jeff. “It’s a more efficient use of time if our employees are given the right materials the first time.”

Here’s a good example of what this actually looks like in action. Previously, Prestige plumbers would assemble a vanity sink they were about to install. In the new

system, the vanity sink is already assembled by someone else in the plant and the plumber is responsible solely for plumbing. “Doing these things speeds up our production line and makes us more efficient,” adds Jeff.

### CHANGE AGENTS

This kind of innovation comes at a cost. Not everyone in the plant has jumped onboard, and understandably so. It has meant a great deal of change to how jobs are done and many routines have shifted. “Change is always resisted,” says *PRESTIGE continued next page*

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*Nathan Titus preassembles a sink unit, so the plumber can focus on connecting the sink to the new home.*

Occupational Health and Safety Coordinator and QC Development Coordinator Kathy Gidney. She's part of the core team including Bryant, Jeff, and Process Improvement Coordinator Adam Spinney who meet weekly to keep the waste diversion project on track. "It can be difficult for people to come around to new ideas. Our employees have worked here an average of 20 years, so they're very used to doing things in a certain way. When you change that, it can be off-putting."

That said, both Kathy and Jeff are convinced that 100% buy-in is possible by involving employees at the ground level. "We don't want to dictate to them. We want their input and suggestions," says Jeff. "When you get people involved and have a more collective approach, that's when ideas really start flowing."

Carl MacLellan is a good example of an employee who has been able to see the direct benefits of the waste diversion project in his work. He's been building walls and partitions at Prestige for the last 29 years, but he's never felt more efficient. In the past, there was a lot of "travelling" in his work—running back and forth between cutting lumber and assembling the walls. "It's so much faster and more efficient to have the lumber cut for me," he says. "I'm able to build more walls in a day. In a week's time, that really adds up."

Carl says that even though the changes to

*Carl MacLellan bought in early to centralized cutting of OSB. It has saved trees and made him more efficient.*

procedures look small on the surface, they've added great value to his job. "I've always liked my job but I'm happier now. And I like working for a company where the status quo just isn't good enough. It feels good to make changes that help things run better."

Process Improvement Coordinator Adam Spinney agrees wholeheartedly. With a background in waste and cost reduction, he's a great fit for the waste diversion project and he feels passionately about anything that will improve Prestige's operational processes.

Adam has applied a natural analytical bent to many aspects of building homes. One example is the wire shelving that comes with each of the units. "This was an area where we discovered there was a better way to do things." Each shelving unit used to be individually measured and created for each room of the house. Now, the measurements are taken from the design drawings, a cut list is drawn up for the whole house, and the pieces are precut. "Then they're sent down the line ready to be installed," says Adam. "And all of them are labelled for the rooms they're being installed in. It's much more streamlined and efficient."

In addition to saving time, there's also a lot less waste. "It leads to employees naturally optimizing their cuts," says Adam, who notes that the same applies to plumbing piping, plastic wrap for houses, and pieces of OSB. "Once you start thinking in terms of making the best use of materials, it changes everything."

#### **TIP OF THE ICEBERG**

Ron Monahan understands this sentiment. He's the man behind the discarded OSB pile. He's responsible



## How Green is Shawptalk?

Here at Shawptalk, we figured you might like to know how “green” our own paper and printing process is! We’re proud to report that *Shawptalk* has always been printed on recycled paper. The issue you hold in your hands might actually contain a previous and recycled *Shawptalk*! For this issue we have upped the ante and printed on 100% postconsumer recycled paper.

We hope you enjoy the new look and feel of the newsletter because we’ve decided to continue with this more environmentally friendly option.

Other green elements: when Shawptalk is printed, only water-based inks are used, as opposed to inks made from petrochemicals. Some of the benefits of

water-based inks include less use of nonrenewable resources and less release of toxic fumes.

In terms of numbers, we print only the number of copies needed for our employees and their families, so there is no excess waste. In addition, the company who prints Shawptalk – B2C – is quite eco-friendly, promoting a no-idling zone in its parking area and recycling all lunchroom waste.

We are committed to being as environmentally friendly as technology and innovation will allow us. Luckily, we are living in an age where processes are constantly changing and improving. We intend to continue to change with the times.



*Jeff Vail, Materials Supervisor, left, and Ron Monahan confer about getting every last square foot out of the oriented strand board.*

for taking the OSB and optimizing the usable pieces out of it. It’s a job that suits his personality and temperament. “It’s definitely challenging,” he says. “But I like making things more organized and efficient.”

The list of work areas in the plant that need OSB grows every day but Ron is on top of it. His work area is organized into colour-coded bins that house specific sizes of cut OSB. “That’s a roof kit over there,” he says. “The forklift just takes it upstairs and it’s ready for the guys doing the roof.” In the past, the roofers would have cut their own wood, right on site. Now, everything they need is in Ron’s roof kit,

cut to the proper specifications.

On July 1, it will be one year since Prestige initiated the change on OSB and lumber. General Manager Dean Robertson couldn’t be more thrilled with the progress that has been made. “What the Prestige team is doing is the right thing. There is less material going to the landfill, there are less transportation costs, and in general a lot less energy required to build our homes. This directly benefits our customers as they don’t have to pay for waste,” says Dean. “I applaud this hard-working team’s efforts and encourage them to continue to make our operation more sustainable.”

Many involved in this unique project feel that the company is just seeing the tip of the iceberg in terms of the kind of future efficiencies and innovations possible. “As we work our way through this recession, we need to continue to innovate,” says Joe Gushue, who is excited by the potential of these kinds of change initiatives. “It’s so clearly a win-win-win,” he says. “We spend less on our material costs, are able to produce more homes, and help the environment in the process. It doesn’t get much better than that.”

Joe would like to thank the core project team and also each and every employee who has been impacted by these changes. “This kind of massive change requires a lot of hard work and commitment,” says Joe. “The employees on the floor are the ones who have to carry this out and make it happen. And that deserves a huge thank you.”



## The Little Pellet That Could

**Over the past few years**, there has been a lot of buzz about wood pellets. Not only are pellets a cost effective way of heating homes, they are also what has become known as a “green” energy source. The reasons are twofold:

- Wood pellets are manufactured using biomass (e.g., sawdust, wood shavings, and round wood), which makes wood pellets a renewable energy source.
- The overall emissions for wood pellets are lower than other conventional wood products.

Worldwide, the demand for the product has grown as fuel costs soar and environmental awareness grows. Wood pellets produced from materials that would have gone to landfills in the past are sought out by emerging markets in the Far East and Europe where pellets fire massive generators that provide power to millions of people.

*The glow of a clean-burning pellet stove is welcome in homes, along with the saving on heating costs.*

### LEADING THE PACK

Shaw Resources is on the leading edge of this burgeoning field. As one of the most respected pellet manufacturers in Canada, the company provides pellets to both the residential and industrial markets through two operations: Eastern Embers in Nova Scotia and the Belledune plant in northern New Brunswick.

The Belledune plant supplies an industrial-grade pellet to a major power-generating customer in The Netherlands. “When the Kyoto Protocol first came out, many



*Above, one of six ships per year that hauls a huge cargo of pellets from Belledune to a Dutch power utility. The view on the right is over the brimming cargo toward the stern of the ship.*

European countries became interested in alternative fuel sources,” says Glenn Hardie, General Manager of Wood Pellet Operations. “The governments of these countries created subsidies and incentives for power generation companies to move away from fossil fuel burning into green energy burning. Wood pellets became one of their options.” Belledune currently employs 22 people and ships 45,000 tonnes of pellets overseas in six shipments per year.

In Nova Scotia, Eastern Embers manufactures pellets primarily for individual consumers and their home heating appliances. Scott Smith is the Sales and Marketing Manager at Shaw Resources. He says that in Atlantic Canada, from an environmental standpoint, heating by any form of wood is a huge improvement over oil or electricity. “In our region, we have the highest reliance on oil for residential space heating of anywhere in the country, says Scott. “Pellets are not only a

## Using a By-Product of the By-Product

Nova Scotia Sand & Gravel is literally a hop, skip, and a jump from Eastern Embers. Close enough that when Shaw Resources management was trying to come up with an alternative to oil for drying their massive hills of sand, they turned their minds to the possibility of wood pellets to fuel their dryer.

An even better solution presented itself when they discovered that a powdery by-product of pellets – called “fines” – could be used instead. Purchasing a new burner was the first step, followed closely by the innovation of the snake-like pipeline that carries the fines from Eastern Embers to Nova Scotia Sand & Gravel, 1.5 km away, and ends at the dryer.

The result? Up to 200,000 tonnes of sand a day for the last two and a half years have been dried without using an ounce of oil! “This is a real success story for our company,” says Operations Manager Jeff Newton. “We’re decreasing our dependence on oil, using a by-product from another part of the company, and both these things help the environment.”



*The pipeline from Embers to NSS&G*

cheaper way to heat, but they are definitely a green alternative, and our customers appreciate that.”

Eastern Embers typically has about 15 employees manufacturing over 25,000 tonnes annually for customers in Atlantic Canada and some export markets. “Our product is currently the preferred residential pellet in Atlantic Canada and has been very well received in other markets it has been introduced into,” says Scott.

### STAYING LOCAL

One of the beneficial offshoots of the biomass market, which includes wood pellets, is that it generates so many jobs in local

economies. In the European Union, where green energy is more widely used than in North America, up to 300,000 jobs are projected to be generated over the next 10 years. Within Canada, studies show that money spent on the biomass industry actually stays in the community where it’s generated. Seventy per cent of this money spent stays local, compared to oil, where only ten per cent remains in the local economy.

With the benefits to the environment, the pocket book, and local communities, The Shaw Group is proud to be making such a positive and sustainable fuel for the future.

## What’s red and brown – and green all over?

**With a 150-year-old product,** you might expect that Shaw Brick wouldn’t be terribly environmentally friendly. But this division is also doing its part to help the environment and lower costs at the same time. According to Plant Manager John McKenna, one of their main initiatives over these past few years has been a mission to reduce waste. This means that Brick employees have fine-tuned their methods of producing bricks to ensure that fewer bricks get spoiled.

Part of this strategy was to solve the problem of the “hot flue,” where bricks in the centre of the kiln would get too hot and melt into deformed shapes. A detailed account of how the Brick team worked to solve this problem by introducing a new “burner configuration” into their firing process appeared in the September 2006 issue of Shawtalk. These improvements led to an immediate 5% increase in yield.

### RECYCLING CENTRAL

But not all flawed bricks resulted from high temperatures. Some bricks cracked before they were ever fired at all. This led to changing the conditions in the holding room where bricks are stored before entering the dryer. The addition of curtains and humidity sensors have helped enormously. “This allows us to monitor the level of moisture in the room, as

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*BRICK continues*

well as control unwanted air flow,” says John. “If the moisture levels are high, we open the curtains up and let fresh air in. If the moisture levels are low, we keep the curtains closed and spray water on the floors. It’s pretty basic technology but it all helps.”

And for the odd brick that still gets ruined despite the team’s best efforts, there’s an environmentally friendly way of dealing with it. Cracked bricks go to a scrap pile where the red-bodied bricks are reused as a landscape product, and the buff and grey-bodied bricks are used for building roads on Shaw property. Waste from brown-bodied products are put back into the grinding process of New Glasgow shale.

In terms of environmental stewardship, another whole area of consideration has been the amount of oil needed to make bricks. In an effort to improve their production methods, Shaw Brick implemented a new and innovative kiln control system in 2008. In addition to burning less oil, this new system gave the team more flexibility in record keeping and kiln control, which has led to an improved product, less oil being burned, and the best kiln yields on record.

**EVERY LITTLE BIT HELPS**

Further to that, the team has been experimenting with burn times for different types of brick. Recently,



*Larger voids lead to burning less fuel*

they stripped 10 minutes off the burning time of the Maritime, Olde English, and Highland Collections (from one hour and forty minutes to one hour and thirty minutes) and are pleased with the results. “The product is still excellent,” says John, “with the additional benefits of using less oil and pushing the product out faster.”

Playing with the size of the void (or holes) in the bricks is another recent innovation, says John. “Over the last few years, we’ve made the voids in our brick larger, increasing from about 14–16% to 22–24%. If there is less mass to heat, the job takes less fuel.” This innovation also saves on raw material costs.

Less material used and wasted, less oil burned, and recycled products. Wow, with a list like this, who knows what Brick will be up to next? Don’t worry, *Shawptalk* will keep you informed!

## **A Natural Thaw**

**In the dark, cold winter months,** Block employees work hard to make sure that the sand and stone needed to make their concrete blocks doesn’t freeze. According to Plant Manager Phil Langille, who assessed the pros and cons of various heat sources, wood was definitely the cheapest and the greenest.

“We’re saving thousands of dollars by using wood to heat the aggregate,” says Phil. “And the other great benefit is that we’re actually using a waste product to do the heating.” That’s right. The Block plant uses the wood from discarded pallets as their heat source. “We’re taking wood that would have gone to the landfill or be burned as waste and reusing it.”

The stove they use is no potbelly



# Fuel Economy Rules the Road for Our Trucks

**Over the past decade**, there's been a lot more emphasis on reducing fossil fuel emissions by governments in North America. This has resulted in emission controls being mandated for engine manufacturers, which has led to increased fuel efficiency in both cars and trucks. This has saved companies like The Shaw Group money when it comes to transporting their products. And that's a good thing for Danny Kennedy.

As Transportation Manager for Shaw Resources, he's invested in making sure his fleet of 14 tankers runs smoothly and efficiently. He notes that at the same time engines were becoming more fuel efficient, the construction of these transport trucks was also changing. Steel tankers became obsolete and were replaced with lightweight aluminium and the cabs of the trucks began to be designed more aerodynamically. Both of these factors also helped trucks use less diesel.

## CRITICAL INVESTMENTS

And then about three years ago, the company decided to invest in B-train double trailers, which would allow them to haul more product for nearly the same amount of fuel. "Fuel was our biggest consideration in the decision to buy the B-trains," says Danny. "If we can move an extra 10 tons to our customer in the same truck, that's a huge savings for us."

It's also a huge savings for the environment. And it's not the only thing that The Shaw Group does to help cut its fossil fuel emissions. Transport Manager for the Brick, Block, and Precast divisions Peter Ashley reports that the company has installed speed limiters right into his fleet's computer system that don't let the vehicles travel over 105 km per hour. In addition, Peter and his transport team have invested biodegradable hydraulic oil for the articulating booms that hoist product off the back of trucks. "We felt very strongly that if there was ever an oil spill using these booms, that it not spell disaster for the environment," says Peter. "The biodegradable oil is very expensive but easily cleaned up. If there is a spill in the area of a watershed, we know we've done the right thing."

## PROPER MAINTENANCE

The Shaw Group's trucks haul not only the products of Shaw Resources (e.g., pellets, premixes, sand products, etc.), Shaw Brick, Shaw Block, and Shaw Precast Solutions (concrete pipe material) but also fly ash (see sidebar on page 10) and all the cement that The Shaw Group uses throughout the Maritimes. Most of

*TRUCKS continues next page*



Colin Mills stokes the furnace with waste wood from discarded pallets.

in the corner either. It's a massive eight-foot-high outdoor wood furnace that gets loaded up twice a day by Block employees. The aggregate is dumped into truck hoppers, which the wood furnace heats up. The warm steel thaws the sand and stone enough to work with and produce Block's main winter product – concrete blocks.

Proving again that Shaw was thinking about the environment long before it was fashionable, the Block plant has been warming its aggregate this way for the past 13 years. Way to be green!



TRUCKS *continued*



*B-trains like this one use less fuel per tonnage hauled.*

their deliveries are within Atlantic Canada, but Ontario, Quebec, and Maine are also ports of call. On any given day, there are approximately 30 trucks on the road, so it's important they are in good working condition and achieve excellent fuel mileage. "Every time we're looking for a new truck, we look specifically at the fuel mileage," says Danny. "We make sure the right ratios are in place between the transmissions and the rear ends, so that they maximize fuel economy at a given speed."

Not content to rest on Resources' green transportation laurels, Danny and his team are investigating the implementation of "quads" (a four-axle trailer), which will reduce fuel consumption per ton even



*Clarence Parker gasses up his truck. Because of excellent maintenance, he will achieve the maximum fuel economy.*



*Joe Weir checks tire pressure, and there are a lot of tires to check. But correct pressure results in better mileage.*

more. "Just as with the B-trains, the quads will actually lessen the amount of driving we're doing because the vehicle will be capable of carrying and delivering more tonnage each time we go to a customer."

## **Fly Ash – Recycling ahead of its time**

**Danny Kennedy likes to joke** that Shaw was green before anyone even knew what that meant. He's referring to the fact that the company has been helping to "recycle" for the last quarter of a century in the form of fly ash. For those of you who don't remember, fly ash is the fine, grey residue that is a by-product of burning coal.

Way back in 1983, then-Chairman Syd Acker discovered that fly ash could be used as a cement replacement in concrete. Since then, the company has been selling great heaps of it to customers in Nova Scotia, New Brunswick, and most recently Newfoundland. There are currently two sets of B-trains hauling fly ash to Newfoundland non-stop during the peak season and the company expects significant growth there over the next few years.

*At right is some of our early advertising for fly ash.*

# The Name of the Game at Shaw Precast: Sustainable Solutions

A few years ago, Shaw Precast Solutions noticed the trend toward more environmentally friendly building practices and took immediate action. Today, the company is known and sought after by companies requiring green building products and looking to implement sustainable development practices.

This new area of expertise also makes Precast a competitive bidder for provincial and municipal government tenders. The Province of Nova Scotia, Halifax Regional Municipality, and the Federal Government of Canada have all recently committed to ensuring that all new buildings receiving funding from these levels of government meet certain environmental and energy efficiency standards. All these new

buildings, which include schools, hospitals, courts, long-term care facilities, office buildings, airport upgrades, and Canadian Forces bases will be designed and constructed in accordance with LEED (Leadership in Energy and Environmental Design) criteria, as determined by the Canada Green Building Council.

## SIGNIFICANT ADVANTAGE

According to Sales Manager Rylan MacDow, the fact that the environmental impacts of construction products have now become a consideration for all levels of the government means that Shaw Precast Solutions has a big leg up on the competition. “Concrete is produced with benign, natural materials, with the added advantage of being local,” says Rylan. “All of our products’ raw materials are extracted within 50 km of our plant and are manufactured locally.”

This immediately places them at an advantage over other companies and competing products who do not qualify as regional. Using local resources to make concrete also means less energy is expended in fuel costs for transportation of raw materials and finished products. In addition, the use of fly ash in the concrete production process is another green advantage for Precast. Fly ash – a natural by-product of burning coal – is classified as “recycled content,” and gives the owner extra LEED points on these project developments.

In terms of environmental sustainability, concrete consumes less energy to manufacture than plastic fabrication. It’s also strong, durable, and recyclable. “Comprised of the world’s most commonly used building materials, precast concrete infrastructure is quickly integrated into ecosystems,” says Rylan, who cites the example of Precast’s open-bottom boxes and arch products being used to accommodate the natural channels of streams at culvert crossings.

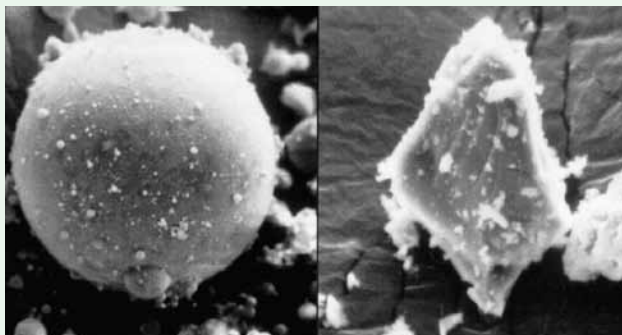
## EARTH-FRIENDLY PRODUCTS

Over the past few years, two of the company’s green products have really taken off. Contech CDS

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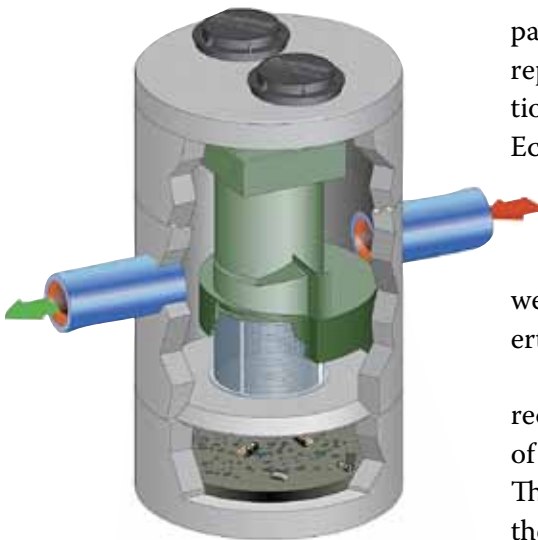


Shaw Resources is responsible for the quality control, marketing and delivery of Nova Scotia Power’s class F flyash.



Spherical flyash particles help lubricate the concrete mix

... compared to the angular particles of portland cement.



*A Contech CDS Stormwater Treatment Chamber*

Stormwater Treatment Chambers are the market leader for on-site stormwater treatment. The system effectively screens, separates, and traps debris, sediment, and oil and grease from stormwater runoff. Immensely popular, over 120 of these systems have been successfully installed in Atlantic Canada. Owners who install a CDS unit on their project will also qualify for LEED stormwater management credits.

The EcoFlow On-site Septic System is another success story. Developed in partnership with Premier Tech Aqua, from Quebec, and the Nova Scotia Department of Environment, this natural, non-invasive, and



*The EcoFlow Onsite Septic System*

passive on-site septic system has replaced hundreds of malfunctioning and failed septic systems. Ecoflow has proven itself as a best solution for the long-term protection of lakes, water-courses, and groundwater, as well as the preservation of property values.

Instituting internal changes to reduce emissions is another aspect of Precast's green commitment. The wet cast operation decreased the amount of energy required for space heating when they switched to propane radiant heat and programmable thermostats. In another initiative, the Precast yard was reorganized, resulting in a savings of 5,000 litres per year in diesel fuel. And when the company took advantage of Nova Scotia Power's lighting retrofit program, they saved \$4,000 in electricity costs.

General Manager John Greer says that being environmentally conscious and responsible is just the right thing to do. "A number of small steps adds up to big change," says John. "Our team is committed to embracing the challenge and the opportunity that working more sustainably represents. We recognize that taking steps to care for the environment is the way of the future and we will continue to work hard, improving our processes and operations."

## *Scrap? No such t* **Ven-Rez Emplo**

**Ven-Rez in Shelburne** has been making durable furniture for 60 years. Part of their success is the way they do business; what was once called common sense is now called "green." The company has always focused on energy conservation and reduction of waste.

"Ven-Rez has always stressed the efficient use of all of its raw materials," says General Manager Greg Gillespie. "It's something that comes naturally to the team here. Our sixty employees practice strict recycling of personal and commercial items. In fact, 90% of non-construction materials leave the plant in recycling or compost containers."

From a big picture perspective, Ven-Rez is actively engaged in making sure that their operation is as sustainable as possible. Lean manufacturing techniques reduce costs, while energy audits on major equipment conserve energy. In the realm of shipping, the company's small fleet of trucks and trailers is used to its best capacity, only leaving the plant when they are 90% plus full. "This means less trips than if we were shipping smaller loads at increased frequency," says Greg. "And the fact that our trucks return to the plant full of raw material means we are maximizing the efficiency of these trucks, and lowering the overall environmental impact."

hing!

## Employee Commitment Erases Waste

In addition, the company makes a practice of not wrapping most of their product for shipping. “When we deliver our own furniture, we know how to pack it securely,” says Greg. “There’s no need for individual products to be boxed or wrapped and this really cuts down on waste.” He adds that all cardboard and cartons that enter the plant are recycled and re-used, never thrown out.

The company’s employees take the internal recycling program very seriously. They have become proficient at saving off-cuts of wood

and using them for the next project and will proudly tell you that almost zero wood leaves the plant in the form of waste. Even tiny, unusable “edging” is taken home by employees for fire kindling and the sawdust from the wood shop

*Below, these chairs are stackable, and then stackable again. With a combination of know-how and sheets of reused cardboard, Ven-Rez has cut way down on packing and wrapping materials. At right, Mike Lo holds some of the small, unusable bits of wood that go to employees’ homes as kindling.*

ends up with local farmers who use it for animal bedding. Now that’s commitment!

Keep up the good work, Ven-Rez!



## Reclamation at Resources

# Sand Extraction Sites Return to Square One

**“It’s just the way we’ve always done things.”**

That’s how Jeff Newton, Operations Manager for Nova Scotia Sand & Gravel, describes the way Shaw Resources takes care of the tracts of land where they extract sand. “It’s something we’ve been doing for over 30 years and everyone knows exactly what has to be done.”

The company extracts massive amounts of sand – up to 500,000 tonnes – from numerous sites throughout Nova Scotia, utilizing operating permits that last five years or more. The extracted material is used as golf course and traction sand and mixed into concrete and mortar.

Matt Ferguson, Environment Manager, is in

charge of all things environmental at Shaw Resources. “Traditionally, mining and resource extraction activities have been viewed as leaving lasting scars

on the landscape with no community benefit,” says Matt. “We see our off-site extraction activities as a temporary land use. Many of the reclaimed pits that

we have extracted from are later turned over for use as prime agricultural land or sold for residential use.”

Right from the beginning of the process, Shaw Resources shows its sense of responsibility by posting a bond to prove they have the funds to be able

*“We see our off-site extraction activities as a temporary land use.”*



## Clayton at Parks of West Bedford

# Die-Hard Environmental Stewards

to put the land back to its original state. Then the land is gently scraped of what is called “overburden”—the topsoil, small trees, and stumps that need to be removed in order for the excavation to begin. These materials are stored right on the property.

Once the sand is extracted from the site, it’s time to return the piece of land to its natural state. This is called the “reclamation” process and begins with a bulldozer re-shaping the land to make it aesthetically pleasing. Once all the steep slopes are minimized, the topsoil is laid back down and then planted with natural, local seeds. The last step is having Nova Scotia Environment come in to make sure the reclamation work has been done to their standards.

Matt believes that the community benefits from the local employment Shaw Resources generates and also the fact that the land is left suitable for community growth, parks, or agricultural purposes. “The goal in the end is to leave a positive legacy in the communities in which we operate. I believe that our reclamation work does that.”

*Resources removed 10,000 tonnes of sand from this site in Belmont, NS, just north of Truro. The site was reclaimed in 1981. Shortly after the reclamation, the property was sold and developed as a residential lot. Today there’s a home on the site*



*Model homes are going up at The Parks of West Bedford.*

**Clayton Developments** was a deep, dark shade of green before “environmentally friendly” became a household word. The real estate development company has been committed to reducing environmental impacts and encouraging sustainability for over two decades. Designers and builders of the first EnviroHome in Canada, the company was also one of the original signatories of the R2000 program (one of the first home energy-saving programs). In addition, Clayton has always exceeded mandatory requirements for open or green space and has also always completed its own voluntary lake monitoring and water testing to keep residents safe.

The most recent in this long

string of environmental contributions is The Parks of West Bedford, the company’s largest and most impressive community to date. “The driving theme behind this community was to provide something that went above and beyond what even Clayton had been doing from a green perspective,” says General Manager Mike Hanusiak.

### NATIONAL RECOGNITION

This development – a 30-year project – will be the “greenest” community in HRM and one of only a handful of green communities across Canada. Not only do the design and construction methods encourage sustainability, but home

*PARKS continues next page*

builders and third-party purchasers will need to adhere to strict regulations. In addition, there is a comprehensive storm water management plan and extensive wetland preservation. Multi-use trails will connect neighbourhoods, with nodes of mass transportation set up to decrease vehicle reliance and reduce fossil fuel emissions.

The Parks of West Bedford will eventually house up to 20,000 people in 6,500 mixed-use units. “We’re doing things in this community that have not been done in Nova Scotia before,” says Peter Greenwood, Vice-President of Real Estate Services. “Clayton is responding to what the public is calling for and coming to expect.” All homes will be EnerGuide-rated and all home owners will receive *The Best Management Practices Homeowners’ Guide* that provides information on caring for homes and property using green principles and helping to maintain the natural environment within the community.

#### LOOKING TO THE FUTURE

This development will also contain the only private-sector business



*Prospective residents can visit a model building, but what they don’t see within the walls is that their home will be in HRM’s most sustainable neighbourhood.*

campus in Eastern Canada, containing an employment centre, knowledge-based industries, and a high-end distribution centre. Banks, restaurants, retail stores, churches, a long-term care facility, and a multi-surface ice rink round out the community.

Building communities that are sustainable in the future and encouraging residents to maintain the

piece of earth on which they live is a value that the company holds dear. “Clayton Developments has set the bar for green development high,” says Mike. “We serve as role models within our industry and are hopeful that other developers will follow in our footsteps, helping to make HRM and Nova Scotia a better place to live.”