

**GREEN ISSUE**

# *Building* **BLOCKS**

**VOL. 7 NO. 2    OCTOBER 2008    GREATER TORONTO APARTMENT ASSOCIATION**

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# O'SHANTER AT THE CUTTING EDGE



O'Shanter Development Company has been a long time member of the Greater Toronto Apartment Association and a true leader in energy conservation and environmental sustainability. The association is pleased to include a feature presentation on O'Shanter in this edition of Building Blocks with its "green" theme.

As the real estate management industry becomes more focused on environmental sustainability and responsibility, O'Shanter Development Company Ltd. has proven to be an industry leader in environmental management. As the only ISO 14001 Environmental Management and ISO 9001 Quality Management certified multi-residential property management company in Canada, O'Shanter holds itself to the highest standards of environmental practices.

As environmental responsibility has become more of a priority for Canadians, many companies have looked to brand themselves as "Green". However, O'Shanter stands out for its strict "Green Design" policy. In following with their stated goal of meeting the targets set forth in the Kyoto Protocol, "Green Design" is a process for ensuring that the environmental impact of the design, construction, renovation and ongoing operation of a facility is minimized.

O'Shanter incorporates the principals of "Green Design" into the planning of new construction and renovation projects, while constantly striving to improve the energy efficiency of all their buildings.

The "Green Design" policy encompasses every element of a building's construction, renovation and maintenance. Among other requirements, the "Green Design" policy ensures that all appliances meet the "Energy Efficiency Regulations" produced by Natural Resources Canada's Office of Energy Efficiency, using trees and plantings to reduce summer solar gain and block winter winds and the installation of energy-efficient, high-performance windows in every suite.

Furthermore, O'Shanter has been actively tracking energy consumption at all of their properties for over thirty years. In keeping with the goal of continuous improvement as stated in the company's Quality Policy, this has allowed

O'Shanter to monitor the efficiency of all of their energy systems and target specific areas for improvement.

Fortunately, the company has found that innovative Green Design can not only be beneficial to the environment, but that improving the efficiency of a building's energy system can significantly reduce long-term building costs. This can clearly be seen by examining the effects of the capital investments made to replace the original steam heating system at the Park Terraces at 3000 Yonge Street with a hydronic system with fan coils and programmable thermostats.

Built in 1953, the 272 suite, 2 tower apartment building was one of the earliest highrise buildings in Toronto. When O'Shanter purchased the property in April, 2005, few upgrades had been made to the original steam heating system, which was nearing the end of its functional life. It was quickly determined that the building was a utility hog, due in large part to the obsolete and poorly maintained heating system.

The boilers were gas fueled, and capable of interruptible operation on #2 oil. Two boilers supplied low pressure steam to radiators equipped with thermostatic steam traps and returned condensate to the boiler room. However, combustion analysis revealed that the combustion efficiency was only 48% for one boiler and 70% for the other. There were no controls beyond an on/off switch for when the boilers reached 5 PSI. The return tank and vacuum pump were also inoperative, and the majority of the condensate was therefore being dumped into the City's sewers.

Further analysis revealed that 50% of the buildings steam traps were inoperative. This resulted in continual banging noises from the water hammer and uncontrollable overheating during cold weather.

While the planning process to replace the heating system took place, O'Shanter began working to upgrade the water system. This involved the installation of 6 litre low flush toilets, low flow shower heads and aerators in every suite. This water conservation project resulted in an approximately 40% reduction in consumption. At a cost of \$54 000, the cost payback was roughly 2 years.

Proceeding with the heating system replacement, fan coils were manufactured by Temspec, and then installed by construction crews in each unit by vertical riser after sections of the vermiculite plaster wall were cut. Over a thousand radiators were removed, and over five miles of baseboard were reinstalled in order to run power cables behind.

In the boiler room, the old plant was demolished and removed, replaced by remotely controlled boilers, piping, and over twelve floors of liner in the chimney. The new system comprised of four RDI Futura II, 1,950,000 BTU non-condensing, efficient boilers.

The south building loop picks up the garage unit heaters and ramp heaters through a separate pump from the primary loop and feeds the building through a three way valve. The north building feeds directly from the loop. The control is an indoor/outdoor reset control by Steve Gayton of Gayton Engineering.

This extensive system was built and installed during a short four-month warm weather period. The results were immediate, as consumption was cut from the original system by close to 45%.

O'Shanter continued to implement its "Greening Policy" at the Park Terraces well beyond the completion of this extensive project. The original Rolofson elevators were soon replaced with Holliser-Whitney overhead traction machines. The starting amperage of the Rolofson machines was 230 amps. This dropped to 30 amps, with a recording ammeter determining that power consumption had been reduced by 78%.

O'Shanter has also relamped hallways, stairwells and mechanical rooms with high efficiency fluorescent lighting and instituted an ongoing program to replace old appliances with Energy Star compliant appliances.

Using the Kyoto Green House Gas Emission targets as a benchmark for measuring the success of O'Shanter's greening policies, O'Shanter met their goals by burning 59% less gas in the period of October 26, 2005 to September 26, 2006 than was used in the period the year before.

Furthermore, as one of the only property management companies in Ontario that is a member of the Recycling Council of Ontario, O'Shanter has demonstrated a long-standing commitment to waste diversion. O'Shanter responded to the City of Toronto's waste levy proactively by investing in the recycling infrastructure at all of their properties. It was determined that any successful waste diversion program needed to raise tenants' awareness, while

providing convenient facilities to help tenants modify their habits and make recycling as easy as possible.

At the Brentwood Towers on Lascelles Avenue, O'Shanter constructed five recycling-specific rooms. The rooms are all located on the basement level of the buildings and connected to the parking garage. The rooms make recycling much more accessible for all tenants year-round, and offer bins for general recycling as well as household batteries and fluorescent lightbulbs.

At other O'Shanter properties, fenced enclosures are being built around the recycling and garbage bins. Coupled with the purchase of surveillance cameras and significant signage, these enclosures should help to drastically reduce the volume of illegal dumping at these properties. Keys will be distributed to give tenants access to their recycling and bulk waste facilities.

It was also determined that some floors did not have access to garbage chutes. O'Shanter therefore agreed that the chutes at these buildings should be retrofitted to ensure that all tenants had access to the compactor. This ensured that all garbage was compacted, thereby reducing the total volume of waste being collected by the City and sent to landfills.

O'Shanter further engaged in an extensive communications campaign designed to encourage tenants to increase their recycling output. Tenants received a letter in early-March informing them of the City's waste levy. A follow-up letter specific to each property and a series of information meetings ensured that tenants were well-informed of the changes O'Shanter was making as well as their own responsibilities to divert waste.

To help tenants increase their recycling output, O'Shanter determined that they required in-suite recycling bags. Rather than wait for the City of Toronto's bags, which will not be made available until November, 2008 at the earliest, O'Shanter purchased reusable bags from Canadian tire. The bags were distributed along with a custom designed poster to clarify what items are recyclable. The poster was designed to be easily understandable for all tenants, including those for whom English is not their first language.

O'Shanter's ongoing commitment to decreasing the impact it has on the environment has yielded impressive results. By incorporating the concepts of "Green Design" into its corporate policy, O'Shanter has ensured consistent improvement in the sustainability of its management portfolio. In doing so, O'Shanter has reduced costs and proved itself to be a recognized industry leader in environmental responsibility. ♦

# O'Shanter Tackles Waste Levy with Plan



While concerned about the financial impact of the new City of Toronto waste levy on apartments, O'Shanter proceeded to develop a plan to try and minimize the impact while encouraging residents to rise to the challenge of improving their recycling rate.

The strategy is in accordance with the City of Toronto's commitment to reach a 70% waste diversion rate by 2010. The City will be moving to a charge for all residual waste collected by volume while recycling pick up will remain

free. With a current diversion rate of only 13-15% in apartments versus 58% in single family homes the City has identified the apartment sector as a significant priority.

O'Shanter calculated that their Brentwood Towers property garbage output at present would result in a change of approximately \$85,000 annually or \$7.50 per suite per month. In order for the property to have a zero charge, residents can only throw out the equivalent of 2/3 bag of garbage per week which would require a 53% waste diversion improvement rate.

#### THE O'SHANTER STRATEGY

In preparation for the levy, O'Shanter planned a combination of infrastructural changes to the recycling and waste collection system and an aggressive communications campaign. The campaign began with a letter alerting residents of the levy and its implications and was met by resident enthusiasm and suggestions from many residents.

Residents suggested recycling bins for every suite (coming soon from the City) as well as a dramatic increase in the number of common area recycling bins in order for tenants to dispose properly of their recycling materials. While the City will be providing in-suite bins, O'Shanter was proactive in providing special recycling bags to each resident before the July 1st levy start date.

O'Shanter also built five new recycling rooms to service the complex across from laundry rooms and easily accessible for residents and for maintenance staff to oversee. It is hoped this will increase recycling by at least five bins which should translate into an increased diversion rate by 30 cubic yards.

The company also put additional recycling bins in laundry rooms, mailrooms and other common areas to encourage increased recycling.

In order to ensure that the uncompacted waste bins are not a dumping ground for recycled materials, O'Shanter decreased the accessibility to these bins by removing them from the underground garage area.

Finally, O'Shanter set up a very aggressive communications strategy including improved signage that is clear and explains what can and cannot be recycled. They set up a kiosk between 4-7 pm in each building to give residents the opportunity to directly address their concerns and become more educated on the changes. Regular communication in the Brentwood Tenants' Association newsletter and a program to get children involved in the recycling program were also done. ♦



**O'Shanter Development Company and the Brentwood Towers Tenants' Association should be congratulated for working together to meet the City's goals of increased waste diversion.**

# POLLUTION PREVENTION PAYS!

## O'SHANTER DEVELOPMENT COMPANY LTD

### WATER AND ENERGY CONSERVATION/BUILDING MANAGEMENT

#### DESCRIPTION OF PROJECT

O'Shanter Development Company Ltd of Toronto uses improved MagnetoHydroDynamics (MHD) technology to reduce pollution, and water scale buildup, and to save on natural gas heating costs.

MHD also known as Ionization by Magnetic Induction (IMI), is an energy conservation technology designed to reduce costs and pollution from fossil fuels. The MHD unit is strapped onto the boiler fuel feed piping. Strong magnetic flux fields from new ceramic-based metals in the MHD unit are applied to the fuel. These ceramic-based magnets are many times stronger in flux strength than the ordinary metal-based magnets. The magnetically charged hydrocarbon fuel molecules are able to transfer more energy through a better oxygen binding. The increased combustion efficiency reduces both fuel consumption and exhaust pollutants, such as carbon monoxide (CO), unburnt hydrocarbon particulate and nitrous oxides (NOx).

MHD can also be used to remove water scale buildup in water and fire-tube boilers. Cleaning out the scale boosts

heat retention, reduces fuel consumption and saves money. Water scale buildup of 13 mm (0.5 inch) can waste up to 60%, or about \$600 per \$1000, of energy input costs.

O'Shanter Development is a commercial and residential property management firm. It uses MHD technology on high-rise apartment building heating boilers, both on fuel supply lines and to remove water scale buildup. For scale removal, O'Shanter staff move the MHD units around from building to building. With the installation of the MHD units, boiler combustion efficiency has increased and the company has achieved ongoing fuel savings of 5 to 10% depending on the individual boilers, \$17,500 to \$35,000 on heating costs of about \$350,000/year.

#### BENEFITS

Environmental: reduced fuel consumption by 5 to 10%; increased combustion efficiency; reduced emissions of CO, particulate and NOx.

Economic: fuel cost savings of 5 to 10%; less than one year payback period. ♦



# COMPANY PROFILE - O'SHANTER DEVELOPMENT COMPANY



O'Shanter Development Company is a family-owned and managed property management and development firm. Adam and Jonathan Krehm now manage the company their father, William, founded in Toronto in 1955. With more than 50 employees at 16 sites the company is able to address the needs of all its clients and tenants. In addition to managing its own multi-residential properties, about a third of portfolio features third party properties. The property portfolio exceeds 1,650,000 square feet and comprised of over 2000 residential rental units.

The supervisory staff specializes in inhouse legal and collection services, Operational and Project Management, Construction, Energy Management, Fire Code Retrofit, Mechanical Systems, Heating, Ventilation and Air Conditioning, Electrical, and Plumbing. Housing all this available talent and expertise under one roof provides our tenants with a team of professionals working to ensure our buildings are managed professionally and efficiently.

**Past projects**

- Automated utility monitoring;
- Energy efficient windows and doors to increase insulation;
- Water aerators and efficient toilets to decrease water consumption;
- Energy efficient boilers;
- Individual Hydro Meter conversion project;
- Energy star compliant appliances;
- Elevator equipment – state of the art variable speed overhead traction machines;
- Hallways, stairwells and mechanical rooms were relamped with high efficiency fluorescent lighting;
- Steam system replaced with a hydronic system with fan coils and programmable thermostats;
- Aggressive and comprehensive recycling and diversion rate initiatives.

**Ongoing projects**

- Aggressive and comprehensive recycling and diversion rate initiatives;
- Active Individual Hydro Meter conversions.

**Future Projects**

- Up to 100% Individual Hydro Meter conversion;
- Green roofs;
- Green power;
- Peak load shedding.

**COMMITMENT TO ENVIRONMENT**

In year 2002 O'Shanter Development Company developed a Quality Management System which committed the company to international standards of operational and environmental standards established by the International Standards Organization (ISO).

O'Shanter's ongoing commitment to decreasing the impact it has on the environment has yielded impressive results. O'Shanter was the first property management company in Canada to achieve both ISO 9001 Quality Management and ISO 14001 Environmental Management certifications. The company holds itself to the highest standards of environmental practices. O'Shanter incorporates the principals of "Green Design" into the planning of new construction and renovation projects, while constantly striving to improve the energy efficiency of all their buildings.

The "Green Design" policy encompasses every element of a building's construction, renovation and maintenance. Among other requirements, the "Green Design" policy ensures that all appliances meet the "Energy Efficiency Regulations" produced by Natural Resources Canada's Office of Energy Efficiency, using trees and plantings to reduce summer solar gain and block winter winds, and specifying high-efficiency heating, cooling, and ventilation systems. By incorporating the concepts of "Green Design" into its corporate policy, O'Shanter has ensured consistent improvement in the sustainability of its management portfolio. In doing so, O'Shanter proved itself to be a recognized industry leader in environmental responsibility.

To help tenants increase their recycling output, O'Shanter determined that they required in-suite recycling bags. Rather than wait for the City of Toronto's bags, which will not be made available until November, 2008 at the earliest, O'Shanter purchased reusable bags. The bags were distributed along with a custom designed poster to clarify what items are recyclable. A custom recycling poster was designed to be easily understandable for all tenants, including those for whom English is not their first language.

The office staff adheres to the eco office policy which includes recycling, turning computer equipment off at night, reusing paper for internal communication, refilling printer consumables and reusing old computer equipment. Furthermore, personnel receives extensive training on environmental issues which includes overview of the ISO, environmental requirements, energy conservation and waste management.

### OVERVIEW OF ENVIRONMENTAL ACHIEVEMENTS

O'Shanter is proud of its environmental achievements. The key to success stems from the centralized utility monitoring process coupled with continuous improvement initiatives underlined by the ISO quality policy. By utilizing a centralized monitoring station at the head office, the company is able to monitor gas, water and hydro consumption four times hourly and monitor waste volume daily. This in turn enables the company to appropriately assess the performance and apply energy conservation retrofit measures which can help further reduce consumption. The monitoring and retrofit management cycle provides with means to rapidly identify inefficiencies and system waste and expedite updates to meet today's standards. The company was utilizing the method of centralized monitoring for the past 15 years with impressive results.

#### Water consumption reduced by 43%

While the planning process to replace the heating system took place, O'Shanter began working to upgrade the water system. This involved the installation of 6 litre low flush toilets, low flow shower heads and aerators in every suite. This water conservation project resulted in an approximately 40% reduction in consumption.

#### Gas consumption reduced by 45%

A case in point example, the old plant on 3000 Yonge St. was demolished and removed, replaced by the new plant, piping, and over twelve floors of liner in the chimney. The new system comprised of four RDI Futura II, 1,950,000 BTU non-condensing, 85% efficiency boilers.

This extensive system was built and installed during a short four-month warm weather period. The results were immediate, as consumption was cut from the original system by close to 45%.

#### Electricity consumption reduced by 15%

Another case in point example at the Brentwood towers; proceeding with the heating system replacement, fan coils were manufactured by Temspec, and then installed by construction crews in each unit by vertical riser after sections of the vermiculite plaster wall were cut. Over a thousand radiators were removed, and over five miles of baseboard were reinstalled in order to run power cables behind. In one site Rolofson elevators were soon replaced with Holliser-Whitney overhead traction machines. The starting amperage of the Rolofson machines was 230 amps. This dropped to 30 amps, with a recording amp meter determining that power consumption had been reduced by 78%. O'Shanter has also relamped hallways, stairwells and mechanical rooms with high efficiency fluorescent lighting and instituted an ongoing program to replace old appliances with Energy Star compliant appliances.

#### Recycling Rate increased by 30%

At the Brentwood Towers on Lascelles Avenue, O'Shanter constructed five recycling-specific rooms. The rooms are all located on the basement level of the buildings and connected

to the parking garage. The rooms make recycling much more accessible for all tenants year-round, and offer bins for general recycling as well as household batteries and fluorescent light bulbs.

O'Shanter further engaged in an extensive communications campaign designed to encourage tenants to increase their recycling output. Tenants received a letter in early-March informing them of the City's waste levy. A follow-up letter specific to each property and a series of information meetings ensured that tenants were well-informed of the changes O'Shanter was making as well as their own responsibilities to divert waste.

To help tenants increase their recycling output, O'Shanter determined that they required in-suite recycling bags. Rather than wait for the City of Toronto's bags, which will not be made available until November, 2008 at the earliest, O'Shanter purchased reusable. The bags were distributed along with a poster designed to clarify what items are recyclable. The poster was designed to be easily understandable for all tenants, including those for whom English is not their first language. Other environmental initiatives include:

1. Recycling printer consumables – refilling printer cartridges;
2. Reusing computer equipment – using old computers as “thin clients”;
3. Internet fax – scanning to PDF and reducing the use of paper;
4. Electronic newsletter – reducing the use of paper;
5. Turning computer equipment off at night;
6. Converting buildings to individual meters – currently over 60% of units have already been converted;
7. Looking replacing flat roofs with roof top gardens.

#### STATEMENT OF ENVIRONMENTAL VALUES

O'Shanter Development company has implemented two environmental policies. The ISO certified Environmental Policy and the Greening Policy. (Please see attached)

The ISO certified Environmental Policy states:

- We will strive for containment and prevention of pollution in all of our activities in recognition of Governmental standards.
- We will instruct our employees, including part time workers, to increase their awareness of potential environmental impacts.

The policy is communicated to employees, tenants and contractors to increase environmental awareness. Employees receive extensive training on environmental issues. O'Shanter University – an online training application is being developed to provide employees with information pertaining to full

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scope of environmental issues. There are four topics dedicated to the environment in the curriculum. This includes:

1. ISO Overview
2. Environmental requirements
3. Energy Conservation
4. Waste Management

Everyone is encouraged to minimize environmental impact. The design team includes an energy specialist with experience in energy auditing and design specifications. A pre-design workshop is held to establish performance targets for the project building. And tracking tools are established to ensure the project targets are met throughout every phase of the project.

#### GREEN DESIGN

Environmental analysis is incorporated in every aspect of company's operations. O'Shanter incorporates the principals of "Green Design" into the planning of new construction and renovation projects as well as maintenance of the existing infrastructure, while constantly striving to improve the energy efficiency and minimize the environmental impact.

Green Design is a process for ensuring that environmental impact of the design, construction, renovation and ongoing operation is minimized. Consultants, architects and building design agencies, contractors and suppliers are working hard to minimize the environmental impact during the design and construction phase. Employees responsible for maintenance receive extensive environmental training.

An energy specialist with experience in energy auditing and design specifications is actively participating in the design and maintenance process. A pre-design workshop, including, establishing environmental performance targets for the project building is held. Tracking tools to ensure the project targets are met throughout every phase of the project are established and constantly monitored.

The company keeps track of the new technology to take advantage of the latest developments in environmental management. For example an improved Magneto-Hydro-Dynamics (MHD) technology was implemented to reduce pollution, and water scale build up. MHD also known as Ionization by Magnetic Induction is an energy conservation technology designed to reduce costs and pollution from fossil fuels. The technology is used on high-rise apartment building heating boilers, both on supply lines and to remove water scale build-up.

Furthermore, the following criteria are taken into consideration in project design and in analyses concerning daily operations (please refer to the "Greening Policy" for complete list of criteria):

#### ENERGY CONSERVATION

1. Design the project to optimize energy consumption.
2. Build the least area suiting the needs of the project, which requires the least energy to maintain. Be space efficient, for example combine space uses.
3. Designs an energy efficient building envelop, high-performance windows.
4. Control solar heat gain and glare by selecting glazing with appropriate ratio of visibility light transmittance to solar heat gain coefficient.
5. Specify high-efficiency appliances and office equipment. All appliances shall meet the "Energy Efficiency Regulations" produced by Natural Resources Canada – Office of Energy Efficiency.
6. Energy efficient lighting;

#### RENEWBLE ENERGY

1. Maximize natural ventilation and passive energy to meet heating and cooling needs. Make use of "free" cooling.
2. Maximize daylight harvesting throughout the year to reduce lighting needs.

#### SUSTAINABLE ENERGY

1. Locate building to maximize public transit, bike routes and walking routes.

#### WATER CONSERVATION

1. Design water closets with a maximum of 6 litres per flush.
2. Lavatory and kitchen faucets shall have a maximum of 9.5 litres per minute
3. Public lavatory faucets shall have 2 litres per minute or less.
4. Public faucets shall be self shut-off, either time-activated (5 second shut-off) or motion detecting.
5. Appliances (dishwashers, clothes dryers and washers etc) shall be energy and water efficient.
6. Plant new landscape and/or maintain native landscape that requires little or no watering.
7. Install utility grade water meters and sub metering to measure water usage for locations using large volume of water.

#### STORM WATER MANAGEMENT

1. Use vegetation swales and filter strip/buffers to treat runoff from landscaped areas.
2. Use pervious surfaces (a surface that allows water to penetrate for at least half the surfaces that are usually paved. (Roads, parking, courtyards and pathways) where soil conditions permit.

#### LANDSCAPING & VEGETATION

1. Maintain the sites existing large trees wherever possible.
2. Minimize excavation and soil disturbance of natural landscape.

3. Avoid building on environmentally sensitive areas such as wetlands and endangered species habitats.
4. Incorporate landscape design into overall energy management plan for the facility.
5. Naturalize landscaped areas to the extent possible.
6. Save, protect and reuse all topsoil-removed from the site during construction.
7. Protect vegetation, watercourses and wildlife habitat during construction.
8. Avoid major changes to surface grading during construction.
9. Ensure the implementation of a spill response action plan by all construction forces during construction

#### AIR EMISSIONS

1. Minimize use of CFC's & HCFC's in HVAC equipment. Provide automated leak detection in all areas using CFC's, HCFC, ammonia etc., and provide alarm monitoring to the central BAS system.
2. Provide secondary containment and recovery for all refrigerant systems that vent to atmosphere

#### PEST CONTROL

1. Reduce need for chemical use by designing the landscape for an Intergraded Pest Management approach.
2. Design building techniques that are insect-resistant to ensure minimal pesticide use.

#### MATERIALS

1. Integrate flexible floor plans, column spacing and floor to ceiling heights that can adapt to multiple uses.
2. Select durable, low maintenance materials and building systems that can be recycled once they have been used.
3. Renovate older buildings if these can be upgraded to operate efficiently.
4. Keep as much of the existing structure as possible.
5. Select building systems that can be dismantled at the end of the buildings useful life
6. Include products with a high post-consumer recycled content.
7. Use local materials to reduce transportation costs.

#### WASTE MANAGEMENT

1. Design into the building a central location, convenient to building users to collect and store recyclables and compostables.
2. Minimize construction waste and debris. Reuse where possible. Contractors shall divert from landfill all recyclable material generated as a result of demolition and construction, such as cardboard, clean scrap wood, wood pallets, concrete and bricks, asphalt, metal, drywall, clean land-fill, paint.
3. All contractors will provide proof of diversion of recyclable materials by providing a statement from the recycling facility indicating weight and confirmation of diversion.

#### INDOOR AIR QUALITY (IAQ)

1. Provide maximum off gassing for all interior furnishings such as carpets, wall covering, furniture and partitions.
2. Avoid materials that will off-gas pollutants such as formaldehyde.
3. Avoid fibrous floor, wall and ceiling finishes that are exposed in supply and return air or occupant spaces.
4. Avoid ozone-depleting chemicals in mechanical equipment.
5. Locate air intakes away from sources of outdoor pollutants.
6. Ensure ventilation systems are pollutant-free by; protecting ventilation system and ductwork from contaminants during construction, and cleaning the supply and return air ducts and ventilation equipment before occupancy.

#### NATURAL LIGHTING

1. Design facilities for the maximum use of daylight, as the primary source of light during the day. Provide high quality day lighting and visual comfort by controlling glare and providing even daylight distribution.
2. Provide visual access to outdoors.

#### COMMISSIONING AND TURN OVER

1. Provide an independent building commissioning report for all building systems, verifying compliance with "Green Design" policy.

#### WASTE REDUCTION

An aggressive recycling program commenced with a stakeholder analysis, logistical and behavioural assessment of waste disposal in multi-residential buildings. It was determined that some floors did not have access to garbage chutes. To ensure that all tenants had access to the compactor, an action plan to retrofit the chutes has been implemented. This ensured that all garbage was compacted, thereby reducing the total volume of waste being collected by the City and sent to landfills. The waste reduction rate during the past three years has been increased by 30%. The goal for the year 2008 has been set at 50%, the goal for the year 2009 has been set at 60% and for the year 2010 at 70%. It is worth noting, that these rates by far exceed the governmental standards. As of this writing, O'Shanter has been in touch with Frontier Haulage and recycling companies (including Turtle Island Recycling), in an active effort to expedite recycling diversion rates.

O'Shanter constructed recycling-specific rooms. The rooms make recycling much more accessible for all tenants year-round, and offer bins for general recycling as well as household batteries and fluorescent light bulbs. At other O'Shanter properties, fenced enclosures are being built around the recycling and garbage bins. Coupled with the purchase of surveillance cameras and significant signage, these enclosures should help to drastically reduce the volume of illegal dumping at these properties. Keys are then distributed to give tenants access to their recycling and bulky waste facilities.

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O'Shanter further engaged in an extensive communications campaign designed to encourage tenants to increase their recycling output. Tenants received a letter in early-March informing them of the City's waste levy. A follow-up letter specific to each property and a series of information meetings ensured that tenants were well-informed of the changes O'Shanter was making as well as their own responsibilities to divert waste. To help tenants increase their recycling output, O'Shanter determined that they required in-suite recycling bags. Rather than wait for the City of Toronto's in-suite bags/bins, which will not be made available until November, 2008 at the earliest, O'Shanter purchased reusable bags. The bags were distributed along with a poster designed to clarify what items are recyclable. The poster was designed to be easily understandable for all tenants, including those for whom English is not their first language. Although O'Shanter is not a manufacturer, the company takes every opportunity to minimize the environmental impact. Recycling-specific rooms were constructed to deal with waste diversion. The rooms are all located on the basement level of the buildings and connected to the parking garage. The rooms make recycling much more accessible for all tenants year-round, and offer bins for general recycling as well as household batteries and fluorescent light bulbs.

#### **DUE DILIGENCE**

Suppliers and contractors are selected considering the strict environmental requirements. The company gives preference to "green products" and environmentally responsible contractors. O'Shanter incorporates the principals of "Green Design" into the planning of new construction and renovation projects as well as maintenance of the existing infrastructure, while constantly striving to improve the energy efficiency and minimize the environmental impact.

The performance of contractors and suppliers is continuously evaluated. These evaluations or audits assess performance, continuous improvement and adherence to environmental standards and assign a score used to compare suppliers' performance and Quality/Environmental Systems. In addition to this criteria, where contractors may be engaged they may be evaluated for their ability to perform the requirements. As well, they shall be monitored on their on-going performance in the same fashion as O'Shanter's other suppliers.

The Maintenance Manager, Maintenance Supervisor and Property Managers are responsible for the review of the complete company Critical Supplier List at least annually. The list may be subdivided and one quarter reviewed to coincide with each quarterly Management Review meeting. The suppliers are rated using a sophisticated matrix. The data is retrieved from various sources – Environmental assessment, Purchase Orders, Invoices, call backs and response, etc. The score assigned will provide an indication of performance. The ISO committee reviews the evaluation and determines which supplier may or may not be retained.

#### **ISO 9001:2000 AND ISO 14001:2004 CERTIFICATION**

O'Shanter was the first property management company in Canada to achieve both ISO 9001 Quality Management and ISO 14001 Environmental Management certifications. The company holds itself to the highest standards of environmental practices. O'Shanter incorporates the principals of "Green Design" into the planning of new construction and renovation projects, while constantly striving to improve the energy efficiency of all their buildings. O'Shanter's quality and environmental management system has been established and implemented to demonstrate the ability to provide Property Management services that meet customers' requirements.

Company's quality and EMS objectives, through continuous improvement and innovation, are:

- a) to maintain the recognized standard of quality, service and reliability and
- b) to meet our customers' requirements relating to processing quality, environmental issues, value and service which will result in their satisfaction and
- c) Maintain recognized standard as an environmentally sensitive supplier of services.

Every function within the company demonstrates commitment to safety, ethical behaviour, the environment and customer satisfaction as the highest priorities at all times. Moreover, implementation of quality and service involves all levels of personnel in the organization.

The quality program has been developed to meet the custom nature of business and the specific requirements of ISO 9001:2000 and ISO 14001:2004. It contains statements of their quality objectives and policies, commitment to quality and environment, the authority of the ISO Coordinator and descriptions of the procedures for implementation of same.

#### **COMMITMENT TO ENVIRONMENT**

The "Green Design" policy encompasses every element of a building's construction, renovation and maintenance. Among other requirements, the "Green Design" policy ensures that all appliances meet the "Energy Efficiency Regulations" produced by Natural Resources Canada's Office of Energy Efficiency, using trees and plantings to reduce summer solar gain and block winter winds, and specifying high-efficiency heating, cooling, and ventilation systems.

#### **RAISING THE BAR OF EXCELLENCE IN RECYCLING**

To help tenants increase their recycling output, O'Shanter determined that they required in-suite recycling bags. Rather than wait for the City of Toronto's bags/bins, which will not be made available until November, 2008 at the earliest, O'Shanter purchased reusable bags. The bags were distributed along with a custom designed poster to clarify what items are recyclable. The poster was designed to be easily understandable for all tenants, including those for whom English is not their first language. ♦