



Photo courtesy of Delsan-AIM

SPECIAL FEATURE

November 30, 2018

# DEMOLITION & ENVIRONMENTAL ENGINEERING

[www.dailycommercialnews.com](http://www.dailycommercialnews.com)

**Daily Commercial News**

by ConstructConnect®

## Environmental Engineering

## Disan Court slope restoration a complex stabilization

DAN O'REILLY  
CORRESPONDENT

Reducing threats to life and property from flooding and erosion is a core responsibility for the Toronto Region Conservation Authority (TRCA) and one which extends well beyond massive, lengthy, and expensive projects.

Small scale restorations such the recently completed \$425,000-Disan Court Stabilization Project often come with their own scales of complexity, says TRCA project manager Courtney Rennie.

In the wake of a major storm in July 2013 which caused damage to hundreds of public and private properties through-

out the Greater Toronto Area, the steep slope behind two houses on Disan Court in northwest Toronto was severely eroded. The erosion caused the decades-old non-engineered timber retaining walls to fail and seriously compromised the working platform for the storm and sanitary sewers lines which extends between the houses, she says.

Undertaken by a small TRCA crew between June and November of this year, the stabilization included demolishing and removing the old retaining walls, excavating unsuitable fill from the slope, the reconstruction of the sewer infrastructure platform, and erecting a two- to four-metre-high (6.5- to 13.1-foot) segmental block retaining wall.

Project consultants included Sarafinchin Associates Ltd. who completed the slope stability and erosion risk assessment and EXP which developed the detailed designs for the retaining wall.

In late October the crew began the site restoration which included planting some trees in the homeowners' back yards and erecting privacy fence on top of the retaining wall. Trees were also planted in a nearby park to compensate for tress loss in the ravine stemming from the construction, she says.

Conducted in the rear yards of the two adjacent homes which overlook the Humber River valley, the project came with a list of challenges, not the least of which was squeezing small machinery in the tight space between those homes, she says.

First step in the schedule was laying down a trail of mulch to lessen the impact of a Tri-axle, a skid steer, and a Cat 305 excavator which were used in the various phases of the project. An estimated 650 cubic metres or 65 tri-axle loads of the fill was excavated and then stockpiled on a small staging area on Disan Court until it could be removed, says project supervisor Norman Pires.

And in the middle of last summer's heat there were a number of extremely hard tasks for the crew including demolishing the old three-layer concrete working platform and building the retaining wall, says site supervisor Anthony Fortunato.

"Each block weighed about 250 pounds (113 kilograms) and they had to be saw cut on site for the custom corners."

Although the retaining wall was required on this particular site, the authority's preferred option is to regrade slopes wherever possible to lessen the environmental impact and avoid future maintenance issues at some point in the future, says Rennie.

The need for some form of remediated action was brought to the attention of the authority shortly after the 2013 storm by the local city councillor. But the project didn't commence until this year because the TRCA has a priority list of projects and only so much funding, says Rennie.

Under its Erosion Risk Management Program, the majority of that funding is directed towards the maintenance of existing erosion control structures along rivers and valleys which protect public greenspace, park amenities, and municipal infrastructure. But it does apply to protecting private property where homes and other essential structures confirmed to be at risk from erosion or instability.

In the case of those private sites a three-step assessment process is used to determine what can and should be done. That process starts with an initial site visit and then can be accelerated to a detailed risk assessment to a final decision on whether work is required, she says.

"Properties where no risk has been identified are recommended for monitoring only."

On properties where work is deemed necessary there is period of pre-construction negotiation with the homeowners who are expected to bear a portion of the project cost or transfer ownership of the affected land parcel to the TRCA.

Unless a parcel is landlocked with no adjacent public lands, the authority prefers the property transfer route. Not only does it foster the expansion of public greenspace, it ensures the parcel is owned by one owner (the TRCA) instead of multiple owners, says Rennie.

"One single owner ensures consistent monitoring, maintenance, and repairs to erosion control structures throughout their lifespan."

With hundreds of reports of property damage following the 2013 storm, the authority has been working to address the most severely damaged sites and that ranges from four to six sites annually depending on funding.

"We're getting to the end of the 2013 list."

However, subsequent storms have caused similar slope problems and they will also have to be addressed, she says.



TRCA

A panoramic photo of the completed \$425,000 Disan Court Stabilization Project, which included slope stabilization, demolition and removal of old retaining walls, excavating unsuitable fill and reconstruction of a sewer infrastructure platform.

## Economic Snapshot

## The best performing provinces in 2017 and why

At first glance, the recently released 2017 Provincial and Territorial Economic Accounts appear past their "best before" date. However, without this data it is impossible to put current provincial economic data in perspective.

After posting back-to-back declines of -3.7% and -4.2% in 2015 and 2016, the **Alberta** economy grew by 4.4% in 2017, the fastest of Canada's ten provinces. Virtually all of this pick-up in growth was due to a rebound in world oil prices and a concomitant 37% y/y increase in the value of the province's oil exports. Consistent with the province's 2017 *Capital Spending Survey* results, non-residential investment continued to trend lower for the third consecutive year. Also, because energy production is capital and not labour intensive, total employment in Alberta increased by a rather modest 1% y/y in 2017 following a -1.6% decline in 2016. Despite the province's difficulties in getting its oil to tidewater, year-to-date total employment is up by 1.9%, second only to Prince Edward Island. This being said, although the province's economic prospects were brightened by Imperial Oil's recently announced plan to proceed with its Aspen Oil Sands Project, the record discount of Western Canada Select to West Texas Intermediate has raised serious concerns about the near- and possibly longer-term prospects for energy investment in the province.

Canada's second fastest growing provincial economy in 2017 was Alberta's neighbour, **British Columbia**. It expanded by 3.8% driven by a combination of a 4.6% increase in consumer spending (mostly gains in durable goods i.e. motor vehicles) and a 17.6% y/y surge in non-residential investment. Major projects which contributed to this gain included the Sunrise Gas Plant and the Northeast British Columbia Expansion Project, occurring despite the shelving of the Trans Mountain Pipeline expansion. Looking ahead, the recent approval of the Kitimat LNG Project strongly suggests that non-res investment will make a significant positive contribution to growth in 2019 and beyond.

Fuelled by very strong growth of residential and non-residential construction and a solid 2.4% jump in consumer spending, the **Prince Edward Island** economy posted growth of 3.5% y/y in 2017. This was the third largest year-over-year gain in the country and the province's best showing in thirteen years. A key factor contributing to this rapid growth was a very large inflow of international migrants that helped to boost PEI's population by 2.4% in 2017, almost twice the national average and contributed to a 70% y/y increase in housing starts. While there are signs that hiring plans in the province have cooled somewhat, employment growth remains strong heading into 2019.

After posting modest gains of 1.2% y/y and 1.6% y/y in 2015 and 2016, the **Manitoba** economy expanded by 3.2% in 2017, its strongest showing since 2008, and the fourth fastest in the country. Probably the best word to describe the province's economic performance last year was 'balanced', given that it was driven by increases in consumer spending, business investment and a solid gain in total exports, the bulk of which were shipped to other provinces. Although Manitoba has experienced a steady outflow of migrants to other provinces since 2004, this population drain was more than offset by a net inflow of international migrants in 2017, causing the province's population to increase by 1.6%, the second fastest gain in the country.

Coincidentally and for the first time in more than thirty years, the two provinces in Central Canada, **Ontario** and **Quebec**, grew by 2.8% in 2017, roughly halfway between Alberta with growth of 4.4% and Newfoundland, which posted growth of 0.9%. However, a look under the hood of the two economies reveals significant differences.



John Clinkard

In Ontario, consumer spending was by far (81%) the major driver of growth in 2017. It was fueled by a combination of low interest rates and a near record inflow of international and interprovincial migrants. However, despite strong growth of the province's major trading partner, the United States, the province's exports were little changed compared to 2016, as was non-residential investment on structures. In Quebec, a smaller (than Ontario) contribution to growth by consumers was accompanied by increases in residential construction and spending on machinery and equipment. Hiring in the province also accelerated to +2.2% in 2017.

Driven primarily by stronger external demand for its key resources (oil, potash and canola), the **Saskatchewan** economy grew by 2.2% in 2017 following back-to-back declines of -0.9% and -0.4% in 2015 and 2016 respectively. Although investment spending in the Wheat province was also positive in 2017, due in part to construction of the Regina Bypass and the Chinook Natural Gas Power Station, total employment was little changed following a -0.9% decline in 2016. Year-to-date hiring is up slightly. However, according to the CFIB, employment plans have weakened, possibly due to the sharp drop in crude oil prices.

Following gains of 0.7% in 2015 and 1.4% in 2016, **New Brunswick's** economy grew by 1.8% in 2017. The major contributor to this slightly faster pace of growth was a 5.5% rebound in exports fuelled literally by a 37% increase in foreign sales of petroleum products that was accompanied by faster growth of both consumer spending (mainly motor vehicles) and of non-residential investment in structures.

Despite a pullback in non-residential investment due in part to the completion of the Moose River Mine, **Nova Scotia** posted growth of 1.5% in 2017 largely on account of a 2.8% increase in consumer spending and a slight gain in exports of seafood, lumber and rubber, supported by healthy U.S. demand and increased demand in China. After contracting by 0.4% y/y in 2016, total employment in the Bluenose province was up by a rather modest 0.7% y/y in 2017 and, given a steady rise in the province's job vacancy rate midway through 2018, it appears likely to move higher going into 2019. This positive outlook is overshadowed to some extent by the winding down of the Maritime Link Project and the Deep Panuke and Sable Island natural gas projects.

The **Newfoundland and Labrador** economy downshifted in 2017, posting growth of 0.9% following a gain of 1.8% in 2016. Virtually all this pull back was the result of a very sharp (18% Y/Y) drop in gross fixed capital formation, stemming primarily from the winding down of construction and the ramping up of production at the Hebron Oil Field, as well as at the Muskrat Falls Hydro Project. Due to the slowdown in labour-intensive construction, total employment in the province contracted by -3.8% and there was a significant net outflow of individuals to other provinces which has persisted into mid 2018. However, the province has received a significant boost from the fact that its oil is benchmarked against Brent Crude, which currently enjoys a \$10 premium vis-à-vis West Texas Intermediate. Going forward, the impact of an aging population, a large fiscal deficit and persisting outmigration will weigh heavily on the province's longer-term prospects.

See online version of this article ([www.dcnon.com](http://www.dcnon.com)) for additional chart titled "National and Provincial Gross Domestic Product and Total Employment".

John Clinkard has over 35 years' experience as an economist in international, national and regional research and analysis with leading financial institutions and media outlets in Canada.



TRCA

Severe erosion behind homes on Disan Court resulted in non-engineered timber retaining walls to fail and seriously compromise the working platform for the storm and sanitary lines which extend between the houses.



# WE DEMOLISH THE COMPETITION

OUR CONTRACTORS PROVIDE A TEAM THAT IS HIGHLY QUALIFIED  
IN SCOPE INTENSIVE DEMOLITION AND ABATEMENT SERVICES



**STRUCTURAL  
& INTERIOR  
DEMOLITION**



**HAZARDOUS  
MATERIAL  
ABATEMENT**



**EMERGENCY  
RESPONSE  
SERVICES**



**ASSET RECOVERY  
& SALVAGE**



**ENGINEERED SAFE  
WORK PLANS**



**SOIL  
REMEDICATION**

**CHECK OUT OUR NEW WEBSITE AT [OADC.CA](http://OADC.CA)  
FOR DEMOLITION AND ABATEMENT CONTRACTORS IN YOUR AREA**

70 LEEK CRESCENT, RICHMOND HILL, ONTARIO, L4B 1H1 | P. 289-485-1017 | F. 416-613-0227 | [INFO@OADC.CA](mailto:INFO@OADC.CA)



**DELSAN**

*We prepare the future...*

A Canadian company since 1994

DEMOLITION | ABATEMENT | DECOMMISSIONING

- | Complete Decommissioning and Demolition
- | Civil Demolition
- | Hazardous Material Abatement
- | Metal Recycling

**THE KEY TO OUR SUCCESS:**

- | Unwavering Commitment to Health and Safety
- | Personalized Project Management
- | Innovative Solutions
- | Specialized, Experienced and Dynamic Team

**416.494.9898 | WWW.DELSAN-AIM.COM**

## Super Demo

## Vale meticulously plans Sudbury superstack demo

IAN HARVEY  
CORRESPONDENT

The iconic Sudbury superstack is coming down but first Vale Canada has to figure out who will do it and how it will be done.

However, it will go with a whimper and not a big bang with engineers ruling out an explosive driven implosion because of environmental concerns and the stack's proximity to existing buildings and the community itself.

While there are many local residents who feel sad about the looming demise of a landmark which is as recognizable as the Big Nickel. Underlying it all is a good news story, Vale's \$1 billion investment in its Clean AER Project to cut sulphur dioxide emissions to 20 kilotonnes per year, well below the provincial regulatory limit of 66 kilotonnes per year.

That's a far cry from the tonnes spewed out when the 1,250 foot superstack was built in 1972. It is also an indication of how clean technology has improved since original owner Inco dispersed sulphur dioxide and nitrogen dioxide emissions from its Copper Cliff smelter over a wide area.

Vale has been mulling the future of the superstack since about 2013 and in 2015 announced it was looking at what the future might hold. The verdict is in and it is curtains for the Superstack but it's not going to happen overnight, says Tom Zanetti Manager, Operational Readiness, Clean AER Project at Vale.

He's projecting the actual demolition to start in April 2020 when the carbon steel liner at the bottom and the stainless steel counterpart at the top are sliced into sections and lowered down. Flue dust and other residue from the sides and the breach area at the bottom will also be recovered and any recyclable materials diverted for reuse.

It is stainless steel at the top because the flue



P199 WIKIPEDIA

Planning for the demolition of Sudbury's iconic superstack has begun. The actual demolition is projected to happen in April 2020 but an explosive driven implosion has been ruled out due to environmental concerns and the stack's proximity to the nearby community.

temperatures tend to be lower and because it's in contact with rain and snow which would otherwise lead to corruptions, he says.

"We are just in the process of having an engineering firm write the scope of work," he says. "We did go out and get companies to come in and give us an idea of what could be done and how, though."

Budget for the demolition won't be clear until those RFPs come back with pricing and other components for the job are calculated such as whether the metal will be salvageable or whether the concrete parts will end up in the tailing area of used for aggregate.

There's even been some discussion about collecting chunks, attaching a plaque of authenticity and offering them as souvenirs much like the Berlin Wall.

In the meantime, the superstack is getting ready for semi-retirement mode while two 450 foot stacks are completed and brought on line. It remains on standby as an emergency vent should there be a problem in the smelting furnace where it needs to be shut down quickly and gases vented.

"We also need to keep it warm because otherwise there will be corrosion as water forms and the metal will decay which will make extraction more problematic," he says. There are two 40 million BTU natural gas heaters in the flue which are sensor controlled to activate and keep temperatures above the dew point.

Obviously, keeping the superstack warm is a substantial cost, as is the required annual maintenance.

The first phase between now and April

2020 will be to get the new stacks operational and prepare the superstack.

The second phase is to clear out the vents leading into the superstack and remove any equipment such as the burners and start the metal extraction which is expected to take up to 18 months. The third phase, taking down the stack, will begin after that, though no date has been set.

"The superstack is three feet thick at the bottom and tapers towards the top," says Zanetti, a life-long local resident who remembers it being built. "So they're going to probably cas-

tellate from the top down with jackhammers and then knock them through."

Once they get to the mid-point where the walls get thicker, culminating in the three-foot thick base, they will likely use a diamond wire cutter to saw through sections, he says.

Crews will have to build a suspended workstation and rig some kind of crane system to lower the panels. As they work on the concrete, it will be intensive with full hazmat suits and respirators because of flue dust accumulations with residues of arsenic and other toxins inside the stack.



Sudbury's superstack stands 1,250 feet tall and is the tallest chimney in the western hemisphere and second largest worldwide.

## Sudbury superstack facts and figures

- Construction of the superstack began in 1970 at a cost of \$25 million and entered into full operation in 1972. The superstack was built to disperse sulphur gases and other byproducts of the smelting process away from the City of Sudbury.
- The superstack is 1,250 feet (381 metres) high, the tallest chimney in the western hemisphere and the second largest in the world. It is also the second tallest freestanding structure of any type in Canada, behind the CN Tower.
- The superstack is 35 metres wide at the bottom with one-metre-thick walls. At the top it is 16 metres wide with 25-cm thick walls. It has 937 tonnes of reinforcing steel buried in its concrete shell and a stainless steel liner that weighs 17,585 tonnes.

- Following completion of the stack's concrete shell, a top-to-bottom vertical steel ladder was installed inside with rest platforms for maintenance.
- There is a steel flue system to carry gases from Vale's Copper Cliff Smelter to the superstack. This system currently carries gases travelling at a top speed of more than 85 kilometres per hour and at a maximum temperature of 390 C.
- Construction of the superstack was followed by environmental reclamation projects across the City of Greater Sudbury including the liming and seeding of more than 3,200 hectares as well as the planting of approximately 300,000 trees annually.

— All facts and figures courtesy of Vale

## Manufacturer and Distributor

of hot forged bolts, specialty threaded products and fasteners  
in accordance with the highest quality standards — Niagara Fasteners.



Our manufacturing range is from 1/2" to 2 1/2" diameter, and M16 to M36.

Larger diameter blanks and, all common grades are stocked and ready for threading to your specifications.

### All Major Head Configurations

Hex; Heavy Hex; Square Carriage; Guard Rail; Specials.

### Materials

SAE Grades 2,5,8; ASTM Grades A307-B; A193-B7-B8; A320-L7; A325; A354-BC or BD; A449; A490; Stainless.

### Threading

Fully threaded rods and studs from 1/4" to 6" diameter UNC - UNF - ACME - Metric - British - Rope.

### Anchor Bolts

Custom to your specifications: straight; bent; re-bar; multi-unit.

ISO 9001  
Registered  
TSSA QA 423  
CSA Z299.3

### Precision Machining

We have CNC lathes with live tooling and bar feeding capabilities, and a fully equipped machine shop with presses, benders, saws, drills and mills, welders and conventional lathes. With our in house capabilities and our standard off the shelf fasteners we are able to offer a complete line of structural bolting, on time and at a competitive price.

**Niagara Fasteners**  
INC.

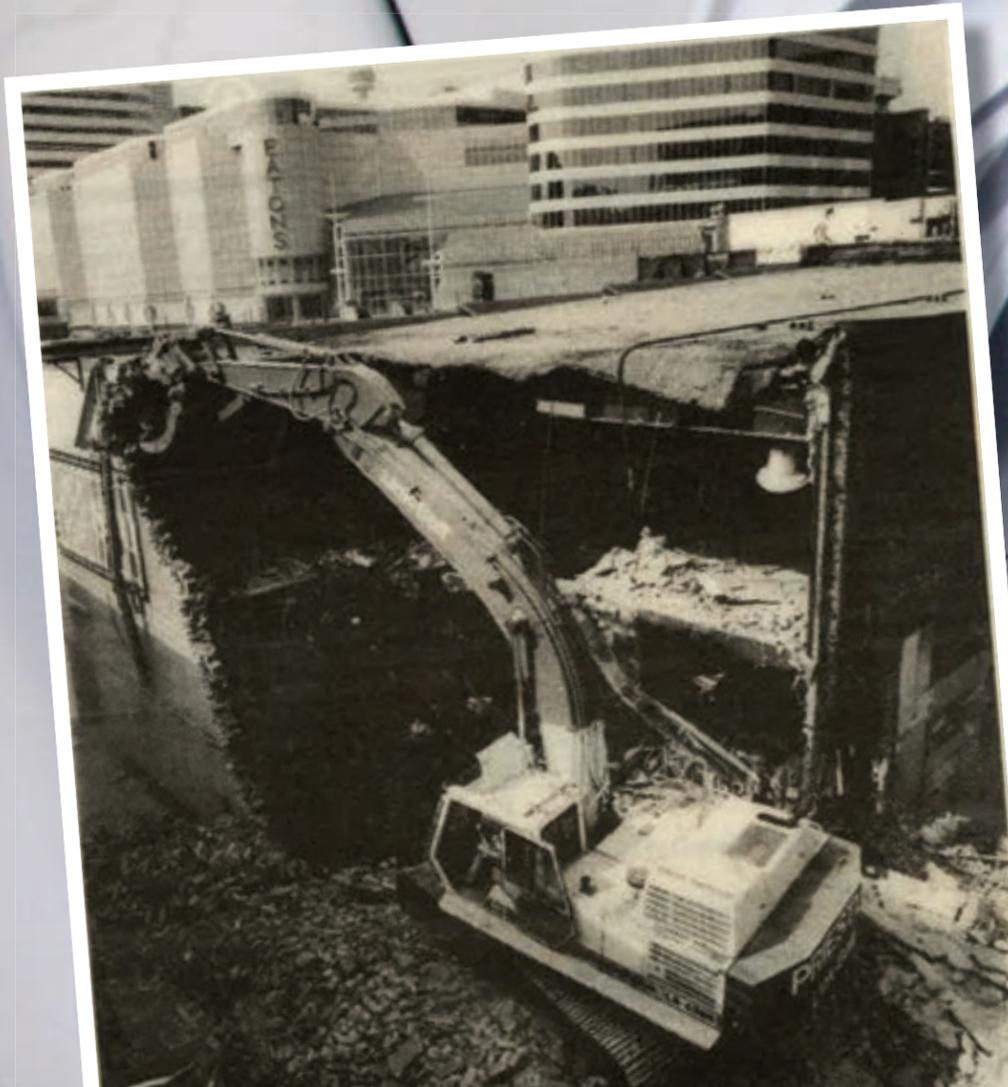


6095 Progress Street, P.O. Box 148, Niagara Falls, ON Canada L2E 6S8 905.356.6887  
1.800.263.3602 fax 905.356.5747 nfsales@niagarafasteners.com www.niagarafasteners.com



**25<sup>th</sup>**  
 Anniversary  
 1993-2018

*Celebrating  
 25 Years of Service!*



Daily Commercial News, Monday, July 12 1999

**DOWNTOWN DEMOLITION** □ Priestly Demolition Inc. is tear-  
 ing down buildings at the future site of the \$100-million Metropolis project on  
 the northeast corner of Yonge and Dundas streets in downtown Toronto. The  
 320,000-square-foot development will include five levels of stores, restaurants  
 and bars, plus an AMC cinema megaplex which will be built on top of the  
 existing Ryerson parking garage. Demolition is expected to be finished by the  
 end of July.  
 Photo by WILLIAM CONWAY



**Priestly Demolition Inc.**  
 3200 Lloydtown-Aurora Road, King, ON L7B 0G3  
 1-800-263-2076

Follow us:





Existing building on River Street to be demolished. The project was scheduled for December. The project was managed by Christofferson Ltd. (structural); Priestly Demolition (demolition); B.A. Demolition Co. (1987) Ltd.  
WILLIAM CONWAY/PROGRESS PHOTOGRAPHY



Women's Hospital  
2014



880 Bay St., Toronto  
2017



Nipigon Bridge  
2016



gun at the former Toronto. Part of new home of the contractor PCL by Brisbin Brook DELIVERY, Page A7



Kitchener Bridge  
2018

*A Force to be Wrecking With!*



**Specialists in:**

- Demolition
- Excavation & Brownfield Remediation
- Custom Concrete Crushing
- Hazardous Material Abatement
- Asset Recovery & Salvage
- Emergency Response Service

[www.priestly.ca](http://www.priestly.ca)

## Fresh Start

# Kelso Quarry Park an environmental engineering showcase

DAN O'REILLY  
CORRESPONDENT

In what might be considered a symbolic comparison to the endless lines of gravel trucks which once poured through its gates, Kelso Quarry Park is on a journey of sorts. In this case the destination is the complete transformation of what was once the Milton Limestone Quarry.

For the past two decades a series of restoration projects have been undertaken and a major event commemorating what has been achieved occurred last July when the park was awarded the Ontario Stone, Sand & Gravel Association's (OSSGA) Bronze Plaque.

Affixed to a large, decorative stone marker, the plaque acknowledges the quarry rehabilitation efforts undertaken by Conservation Halton, which is the regional watershed conservation authority, in partnership with the Town of Milton.

---

"The diverse ecosystem that has been created in the heart of the Niagara Escarpment is why this site is so exceptional,"

Norm Cheesman  
OSSGA

---

Only 21 rehabilitated former pits and quarries have received this award since it was established in 1975 by the association, a non-profit industry association representing over 280 stone, sand, gravel, and crushed stone producers and suppliers of valuable industry products and services.

Located on the Niagara Escarpment just north of Milton and adjacent the popular Kelso-Glen Eden Conservation Area, the 71-hectare former quarry was established in 1958 to provide aggregate for the construction of Highway 401 and, at one time, was one of Canada's largest producers of aggregate.

In 1995, as the quarry was nearing its extraction license limit, Conservation Halton and the quarry owner began "collaborative rehabilitation plans" for the restoration of the property and its eventual transfer to the authority. The quarry was closed in 2001 when the last aggregate was extracted, says authority watershed restoration planner Nigel Finney.



CONSERVATION HALTON

A pivotal feature of the former quarry is a 32-hectare manmade lake. Conservation Halton decided to create fish spawning shoals in the lake in 2015.



SHERRY YUNDT

The Milton Limestone Quarry, pictured above, was transformed into Kelso Quarry Park over two decades. A series of restoration and environmental engineering projects helped make the 71-hectare former quarry a recreational space.

In 2006 owner Barrick Gold Corporation completed the required rehabilitation conditions and the property transfer was completed.

Since then authority has conducted several projects intended to improve the park's ecosystem including creating new wetlands, building of trails, marsh plantings, and extensive tree planting which actually began before the property transfer.

Many of those projects "would not have been possible without the dedicated work of community residents."

The construction industry also played a major role in one of the most significant and extensive components of the multi-phase, multi-year undertaking. A pivotal feature of the quarry is an approximately 32-hectare manmade lake and in late 2015 Conservation Halton embarked on an ambitious undertaking to enhance fish habitat through the creation of fish spawning shoals.

Comprised of gabion stone, clay till, and round river stone, the shoals were built in three areas on the north and west side of the lake.

An in-house restoration ecologist created the shoal design which was based on existing outcropping of shallow rocks as well as planned future uses of the lake, he says.

"Each shoal was designed to provide spawning opportunities at different depths," says Finney, pointing that several factors have to be taken into account when designing and building fish habitat shoals, including the clarity of the water.

Conducted over a two-month period in December 2015 and January 2016, the shoal project partners included Dufferin Construction, which donated a portion of the approximately 45 truckloads of required aggregate. It was transported to the quarry from a pit in Waterloo Region. As the aggregate was being delivered, it was graded into place by Guelph-based Tri-City Equipment.

"Installation of the shoals occurred when there was ice on the lake and a long-range excavator was needed to break through the ice before placing the rock," says Finney, explaining this work had to be conducted in the winter to comply with regulations governing in-water construction.

Another industry player was Eco-Tech Construction

which placed woody debris in the lake and an adjacent wetland. They will serve as perches for waterfowl and basking habitat for turtles.

Later that same winter fish habitat structures in the form of three-metre high, 1.5-metre-wide (eight-foot-high, five-foot wide) free-standing wood cribs were installed near the shoals by Conservation Halton staff with the help of Niagara College restoration students and community volunteers. Built with rot-resistant cedar logs, the cribs were filled with conifer bush and cinderblocks weighing between 362 to 453 kilograms (800-1,000 pounds), says Finney.

Since then restoration initiatives at the quarry have been placed "on pause" because of budget restraints. However, authority is updating a master plan and undertaking a public consultation process with the twin goal of protecting the park's natural and cultural features and enhancing recreational and educational amenities, says Finney.

What has been realized to date "represents the best of the best among thousands of rehabilitated former aggregate extraction sites in the province," OSSGA executive director Norm Cheesman told participants at the park dedication.

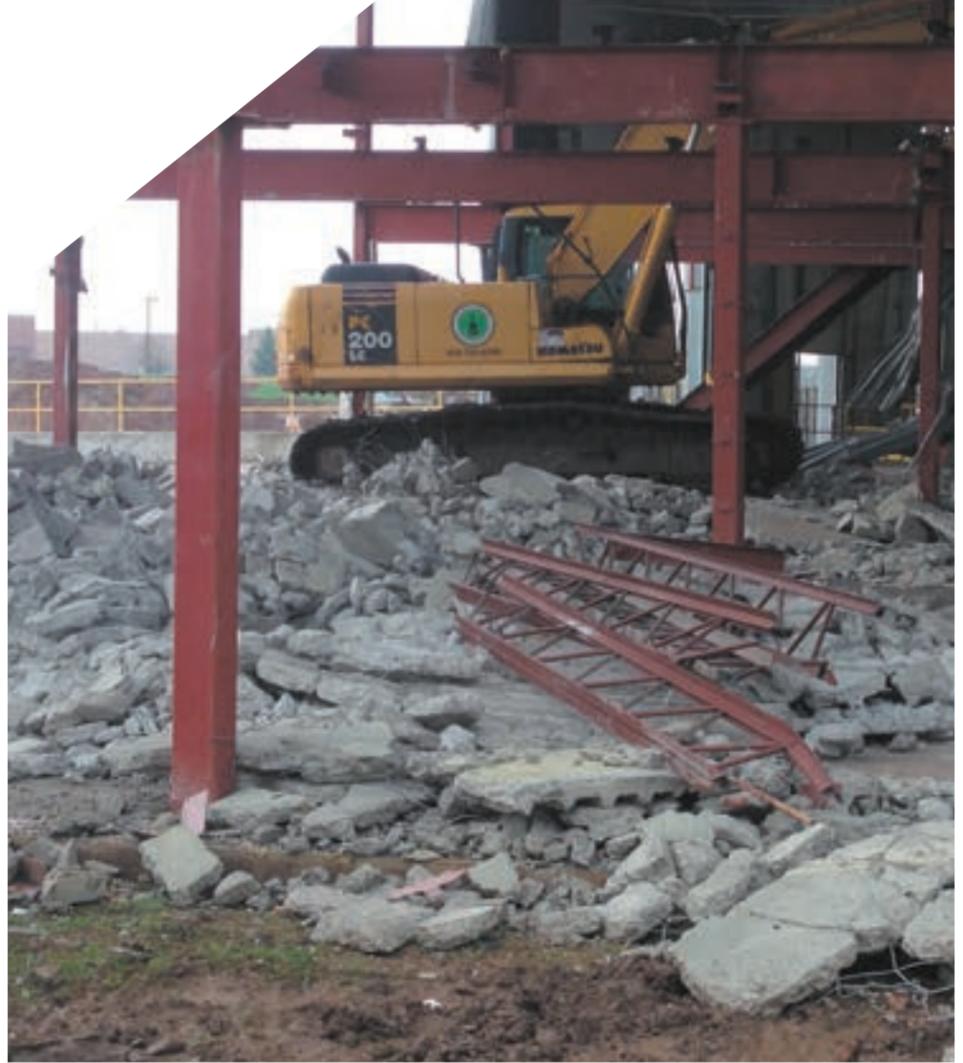
"The diverse ecosystem that has been created in the heart of the Niagara Escarpment is why this site is so exceptional."

Responding to a question on why the association didn't wait until the restoration was fully completed before presenting the award, Cheesman pointed out the process for awarding the bronze plaque started in 2016.

"It's an extensive, multi-year process to review applications. Judging is completed by OSSGA's rehabilitation committee which is comprised of aggregate producers and consultants with expertise in the area of rehabilitation of pits and quarries.

If an application meets all the criteria, the committee makes a recommendation to OSSGA's board of directors that an award be granted. This can take time."

As well, the onsite ceremony was intended as a public event to showcase the rehabilitation, says Cheesman.



When facing a demolition or asbestos abatement project, choose UNITED WRECKING INC. for prompt and professional service customized to fit your specific needs. Serving clients in Mississauga and throughout Ontario, our experienced team has the knowledge and resources necessary to ensure you receive industry leasing service at a competitive price. Our crew is ready to completely demolish your building or prepare it for renovation. Always responsible, always on the cutting-edge of service, that's UNITED WRECKING INC.

308 – 1515 Britannia Rd E, Mississauga, Ontario L4W 4K1 • Phone (905) 795-6099 • Fax (905) 795-9040

[www.unitedwrecking.ca](http://www.unitedwrecking.ca)

## Coal No More

## Lambton Generating Station demo specs a detailed exercise

**DON PROCTER**  
CORRESPONDENT

Demolition is underway on one of Ontario's last coal-fueled plants — the Lambton Generating Station in southwestern Ontario.

Work to date “has gone smoothly,” considering the “complex nature” of the project which consists of structures sprawling over a 1,300-acre site that had a power generating capacity of 1,976 MW at its peak, says Dan Roorda, Ontario Power Generation's project manager for the demolition and decommissioning.

Roorda describes a planning and engineering process to the job that is much bigger than it might appear to passersby. “Identifying the stakeholders, the risks and planning the work in an orderly fashion is complex and very different from construction of a new generation facility.”

Developing a specification for the demolition “took many months,” he points out.

“A lot of engineering” went into planning the disconnection of utility services of the powerhouse — “the hub of the site” — and reconnecting them from a different power feed to facilities such as the main gate, dock, truck scale and an office building that will remain in service while the demolition takes place.

“At the end of the day we wanted to eliminate all hazardous energies

from the powerhouse and turn it over to the (demolition) contractor in a black state (no energy) so they could start anywhere and everywhere in taking things apart.”

OPG began the decommissioning in 2016 because it couldn't get the green light from the province to re-outfit the coal facility with natural gas. The plant had been shuttered since 2013.

JMX Contracting was awarded the demolition contract this summer after OPG had done extensive work, including the removal of hazardous substances. For instance, it drained oils from transformers and removed a PCB storage compound, says Roorda. Some of the oils can be resold, if they are PCB free.

JMX's \$30 million contract primarily covers mechanical demolition (taking down all the buildings) but asbestos remediation and draining and removal of excess oils that could not be removed by OPG are included in its contract, he says.

Demolition of the two west smokestacks is scheduled for demolition next summer while the remaining east stack will be dropped in 2020. The 550-foot tall stacks will be imploded, says Roorda, noting that JMX will sub out the work.

The project manager says the proximity of the stacks to the site's switchyard presents a challenge to mitigate damage risk from vibration, flying debris



The coal-powered Lambton Generating Station was decommissioned in 2016. This southwestern Ontario station was shut down in 2013 after the potential conversion of it to natural gas was turned down.

and the dust cloud. Mitigation includes noise buffers (berms possibly comprised of scrap from the demo) and dust abatement, including water spray, dust curtains and debris shields.

Populations impacted by the project include First Nations, the community of Courtright residents

in Michigan state just across the St. Clair River from Lambton.

The third and final phase — an environmental closure plan — will include cleanup of the sewage lagoon and various ponds, Roorda says, adding the total demolition and environmental cleanup tab is estimated at \$60 million.

No plans have been made for the site once demolition is completed, he adds.

While in principle the Lambton demolition is similar to the Nanticoke generating station demolition on Lake Erie, the two pose different challenges because the sites are configured “quite differently.”

## A partner you can trust

Managing the success of your construction business can be challenging in today's evolving marketplace.

When you partner with Aviva for your surety needs, you can count on us to provide you with:

- Expert advice and consultation for your specific project
- Our commitment to help you meet your business goals
- A stable partnership focused on the long-term

With more than 100 years of expertise behind us, you can trust Aviva as your valued business partner.

**Contact your broker to learn more.**



[avivacanada.com](http://avivacanada.com)    

**Insurance** – Home | Auto | Leisure & Lifestyle | Business | Surety

Aviva and the Aviva logo are trademarks used under license by the licensor.



Leveraging multiple and overlapping generations of field experience, **MGI** is solemnly dedicated to providing our clients with cost-effective and timely service.

### We specialize in:

- Demolition
- Abatement
- Remediation
- Decommissioning
- Earthworks
- Excavation
- Site Services
- Road Works



*Constructing History*



11 Dansk Court  
Etobicoke, ON M9W 5N6  
☎ 416-675-2280  
📞 416-675-2209  
✉ estimating@mgicorp.ca

[www.mgicorp.ca](http://www.mgicorp.ca)



**20V<sup>MAX\*</sup>**  
LITHIUM ION

**180+**  
PRODUCTS

**OUR**  
**FASTEST GROWING**  
**SYSTEM**



**GET MORE DONE™\*\*** with **180+ PRODUCTS** in the DEWALT 20V MAX\* line. All tools come with upgraded features, superior ergonomics and use Lithium-Ion batteries. For extreme performance, step up to the XR® series and get advanced electronics, extended runtime and faster application speeds.



Learn More at [www.DeWALT.ca](http://www.DeWALT.ca)

**GUARANTEED TOUGH.®**

Copyright ©2018 DEWALT. The following are examples of trademarks for one or more DEWALT power tools and accessories: The yellow and black color scheme; the "D"-shaped air intake grill; the array of pyramids on the handgrip; the kit box configuration; and the array of lozenge-shaped humps on the surface of the tool. \*With respect to the DEWALT 20V MAX\*: Maximum initial battery voltage (measured without a workload) is 20 volts. Nominal voltage is 18 \*\*DeWALT 20V MAX\* vs. DeWALT 18V NiCad..