



R.L. Clark Water Treatment Plant – Architectural Upgrades

FEATURE PROJECT

Project Requirements

The R.L. Clark Water Treatment Plant, located in South Etobicoke, first opened in 1968. It was originally called the ‘Westerly Plant’ but was later renamed after Ross Leopold Clark, a former Commissioner of Works in Toronto. The plant is nestled in a highly populated community bordered by park lands, residential homes, local businesses, the Humber College Lakeshore Campus, and Lake Ontario.

The City of Toronto treats over 1 billion litres of drinking water each day. This vital drinking water facility accounts for nearly 30% of Toronto’s drinking water.

The contract involves various upgrade improvements to the entire treatment plant including:

- Architectural Building Improvements** – removal and upgrading of existing architectural building elements.
- Structural Improvements** – structural rehabilitation of various buildings, replacement of ladders, railings, and platforms.
- Civil & Landscaping** – upgrading parking lots and access roads, fence rehabilitation, landscaping improvements around the various buildings, and courtyard renovation.
- Electrical & Security** – upgrading interior and exterior lighting and control systems.
- General Building Improvements** – upgrading HVAC, plumbing, service water, and drainage systems.

Construction began in August 2017 and is scheduled to be substantially completed by August 2019. The facility will remain fully operational throughout the duration of the contract.

Project Scope

- Contract Services:** Stipulated Lump Sum
- Design Features:**
 - Replacement of existing exterior veneer with new architectural block and fibre reinforced panels
 - A new metal ceiling system to replace the old acoustic ceiling tile system
 - Lighting upgrades throughout the entire facility
- Key Challenges:**
 - Construction work adjacent to a residential community
 - Working within a fully secure operational facility
 - Minimizing impact to plant operations with limited timeframes for process related work
 - Coordinating and scheduling activities with multiple trades throughout the entire plant

Roles & Responsibilities

- Owner:** City of Toronto
- Primary Consultant:** Associated Engineering (Ont) Ltd.
- Excavation:** Blu-Mar Excavating & Grading Ltd.
- Demolition:** Lions Group Inc.
- Masonry:** Bernel Masonry Ltd.
- Metal Fabrication:** Trade Tech Industries Inc.
- Roofing & Architectural Panel Systems:** Bothwell-Accurate Co. Inc.
- Painting & Coatings:** Algoma Contractors Inc.
- Curtain Wall & Glazing:** AGC Flat Glass North America Ltd.
- Mechanical:** DNA Mechanical Inc.
- Electrical:** Quantech Electrical Contractors Ltd.
- Suspended Ceiling Systems:** Foremont Drywall Contracting

Team Kenaidan

- Project Director:** Ian Smith
- Project Manager:** Steven Radencich
- Site Supervisor:** Kevin Gomes
- Site Foreman:** Chris Urbanik
- Team Leader Construction Surveyor:** Claudiu Ban
- Health & Safety Coordinator:** Madelaine Gallagher
- Estimators:** Andrew Davies, James Smith
- Project Administrator:** Rachna Pathak
- Preconstruction Coordinator:** Ali Sohrabirehani
- Preconstruction Administrators:** Yolanda Banks, Summer Giometelo

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FEATURE CREW
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Corbett Creek WPCP – Digester Facilities Upgrades

PROJECT UPDATE



Project Requirements

The Corbett Creek Water Pollution Control Plant (WPCP), located in Whitby, Ontario, is a secondary treatment facility that utilizes a conventional activated sludge process for sewage treatment and anaerobic sludge digestion for stabilization of wastewater sludge. Kenaidan constructed a new Primary Digester, converted an existing Secondary Digester to a Primary, and constructed a new gas building, heat exchanger room, and various upgrades to the Digester Control Building.

The scope of work encompassed demolition of the existing Digester No. 1 system, sludge piping, gas, and heating systems. This was replaced with new piping, valves, pumps, heat exchangers, and related equipment. The entire digester gas system was replaced with new gas boosters and safety equipment. The new boilers are dual fuel, which can be powered by digester gas or natural gas. The work also included piping and mixing systems for the newly constructed digester.

Tie-ins and shutdowns to existing systems were also a key component of the project. All existing digesters and boilers had to remain operational until the new systems were complete and commissioned. The new digester gas system has since been reviewed, inspected, and signed off by TSSA and is now operational.

Kenaidan self-performed all concrete formwork and placement, as well as process mechanical installations. Construction began in the summer of 2016 and was substantially complete April 3rd, 2018.

Project Scope

Contract Services: Stipulated Lump Sum

Concrete: 1,370 m³

Formwork: 2,748 m²

Project Features:

- A new 26 m diameter, reinforced concrete Primary Digester
- Modifications to an existing digester
- Digester gas room
- New sludge heat exchanger/pump room
- Expansion and modifications to existing digester control building
- Provision of new equipment, including boilers, heater exchangers, pumps, gas boosters, and valves
- Modifications to process and gas piping systems
- Provision of new digester gas safety equipment
- Upgrades and modifications to HVAC, mechanical and electrical systems
- Provision of control and instrumentation including SCADA system
- Landscaping works

Key Challenges:

- Maintain Primary Digester No. 2 in service with no interruptions to the plant operations while completing the new gas room and installing the new gas lines
- The mechanical team managed to avoid multiple shutdowns that were set to be performed within 24-hour windows, which were both costly and timely, by proposing a solution to bypass sludge recirculation lines, sludge transfer lines, raw sludge lines, and scum lines in a 48-hour window; this allowed additional works to take place that would not have been feasible otherwise, as it would directly impact the day-to-day operations for weeks
- Completion and certification of the new gas room prior to completing roof top and HVAC works
- Supporting live process piping, gas piping, and other site services during construction
- Performing tie-ins and shutdowns without impacting ongoing operations



By Samuel Livingstone
Health & Safety Advisor

Dealing With Impairment At Work – Keeping Each Other Safe

POINT OF INTEREST

Impairment is a reduced ability to perform a task; this can come in different forms. The ones we immediately think about are alcohol

and drugs, but impairment can come from other sources such as lack of sleep or over the counter or prescription medications.

Construction is already one of the most dangerous industries, without having to be exposed to the risks of impairment. It is estimated that 10% of all workplace accidents are impairment related. When someone is impaired,

they are statistically more likely to hurt those around them than they are to hurt themselves. Most workers, when impaired, cannot recognize the symptoms in themselves.

The key to impairment identification is that the worker is acting differently than they normally do. While signs and symptoms vary greatly depending on the cause and severity, the key is to identify that the individual's behaviour and/or ability to perform their assigned tasks has been impacted.

We all must 'Care Enough To Act' when it comes to suspected impairment. Just as we would not walk by an unsafe condition, we cannot ignore

someone who is suspected to be impaired. The main goal must always be to keep our workplace safe and to ensure workers are healthy, both at work and at home. This is why Kenaidan has a comprehensive wellness plan for its employees.

Any worker who is suspected of being impaired, for any reason, should be reminded of the resources that are available to them. Having someone to talk to, getting more information, or knowing their coworkers are concerned can help someone recognize that there is a problem and lead them to take action to move towards a path of self-improvement.

Our Message



By Dave Kirkland

Historically, we have enacted change within Kenaidan in a steady and measured way, but in early January of this year we changed up the leadership of the company in quite a dramatic fashion, revamping much of the Executive group.

The changes to the leadership structure are very important for the future growth of Kenaidan, and have enabled a managed handover to the younger leadership group. This succession process had been planned for some time now, and it's gratifying to see the positive energy this transition has generated.

In my case, stepping down as President and COO and taking on an advisory role, has allowed John Goffredo to step into the prime leadership position while still having me around for support. Promotion of others into executive level positions is now allowing other staff members to step into elevated roles.

As President and COO, I had two primary tasks, one of which was to lead Kenaidan through the difficult circumstances of the last few years. The second task was to enable the transition of leadership from Aidan, as the company Founder, to the next generation President. So it is with satisfaction that I see 2018 and beyond shaping up to be good years

for Kenaidan. I also derive a lot of satisfaction from seeing the positive energy and strength that John is bringing to his new role.

Succession should always be a long-term well managed process, but it should also be a continuing process where the current group of leaders are always looking at providing challenging opportunities for younger staff. The intent is not only to provide everyone with challenging and rewarding work, but also to identify and develop future leaders who will ultimately step into senior level positions.

Going forward, I have great faith not just in the new leadership group, but just as importantly, in the skills and commitment of the many talented staff that work here. We have a great blend of both veteran and junior staff in all areas of the company, with experienced staff providing guidance and training to the younger staff.

The success of Kenaidan has been built around our strengths of teamwork, respect of others, and a commitment to common goals as embodied in our Mission Statement and Core Values. These strengths will continue to be the foundation of our success, and I am excited for the future of Kenaidan!

Environmental Update



By Derek Behary
Manager Environmental
and Quality Services

In 2016, an environmental update article reviewed the Ministry of Environment and Climate Change (MOECC) acceptance to undertake a review of excess soil management in Ontario. This was in response to an Environmental Bill of Rights (EBR) application in November 2013 to "establish a new comprehensive, province-wide policy to address the problem of compromised soil."

The MOECC released an Excess Soil Management Policy Framework in 2016 that contained 21 action items. Even though the MOECC took the lead on this,

the framework represented a multi-ministry approach with input from: Transportation; Natural Resources and Forestry; Agriculture, Food and Rural Affairs; and Infrastructure.

In April 2017, there was an EBR posting to get feedback on the Excess Soil Management Policy Framework which proposed, among other things, a greater focus on source sites. A total of 110 submissions were received by June 23rd, 2017.

Based on the feedback received, amendments include excess soil being designated as waste from the moment it leaves a project area unless the excess soil is being directly transported to a reuse site for final placement, the operator of the reuse site has consented to the deposit of the excess soil, and the excess soil is dry.

It is also proposed, subject to some exceptions, that leaders of projects generating excess soil be required to prepare Excess Soil Management Plans (ESMP) before any excess soil leaves the project area, and to implement the plan. An ESMP would not be required if:

- the project area has never been used for an industrial use or other specified commercial uses,

- the primary purpose of the project is not to remediate contaminated land,
- the project is located outside of a settlement area or involves less than 2,000 m³ of excess soil leaving the project area,
- less than 100 m³ of excess soil is taken directly to a waste disposal site,
- the excess soil must be removed for emergency purposes, or
- the excavation of excess soil is necessary for the maintenance of infrastructure.

At a meeting held on December 1st, 2017, MOECC staff noted that most of the submissions supported a transition period of one and five years for implementation. Reuse standards and clarifications of the waste designation would take effect on January 1st, 2020, while Excess Soil Management Plans (ESMP) and other regulatory requirements would go into effect on January 1st, 2021.

Programs will have to be developed to educate owners, contractors, and haulers. It has been suggested that pilot projects be carried out to test whether the new regulations will work in practice before being implemented over the next few years. Pilot testing of supporting new technologies and Best Management Practices (BMPs) will be critical to getting things right and promoting continuous improvement.

| Yearly Breakdown of Soils Generated by Construction Category | |
|--|-----------------------------------|
| Municipal and Other Infrastructure | 10.7 million m ³ |
| New Residential | 8.6 million m ³ |
| ICI (excluding Roads and Utilities) | 6.5 million m ³ |
| Total | 25.8 million m³ |

Our Company, Our People

ROAMING PHOTOGRAPHER

Bloomington GO Station FEATURE CREW



Back row (L to R): Claudiu Ban, Maurice Wong, Michael Healey, Ambri Zguri, Tony Melo, Kris Woronko, Tony Correia, Bill Crawford, Chris Phillips. *Middle row (L to R):* Nick Sule, Andrea Mrezar, Katelyn Stack, Jason Mulvihill, Mirek Chmielewski, Ron Hamersma, Alex Webb, Carl Johnson, Dave Ramberg, Joel Walton, Jordan Walsh, Luke Walsh, Dora Goncalves. *Front row (L to R):* Freeman Dunphy, Sean MacArthur, Jon Rossi, Don Pletch, Darrel Squires, Ron Young, Manual Goncalves, Bruce Sloan, Igor Melnik, Herman Jones, Paula Oake, Nick Cacciaccaro. *Absent:* Jake Pitawanakwat, Walter Skorka, Bohdan Kunysz, Norm Crawford, Donnie Linstead, Roberto Melo, Mitch Wyszynski.

Chris Cormier is happy to receive his prize for winning "The Great Canadian Whack Off" challenge; one of our events at Guildwood GO Station celebrating North American Occupational Safety & Health Week (NAOSH).

Kenaidan Welcomes

Patrick Hamlin, Project Manager
Taylor Dorland, Project Manager
Moh Nagy, Senior Estimator
Ryan Rogers, Project Engineer

Upcoming Events

Kenaidan's Partnering Party,
June 21st, 2018

Congratulations To

John Goffredo on his promotion to President
Kasra Banis on his promotion to Project Manager
Chris Stewart on his promotion to Project Manager
Andy McLellan on his promotion to Project Manager
Andrea Mrezar on her promotion to Project Manager
Bob Adedayo on his promotion to Project Manager
Lee Evans on his promotion to Site Supervisor
Jeffrey Leung on obtaining his Chartered Professional Accountant Designation

Corporate Donations

Kenaidan recently made donations to:

- Mississauga Italian Canadian Benevolent Association
- Camp Bucko
- Our Youth at Work Association
- Kids Up Front Foundation

Charitable Matching Program

Kenaidan has recently matched employee donations to the following charities:

- Cystic Fibrosis Canada
- Hospital for Sick Children

Contributing Editors: Steven Radencich Kasra Banis Anthony Cipolla Donny DiZio Patricia Pereira Marisa Nardini Andrea Howson



Kenaidan's Mission Statement:

- To provide responsible, quality construction services utilizing superior innovation and expertise.
- To develop and maintain long-term relationships with satisfied clients and suppliers.
- To create a safe, challenging and enjoyable work environment where employees share in corporate growth and success.
- To build on a sound financial base where future development is promoted over short-term gain.



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