



Canada's Voice for  
Brownfields Redevelopment

## October 2019 Newsletter

### Welcome



Hello Fellow CBNers!

I hope you all had a good summer break. New building construction continues to be at an all time high and that means some of the brownfields continue to disappear, which is good news. Please continue to share your success stories. We love to share them at the CBN.

At our conference in June it was underscored that a successful brownfield redevelopment is an outcome of good communication and community involvement and support. The end result is a win-win for everyone, as we do not like to have underused blights in our communities. A well-designed brownfield redevelopment typically supports employment and enriches our communities. In addition, presentations showed that it is not only contaminated soil that has to be considered, but also how vapours and run-off could be dealt with among other things, that might be off concern at a brownfield. A big thank you for the organizers, presenters, and those who attended to make the conference a success. Within the newsletter is a brief summary of the various presentations. Please reach out to the presenters for further details.

Best wishes for the Autumn and success with your site redevelopment. Happy reading.

Warm regards,

**Berend Jan Velderman, M.Sc. P. Geo,**

Director CBN; Communications and Membership Committee Chair

### Membership Renewal Reminder



CBN's 2019-2020 renewals have gone out and it isn't too late to renew your membership for this year. To continue as part of CBN, please renew online or contact the CBN [office](#). Thank you for keeping CBN strong and for supporting the network!



JOIN CBN - BE PART OF THE  
**FUTURE!**

Do you share CBN's enthusiasm to promote brownfield property reuse as the preferred solution for developers, but aren't yet a CBN member? Join us today! Our large and committed membership offers more opportunities for networking, increasing your chances to learn about best practices, gain business, hear about new projects and be exposed to the latest processes and techniques in remediation.

For information on how you can benefit from CBN membership, or to join CBN, please see our [Membership Info page](#) or contact the office by e-mail at [davidp@canadianbrownfieldsnetwork.ca](mailto:davidp@canadianbrownfieldsnetwork.ca). More details are also available in this newsletter - click on [Join CBN](#). Thank you for being part of the future!



### **CBN's Twitter Feed - Please Follow Us!**

Always looking for ways of connecting with the brownfields community, CBN is now on Twitter. We live-tweet from our events and those in which we participate, and post relevant information. Be sure to stay current - sign up to follow us [@CdnBrownfields!](#)

### **Contents this issue:**

- [Welcome](#)
- [CBN Twitter](#)
- [CBN Events](#)
- [CBN Partner Events](#)
- [CBN Conference 2019 - Recap](#)
- [CBN Updates](#)
- [Committee Updates](#)
- [Membership Renewal Reminder](#)
- [Join CBN](#)
- [CBN LinkedIn](#)
- [CBN Twitter](#)
- [CBN Facebook](#)
- [Interested in Volunteering for CBN?](#)
- [Send Us Your Comments](#)
- [Corporate Members](#)

### **CBN Events**



**Thank you for your 2019 Brownie Award Nominations!**

Thank you to everyone who submitted a nomination for a project! If you missed the deadline, please send us your project nomination to [davidp@canadianbrownfieldsnetwork.ca](mailto:davidp@canadianbrownfieldsnetwork.ca), and we will enter it as a submission for the 2020 Brownie Awards!

Our Gala on November 26 is fast approaching! Celebrate excellence and innovation in brownfield remediation and redevelopment at the Delta Toronto hotel by reserving your ticket today! The Brownie Awards are a celebration of our industry's efforts to improve Canada. To purchase your ticket and share in the festivities, please contact [nick@actualmedia.ca](mailto:nick@actualmedia.ca).

**The Brownies Gala is open to everyone in the brownfield community!**

You don't have to have submitted a project for an award to attend the Gala. Especially for this 20th anniversary, we welcome all brownfielders to join the community in celebrating the exceptional projects, programs and people that make our industry a vital part of the development scene in Canada. This will be the biggest year ever for the Brownies, and we'd hate for you to miss out on this important opportunity to celebrate excellence in brownfield remediation and redevelopment - reserve your ticket today!

**The Brownie Awards will be presented on**

Tuesday, November 26, 2019  
at a gala celebration at the Delta Hotel by Marriott Toronto.  
Reception: 5 p.m. • Dinner: 6 p.m.

For award category sponsorships, corporate tables or single tickets, please contact:  
Nick Krukowski • [nick@actualmedia.ca](mailto:nick@actualmedia.ca) • (416) 444-5842 ext. 101

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## Save the Date for CBN's Annual Conference, 2020 Edition!

JUNE 10, 2020 - TED ROGERS SCHOOL OF MANAGEMENT, RYERSON UNIVERSITY, TORONTO



### **CBN's 2020 Conference - Be Sure to Save the Date!**

Building on the success of this year's event (see the recap below), we've already begun work on our 2020 conference. It isn't too early to add the date to your calendar:

**Wednesday, June 10, 2020**  
**Ted Rogers School of Management, Ryerson University (tentative)**

We're expecting another great event and hope to see you there!

### **CBN 2019 Conference - Recap**



## **CBN Conference 2019 - Revitalizing Brownfields: Enriching Communities**

The focus of the 2019 CBN conference was the variety of ways in which brownfield revitalization contributes to healthier, more prosperous communities. This was exemplified in the keynote speech, the case studies and the breakout sessions.

To view the presentation slide decks, please visit <https://canadianbrownfieldsnetwork.ca/events/cbn-conference-2019/presentations>.

### **Keynote Speaker Nelson Lepine (Carcross/Tagish Management Corporation)**

Nelson Lepine, on behalf of his community, expressed appreciation for their 2018 Brownie Award in the REACH OUT category for their Stewardship Program. The Carcross/Tagish Management Corporation (C/TMC) has identified 65 contaminated sites in the Carcross/Tagish First Nation (C/TFN) territory and is actively working on three (including two disused mines). Their approach is "people first, money second" and their partners are fully supportive of this philosophy, making it a huge success. Their initial project was "Tiny House, Big Dreams"; through this program, they provided carpentry apprenticeship training for 15 people (chosen from among 45 applicants!) while building three homes for low-income families. All 15 passed the training and received their first-year Blue Book apprenticeship work experience; 11 of them continued on to the second C/TMC project, the \$19 million C/TFN Learning Centre.

C/TMC's first major brownfield undertaking was the Chooutla Residential School Reconciliation and Reclamation project. Part of Canada's residential school system, the building was torn down in 1992, leaving behind a legacy of environmental contamination and community stigma. The concept behind this project was to heal the land and heal the people. In addition to environmental, heavy equipment and driver training, C/TMC used the project to build the community.

C/TMC is now working on remediation of the abandoned Venus and Arctic Gold and Silver Mines. At both these sites, wet tailings are leaking into nearby bodies of water because of the failure of the original treatment facility. C/TMC is engaging with the federal government to use these sites for building relationships and fostering reconciliation.

### **Cross-Country Check-Up - Jeremy Anglesey (Environment and Climate Change Canada), Alan McCammon (BC Ministry of Environment and Climate Change Strategy), Maylia Parker (Nova Scotia Environment), Dave Belanger (City of Guelph) and Dean Therrien (Ontario Ministry of the Environment, Conservation and Parks)**

- Jeremy Anglesey focused on recent changes to the Federal Contaminated Sites Action Plan (FCSAP) program, a large federal funding program in every province and territory that allows the federal government to clean up sites for which it's responsible. The original program began in 2005 with about 5,000 active or suspected sites; this number quadrupled by 2010 (end of Phase I). By 2020, an estimated 16,000 sites - most of the sites in inventory - will have been closed; that is, it will have been determined that remediation was not necessary or remedial work will have been completed. FCSAP is in the process of renewal - in the 2019 budget, the government provided \$1.16 billion in additional funding for Phase IV over the next five years. Environment and Climate Change Canada wants to collaborate more with its partners, including indigenous communities and the public sector. Jeremy anticipated that details of the new program will be announced in the coming months.
- Alan McCammon noted that BC's "polluter pays" principle provides a statutory basis for cost recovery; while the regime has not been tested much in court, it has led to plenty of negotiations between parties to sort out questions of responsibility, and the regulatory framework helps this. BC uses science-based standards in a variety of areas, and these are contained in the regulations for the Environmental Management Act (EMA). The regulations are hardwired to local processes and are the biggest driver of the regime to help municipalities minimize problems with contaminated land. The Ministry has a variety of sign-off powers and has the authority to order parties to address contamination; this is reinforced by the ability to order administrative monetary penalties (AMPs), which are more effective than lawsuits and are a disincentive for non-compliance. They have also undertaken a review of the province's soil relocation rules and have received cabinet authorization to proceed with a request for legislation. Other recent initiatives include an update to the site profile process, amendments to

the Contaminated Sites Regulation (CSR), wide-area remediation planning (especially in Trail) and internal improvements to computer systems.

- Maylia Parker introduced Nova Scotia Environment (NSE) as the ministry responsible for contaminated sites. As part of Atlantic PIRI, NSE has participated in their review of the minimum experience requirements for site professionals (as well as conducting their own) and their efforts to harmonize environmental quality standards in Atlantic Canada. Contaminated sites governance in Nova Scotia consists of regulations (high-level) amplified by protocols (prescriptive, defining for example exemptions, establishing environmental quality standards and setting remediation pathway-specific requirements). The province's CSRs have been in effect since 2013 and have now been reviewed intensively. The review has shown the program appears to be functioning well and some potential fine-tuning has been identified. As part of this, NSE will be moving to risk-based auditing to remove inconsistencies about the current review process and to allow a focus on the highest risk sites. In terms of brownfields, the province has found that identified sites have increased by 50% but closure of sites remains proportionally the same as with lower volumes and closure time has improved.
- Dave Belanger spoke to the way contaminated sites are dealt with under Ontario's Clean Water Act (CWA) from the municipal perspective. The CWA defines a contaminated site, and technical detail is provided through O. Reg 287/07 and the Ministry of the Environment, Conservation and Parks (MECP) technical rules. However, in assessing condition sites (those identified as having contamination), it is difficult to get information from MECP and the information, once obtained, was not necessarily current, was limited and did not provide data on off-site contamination; for widespread contamination, this makes it difficult to identify the source site versus the impacted site. The City of Guelph has identified actions that it can take and that can be taken by site owners to provide updated/more complete information. Guelph has also developed a number of strategies that it can take for brownfield sites with shallow contamination, but has identified some issues: while MECP can issue a clean-up order under the Environmental Protection Act (EPA), their will to do so is undetermined; remediation often happens only when the property is being sold or redeveloped; and there is no public list of condition sites.
- Dean Therrien covered recent developments at MECP. They began a review, in 2014, of their ability to meet clients' needs and have brought in municipalities and other stakeholders to get good information on where their efforts should focus. As a result of the review, MECP released for consultation several draft amendments to O. Reg 153/04 relating to records of site condition (RSCs) covering non-standard delineation, salt used for safety in snow/ice, discharge of treated drinking water, naturally elevated concentrations, indoor gathering of people for religious purposes, urban agriculture, and temporary roads, among others. Responses to all stages of the consultation have been positive (the comment period for the current consultation ends June 17) and Dean noted that, if the regulatory amendments are approved, they could be in effect by the fall of 2019.

## **Case Studies**

### *Hamilton ERACSE CIP Case Study - Judy Lam and Phil Caldwell (City of Hamilton)*

Judy Lam noted that Hamilton is rated 0.95 by the federal government for economic activity. The City is seeing a substantial amount of construction and has low unemployment. It also had, as of 2008, almost 1,400 potential brownfields. Phil Caldwell explained that Community Improvement Plans (CIPs) have developed as a way for municipalities to provide incentives for development without showing favouritism to any one organization. In 2001, Hamilton launched the first incentive in Canada designed to specifically address brownfields for the Bayfront industrial area - the Environmental Remediation and Site Enhancement (ERASE) CIP. Since then, ERASE CIP has been expanded to apply to the entire Hamilton Urban Area and now includes a comprehensive set of programs to encourage/promote brownfield redevelopment. The CIP's 2018 review and amendments earned it the 2018 Brownie Award for Best Overall Project.

Judy highlighted three significant redevelopments of industrial areas: a former nail factory on Barton Street, converted to a 210,000 sqft Health services centre; Bayfront area, a 1,607-hectare site and now home to the Bayfront Industrial Park and other uses, with about 18,000 jobs and an assessed value of almost \$1.2 billion; and the former Camco-Westinghouse site, now home to the McMaster Innovation Park. The downtown area is also experiencing success, with 3,000 to 5,000 condominium units under construction or in consultation, one new McMaster student residence completed and

another applied for, the Hamilton LRT under development and the Stoke property redevelopment underway; Stoke is the largest redevelopment grant to date, with a value of \$5 million.

Success metrics show that ERASE Study Grant applications are up in all areas of the City and the total assessment value of completed ERASE Redevelopment Grant (ERG) projects is just under \$160 million; \$129 million of this is estimated to be due to the ERG program. Tax revenue on the redeveloped properties has grown from \$500,000 to \$4 million; without the brownfield assistance provided through the ERASE CIP, this would still be \$500,000 today. The \$9.6 million ERG funding commitment has resulted in \$116 million in actual construction value - a leverage ratio of 11:1, not including development charges and building permit fees.

#### *Orillia Recreation Centre Case Study - Renee Recoskie and Laura Thompson (City of Orillia)*

Renee Recoskie provided an overview of Orillia and noted that the City's rich industrial heritage has left its mark on Lake Couchiching and the downtown core. The site of the new Recreation Centre has had a varied industrial history from 1906 to the late 1990s. After the site was decommissioned and the buildings demolished, the City entered the scene, purchasing the property in 2002 for \$1. The 36-acre vacant site needed extensive remediation and risk management. The variety of industrial uses led to a wide range of contaminants, including PHCs, PAHs, VOCs and PCBs. The highest concentrations of contaminants (groundwater concentrations exceeding 100,000 µg/L) were in a DNAPL source zone, just east of the planned building footprint. Between the DNAPL source zone and the environmentally sensitive Ben's Ditch, a permanent stream on the site's north-western boundary, two separate ESAs and two separate RSCs were required. This was the ogre the City had to "battle".

This represented the largest construction project in Orillia's history - \$54 million - and the first brownfield redevelopment. Although the site was purchased to build a recreation centre, City Council did not finally confirm this until 2014. In addition, the work began at the time of the 2011 updates to O Reg 154/04, meaning that the rules of engagement for the battle were changing. From 2014 on, Council provided strong leadership for the site's redevelopment. This was essential, as the stigma of a brownfield led both Council and staff to be seen as underdogs in the battle. Both worked hard to disseminate information about the site and process. The City managed the beneficial reuse of soil and accommodated some 57,000 tonnes of impacted soil within their own waste diversion site. RMMs were put in place to manage the worst of the DNAPL source zone and the building was relocated on the site in order to position the parking area on the zone. Extensive monitoring of RMMs will be ongoing. In 2016, the project received a Brownie Award in the REBUILD category - a very gratifying experience for both Council and staff. The award had the added benefit of showing the community that brownfields are opportunities.

The City learned several lessons from this experience which they will apply to future projects:

- Leverage brownfield redevelopment to encourage investment in surrounding properties
- Celebrate your achievements and take a forward-looking approach to brownfield redevelopment and communicating future projects
- Collaboration is key, both within City departments and between staff and Council
- Work with community ambassadors - people who are educated about brownfield redevelopment and see it as an opportunity
- Incentivize brownfield redevelopment through a Community Improvement Plan and learn best practices in this area from other municipalities

The top 5 tips for other municipalities?

- Take a team approach
- Be transparent
- Educate stakeholders and the community at large
- Collaborate
- See the opportunity, even when the going gets rough

*Case Studies - Questions and Answers Summary*

- Share information on best practices and approaches to different problems with other municipalities at the county/region level and through programs such as FCM's LiBRé
- To bring councils on-side, ensure they are aware of the benefits of brownfield renewals - increased tax revenues, assessment values and other metrics. Since councils change over time, this becomes an ongoing process
- When allocating incentives, chose projects with the highest economic benefits

### **Legal Update - John Georgakopoulos (Willms & Shier Environmental Lawyers LLP)**

John Georgakopoulos gave an overview of the session; it will deal with environmental liabilities, a case law update and managing environmental liabilities. There are two types of environmental liabilities: regulatory (under which the regulator can prosecute and issue compliance orders to a "responsible person") and civil (lawsuits due to on-site and migrating contaminants; defendant need not be the polluter). Individuals as well as organizations can incur both types of liability; John noted that, in *Midwest v. Thordarson*, the court pierced the corporate veil to assess liability and punitive damages against both Mr. Thordarson and his company, Thorco under s. 99 (2) of the Ontario EPA. He then reviewed the deadlines for appeal of regulatory orders and approvals for Ontario and Alberta. In both provinces, he noted that failure to appeal within the deadlines effectively confirms an order by barring "late" appeals. Non-compliance with a regulatory order once the appeal period has lapsed opens the individual/organization against whom the order has been made to prosecution.

#### *Regulatory Orders*

John then reviewed some recent developments regarding regulatory orders:

- *Domtar v. AEP (Alberta)* - AEP issued multiple orders in 2015/2016 to Domtar to delineate, remediate and control contamination. Domtar appealed the orders and the Board issued a stay pending a full hearing. In 2018, the AEP Director cancelled the 2015/2016 orders and issued new orders; these were reversed by the Minister in 2019 and the original orders reinstated.
- *Hamilton Beach v. MOECC (Ontario)* - the Ontario Superior Court of Justice upheld an MOECC order under s. 18 of the EPA, confirming that the Director can order a company or individual to delineate offsite contamination, even if that individual or company was not associated with the polluting activity or property at the time of contamination.
- *Redwater and Orphan Well Association (Alberta)* - this is an important case regarding the status of environmental orders in proceedings under the Bankruptcy and Insolvency Act (BIA). Redwater's receiver and trustee in bankruptcy, Grant Thornton Ltd. (GTL), disclaimed non-productive wells and other assets with onerous environmental abandonment costs. The Alberta Energy Regulator (AER) issued abandonment orders for these wells. GTL claimed the provincial orders conflicted with s. 14.06 (4) of the BIA which, they said, allowed them to disclaim the wells as non-profitable assets for the overall benefit of the bankrupt estate. The Alberta Court of Queen's Bench found in favour of GTL and was upheld by the Alberta Court of Appeal. The AER appealed to the Supreme Court of Canada (SCC). The SCC reversed the lower courts and held 1) there was no conflict between the AER's orders and the BIA and therefore federal paramountcy is not triggered; 2) s. 14.06 (4) of the BIA is intended to protect the trustee from personal liability while the ongoing liability of the bankrupt estate is unaffected and, since the AER has not tried to hold the trustee personally liable, this section of the Act does not apply to this case; 3) that a regulator attempting to enforce a public duty (as was found in this case) is not a creditor within the meaning of the BIA; and 4) that the environmental duty to remediate was too remote and speculative to be included in the bankruptcy process. The trustee therefore had to comply with the regulatory orders. This case, giving environmental orders potential super-priority over secured and unsecured creditors, will impact the lending and insurance communities, and will require all parties to place more emphasis on their due diligence.

#### *Regulatory Prosecutions*

John reviewed 5 cases: Syncrude Canada Ltd. (Alberta), Irving Pulp and Paper Ltd. (New Brunswick), and Montreal, Maine and Atlantic Canada Co. (Quebec; related to the Lac-Mégantic disaster) in which the courts imposed fines under the creative sentencing process; Collingwood Prime (Ontario), in which the director of the defendant company was sentenced to 45 days in jail; Gwaii Wood Products (BC), where two of the defendants were prohibited from conducting logging activities; and Clark Builders

(Alberta), in which the defendant was assessed fines under the Fisheries Act, for a spill of chlorinated water, even though no fish died.

### *Civil Liability*

- Brookfield v. Imperial Oil (Alberta) - the plaintiff asked for an extension of Alberta's 10-year limitation period at trial; this can be allowed under s. 281 of Alberta's Environmental Protection and Enhancement Act. The court denied the application because the age of the historic contamination and the passage of time may prejudice the defendant.
- Huang v. Fraser Hillary's Ltd. (Ontario) - Huang was successful at both trial and an appeal to the Ontario Court of Appeals by the defendant in obtaining damages under s. 99 of the Environmental Protection Act, even though s. 99 was not in effect when the migration of contaminants occurred.

### *Managing Environmental Liabilities*

John summarized key ways of managing environmental liabilities:

- Understand the environmental condition of a property and the potential for migration of contaminants;
- Develop and implement an appropriate environmental management system (EMS) as part of overall due diligence;
- Take all reasonable care to avoid the offence (due diligence again);
- Having reasonable belief in a mistaken set of facts can also be a defence
- Allocate liability during transactions (however, you cannot contract out of regulatory liability);
- Ensure regulatory liability protection in place (RSCs, remediation certificates, etc.) - offers protection from certain regulatory orders; not absolute; can be reopened; does not protect from civil liability;
- Obtain environmental insurance.

Three cases illustrated these measures:

- R. v. Zellstoff Celgar LP (BC) - the defendant claimed due diligence as they had measures in place to prevent discharge of effluent into the Columbia River. The court determined they were not followed and rejected the due diligence defence.
- R. v. ControlChem (Ontario) - a ControlChem employee deliberately discharged liquids into a storm drain, turning the creek white. ControlChem demonstrated they had EMS in place (including training of the employee in question) and enforced them. This was accepted as a due diligence defence and the company was acquitted.
- R. v. MV Marathassa (BC) - the ship leaked fuel oil into English Bay and the owners were charged under the Canada Shipping Act. They demonstrated at trial that they reasonably believed the ship was designed, built and certified to internationally recognized environmental and safety standards (belief in a mistaken set of facts) and that they had pollution prevention system, including comprehensive crew selection and training, in place. As a result, the court ruled they had successfully made out a due diligence defence and acquitted them.

John provided a checklist for managing environmental liabilities:

- Know the environmental risks - create an environmental team, both technical and legal;
- " Understand potential liabilities: regulatory/civil; personal/corporate;
- Create and implement an EMS;
- Build due diligence into the organization's corporate culture;
- Consider and obtain environmental liability protection where available/applicable.

### **Emerging Technology**

*Navigating the Discharge Approval Process for Building Foundation Drainage - Anna Comerton, Associated Engineering*

Anna Comerton introduced the session as not so much an emerging technology itself, but an emerging application of an existing technology - taking industrial water treatment and adapting it to the brownfield place. She began by giving an overview of the City of Toronto's Long-term private water discharge permit application process. Treatment is required for water discharged to the storm sewer system and may be required for discharge to the sanitary sewer system. Treatment should be a multidisciplinary approach to ensure the system works end-to-end, and should be monitored as the City does spot checks. Additional MECP Environmental Compliance Approvals (ECA) are required for water being discharged to storm sewers or to the natural habitat. The City has discharge limits for contaminants commonly found in groundwater; in the brownfield context, practitioners need to be aware of additional contaminants that may not normally be treated to storm water standards. Anna reviewed approaches for treating water for iron and manganese contamination; she noted that iron is not regulated but can cause problems with the treatment system. The standard approach to these contaminants is oxidation/precipitation/filtration. Chlorine and ozone are common oxidants but, since chlorine cannot be discharged, ozone (generated from ambient air via an ozone generator) is preferred. Ozone must be removed after treatment (e.g. through granular activated carbon filtration) and must be monitored. In addition, filters must be periodically backwashed and the backwash sent to the sanitary sewer. The treatment strategy for other contaminants would be determined on a case by case basis, considering what type of sewer the water would be discharged to, other water quality characteristics, footprint limitations, operations & management and health & safety issues, etc.

#### Case Study - Toronto Condominium

This site had an estimated groundwater inflow of up to 400 m<sup>3</sup> per day, with treated groundwater being discharged to the storm sewer system. The treatment system used ozone as the oxidant; this had the additional advantage of reducing nonylphenols. Direct filtration was used to reduce the required treatment room footprint, but ceiling height constraints impacted the filter specification. Liquid waste streams could be sent to the sanitary sewer system.

#### Summary

- The City's long-term private water discharge permit application is a multi-step process.
- Having representative water quality sample data early in the design process is important to the development of a long-term treatment strategy.
- Pre-consultation with the City to present the long-term treatment strategy will help minimize delay in obtaining short-term discharge approval.
- Multi-disciplinary coordination should begin early in the design process to improve system success.
- A site-specific strategy is required; there is no one-size-fits-all approach.

#### *Green Infrastructure (Stormwater Management) - Mark Luckhardt, Sidewalk Labs*

Mark Luckhardt began by noting that Sidewalk Labs' approach to its proposed Waterfront Toronto development is very aggressive in its sustainability targets; part of this is its management of waste and water systems. This is occurring in the context of an increase in the frequency of significant storm events - in the last five years, Toronto has experienced two 100-year storms. The identified issues are poor water quality, stormwater infrastructure failures, urban flooding and resilience, and municipal capacity issues (new development relying on existing infrastructure). Sidewalk Labs' approach is to design with nature, instead of controlling it. This means:

- Moving away from a building-to-building strategy to an area strategy;
- Offering beneficial solutions to existing problems;
- Using data to know when storms are coming, so tanks are emptied and the flow of water through active controls is managed.

For the Queen's Quay project, Sidewalk Labs will be using the public realm right of way to meet retention requirements, relying on infiltration into the ground - 25 mm across the site within 72 hours. In a brownfield, infiltration is an issue because of the level of contamination in the soil. To deal with this, they looked at the initial site assessment to identify where infiltration would be possible. While this did not prove doable, they looked at site specific data for better information on accomplishing this. The landscape designer considered a system that would meet or exceed stormwater standards for the site without having to dig up the entire site. At present, this approach is at the conceptual level and there

are regulatory and policy considerations to discuss with the City. Sidewalk Labs continues to explore other remediation opportunities through stormwater management.

#### Question and Answer Summary

Where overland relief paths can be created, there is no need for detention tanks. Where tanks are used, they will be designed with automated controls to fill during a storm event (to meet detention requirements) and then use the water for non-potable purposes - mainly irrigation. The design will allow the discharge of the necessary volume to meet detention requirements.

#### *Vapour Intrusion Risk Management Measures - Andrea Wojtyniak, Jacobs*

Andrea Wojtyniak began by reviewing the conceptual site model for a vapour intrusion (VI) site. Where there is a known issue, it may be possible to clean the soil and/or water; where this is not practical, however, risk management measures (RMMs) must be used. She then reviewed a variety of common RMMs:

#### Sub-slab Venting or Depressurization

This requires a permeable layer beneath that slab that allows collection of vapours by a system and then venting them to the atmosphere. It can be active (depressurization) or passive (venting). It is a simple, reliable and proven solution that can be installed economically (in a new build) and has less operational variability, so less can go wrong. However, it can be impractical in some building scenarios (e.g. an existing building, manufacturing facility or where there is a sub-grade utility network), has monitoring/reporting requirements (frequent sampling at the outset that can decrease as the system is proven), has energy costs and doesn't work well where the soil is of low permeability or is saturated.

#### HVAC Modification

This solution is applied to maintain positive pressure relative to sub-slab or other entry pathways to keep vapours from intruding. It is typically used in commercial scenarios but is not recommended for residential structures. It can be less disruptive/costly as it will work with a subgrade utility network, and can be effective in the long-term if the HVAC system already maintains a high level of vacuum. However, there is a cost to operate and maintain the system as there is an energy cost. It is not a good option for a leaky existing or an open new building. The success of HVAC modification can be complex to monitor. Some US studies are underway to see whether, once the system has been shown to operate efficiently, the need for monitoring can be reduced.

#### Indoor Air Treatment

Indoor air treatment, which can be effected through a standalone system or can be integrated with an HVAC system, typically uses a sorbent layer to remove volatile organic compounds. It may be a good temporary or interim solution while identifying the VI source or while building a permanent solution. However, there are not many controlled scientific studies to demonstrate its effectiveness. Furthermore, multiple units may be required to cover a larger area, it can be expensive to operate and maintain long-term, there are waste implications from the sorbent material, and the ongoing monitoring requirement is higher. Andrea noted that sorbent technologies may be developed to target specific contaminants of concern (COCs) and that, if these allowed stripping the COCs out of the sorbent, it would be useful.

#### Soil Vapour Extraction (SVE)

As the name implies, this removes the vapour instead of mitigating it. It applies a vacuum to the soil matrix to draw vapours out; they are then piped to carbon filter tanks to remove contaminants. This is a good option in large buildings or where there are multiple buildings and can be used with, or decrease/limit the need for, other RMMs. However, it is dependent on soil conditions and may not be able to remove all contaminants.

#### Selection of an Appropriate Technology

In choosing an appropriate method, consider:

- The building configuration/construction;
- Whether it is a new or existing building;
- The nature and extent of contaminants;
- The soil and groundwater conditions;

- Monitoring and maintenance requirements.

Research to demonstrate the effectiveness of various methods is needed, and some (on sub-slab venting/depressurization) is underway.

*RPAS, the Drone Term You Haven't Heard of (Yet) - Kevin Grover, Stantec*

Kevin Grover began by noting that drones, unmanned aerial vehicles and unmanned aerial systems, effective June 1, 2019, are now called (by Transport Canada) "remotely piloted aircraft systems (RPAS)". This is part of a regulatory framework change introduced at that time. Stantec purchased its first drone 6 years ago and now operates them in 4 countries. They see the value of using them as tools in day-to-day operations including brownfields, oil and gas, transportation, etc., and they now have 28 licensed pilots. Use of an RPAS makes work more efficient and safer. RPASs can be used in surveying/mapping to generate large scale, precise data sets, high-resolution imagery and to generate 3D images of topography. In addition, collecting light at different wavelengths (e.g. infrared) can provide better information for vegetation analytics.

#### Legal/Regulatory Changes

Effective June 1, 2019, the exemptions allowed under the old permits have been eliminated and all applications require a licensed pilot. In addition, the distinction between a hobbyist and a commercial pilot (where the operator is over 15 years old) is no longer made. Basic operations (away from people and airports) and advanced operations (near/over people and/or close to airports) need different licenses; if an RPAS is to be used beyond the visual line of sight, a special flight operations certificate (SFOC) is also required. Safe integration into airspace is a challenge, and RPASs are now deemed to be aircraft. RPASs are limited to daytime use only and a maximum of 400 feet (122 metres) above ground level.

- Basic operations:
  - At least 30 metres from bystanders laterally
  - Can now overfly vehicles on a roadway, but liability potential is an issue
  - Prospective pilots must pass a small basic online exam to become certified
  - RPAS must be registered
- Advanced operations:
  - More applicable to "commercial" uses, including brownfields
  - Can be operated less than 30 metres away from people, either horizontally or vertically
  - Prospective pilots must pass a small advanced online exam and a flight text in the presence of an examiner
- Special flight operations certificate is required when:
  - RPAS is being flown outside the rules for basic or advanced operations
  - RPAS weighs more than 25 kg.
  - RPAS is carrying dangerous or hazardous payloads
  - RPAS is being flown at a special aviation event or an advertised event
  - An operator is flying more than 5 RPASs at one time
  - The operator is not a Canadian citizen, permanent resident of Canada or a corporation incorporated under the laws of Canada or a province

To successfully and safely integrate RPASs into operations, Kevin recommended:

- Have an RPAS champion
- Enlist leadership support
- Involve safety, legal, insurance and IT teams
  - RPAS operations manual
  - RPAS insurance (not required any longer but still recommended)
  - Pilot training program
  - Workflows and checklists
  - Data storage

**HUB Awards - Grant Walsom (CBN President; XCG Consulting)**

In honour of CBN's 15th anniversary, Grant Walsom announced that we were varying the HUB Awards format this year and recognized the contribution of two of CBN's founders as Pioneers: Bonnie Prior and Tammy Lomas-Jylha.



## CBN Updates President's Message

Summer is over unfortunately, and we at CBN are moving back into high gear for a busy fall, winter and spring! On behalf of the new CBN Board (elected at the AGM June 12), we're looking forward to working with all of our membership to move the brownfield agenda in Canada forward. A few highlights of the coming year:

- Action on the breakout session recommendations from our 2019 conference:
  - Self-funded brownfield structure: explore the implementation of a tax increment financing (TIF) program for Canadian municipalities, supported by a graduate urban planning studio group at Ryerson University advised and mentored by CBN members;
  - Coordinating cross-jurisdictional approaches: create a cross-jurisdictional advisory committee to focus on best-practices on hot button issues;
  - Accepting risk/addressing uncertainty: inform/engage with municipalities through partnerships with organizations such as FCM to identify success stories and best practices in managing risk and uncertainty;
  - Learning from others: work with regulators and other stakeholders to identify ways of dealing with emerging technologies and contaminants (e.g. PFAS) while recognizing that regulation can lag operational developments;
  - Advancing sustainable communities and growth: working with municipal stakeholders, develop a brownfields case to help them prioritize brownfield redevelopment;
  - Rallying the message: create messaging that reinforces brownfields as a driver for community economic development.
- Revamping existing website content and adding new resources: building on the 2017 breakout recommendations as well as those from 2018, we are adding new resources for a variety of stakeholders to help build the case for brownfield renewal. As the City of Orillia explained during their presentation at this year's conference, one of the key tasks they faced was overcoming the stigma of brownfields; through new content, we will provide municipalities with the tools they need to address this issue.
- Research you can use: we will be applying for funding to identify and celebrate municipalities' "catalyst moments" on the road to brownfield redevelopment. In addition to informing best practices, the cases will form part of a tool kit municipalities can use.
- Brownie Awards: this year marks the 20th anniversary of the Brownie Awards and we are working hard with our partners at Actual Media to make this year's gala an event to remember. While nominations for the awards are closed, you can submit a project for the 2020 Brownie Awards starting now. Information and the nomination forms are available on our website at <https://canadianbrownfieldsnetwork.ca/brownfield-awards/brownies>. You can also purchase tickets for the 2019 Gala, being held Tuesday, November 26 at the Delta Toronto Hotel - contact [Nick Krukowski](#) of Actual Media!
- Conference 2020: the date for next year's conference has already been set - June 10 at the Ted Rogers School of Management, Ryerson University - and we will soon begin planning for this event. Stay tuned for more news and please save the date.

In addition, our committees - Communications & Membership, Finance & Insurance, Government Relations, and Technical Advisory - continue with their valuable work addressing issues of concern to our industry. You can read about their achievements over the last year below.

I mentioned the Board election earlier. Please join me in welcoming our new Directors, Evelyn Bostwick (Stantec, Saint John, NB) and Andrew Macklin (Actual Media) to the Board and in thanking departing Directors Isaël Poirier (FCM) and Chris Brown (Husky Energy) for their hard work during their terms.

I'm also pleased to announce our two new Vice-Presidents: Meggen Janes (Waterfront Toronto) and John Georgakopoulos (Willms & Shier Environmental Lawyers LLP). As always, we have a great team and I'm looking forward to working with them during my term as your President.

I'd be remiss if I didn't thank you as well, whether you participated as a volunteer or supported us through your membership. We could not aspire to being the go-to source for brownfields redevelopment without you.

**Chris De Sousa** - President, CBN

## CBN Committee Updates



### CBN Government Relations Committee Report:

The Government Relations Committee promoted CBN's guiding principles in support of Brownfield redevelopment by holding outreach sessions with Manitoba, BC and Alberta in the past year. These sessions were productive, BC and Alberta have recently implemented new brownfield regulations, and MB will be reviewing their regulations in the next year.

The committee also developed a CBN submission for Environment and Climate Change Canada's 2019-2022 Federal Sustainable Development Strategy, and pointed to how smart brownfield redevelopment can be a part of the broader FSDS to green Canada's operations and work with partners to conserve Canada's lands, waters and ecosystems.

In the year ahead, the committee looks forward to continuing our valuable work with government and strategic stakeholder partners to further develop solutions that promote brownfield redevelopment across Canada. Our goal is to strengthen our representation in all regions of the country. We would welcome interested CBN members who can contribute to our efforts, connections and representation!

Government Relations Committee members:

- Rob Hoffman (Chair)
- Chris De Sousa
- John Georgakopoulos
- Ellen Greenwood
- Bonnie Prior

Best regards,

**Rob Hoffman** - Chair, CBN Government Relations Committee



### CBN Finance & Insurance Committee Report:

The Finance and Insurance Committee is focused on identifying new issues of concern for lenders and insurers, and changes to insurance and lending that impact brownfield proponents. The committee identifies and tracks new issues or developments. The committee's activities in the 2018-19 year are set out below.

Some insurance carriers are likely still unaware of the proposed excess soil regulations. Once the regulations are in force, we expect that some carriers will confirm that excess soil is included in the definitions of soil or waste, but some will not, leaving developers without coverage for related potential liability. The committee is considering canvassing insurers across Canada (and possibly US insurers) to obtain insight into their approaches to excess soil. In furtherance of this, the committee will monitor changing excess soil regulations nation-wide.

There has been an increase in claims by real estate developers, REITs and property managers due to increases in infill development. This could affect the availability of policies, including definitions, deductibles and premiums. Co-chair George Boire will prepare an article on this topic to increase awareness within the industry.

There have recently been some cases before the courts affecting consultant liability. Chair Joanna Vince is developing an article regarding consultants' insurance to highlight this subject.

The recent Supreme Court of Canada decision in Orphan Well Association v Grant Thornton Ltd., (aka "Redwater"), confirmed that environmental obligations associated with a bankrupt's assets survive bankruptcy, trumping creditor security. The Redwater decision will not only impact secured creditors, but will also impact lenders, and insurers. The committee will explore this issue to gauge the potential effect.

#### 2018-19 Membership

- Joanna Vince, Chair (Willms & Shier)
- George Boire, Co-chair (Marsh Canada)
- James Evans (RBC)
- Carl Spensieri (Berkley Canada)
- Angus Ross (L and A Concepts)
- James Cullen (Golder Associates)

CBN members interested in joining the Finance and Insurance Committee should reach out to Joanna Vince ([joannavince@willmsshier.com](mailto:joannavince@willmsshier.com)).

Best regards,

**George Boire** - Co-chair, CBN Finance & Insurance Committee



#### **CBN Technical Advisory Committee Report:**

The CBN Technical Advisory Committee (TAC) represents a national network of individuals actively engaged in brownfield site assessment and remediation related activities. The group looks primarily at the regulatory environments within all jurisdictions including provincial, federal and municipal to identify and communicate changes and trends that are occurring and evolving over time. The members of the group represent and participate with information regarding the changes occurring in their geographic region and within their own discipline. The current member disciplines are wide ranging from environmental consultants, industry, government, and legal and are based in Atlantic Canada, Quebec, Ontario, Alberta and British Columbia.

Within the context of CBN's Guiding Principles, the TAC reviews proposed regulatory changes to identify and assess the implications on Brownfield Redevelopment. The group has been meeting on a quarterly basis during the year to discuss the changes and when the opportunity arises, provide comments to government when requested.

CBN prepared a submission on June 15, 2018 to the Ontario MECP in response to the EBR request for public comments on the Excess Soil and Brownfield Modernization Regulatory Proposal. The TAC is actively working on a submission to MECP again in 2019 for the revised Ontario Excess Soil regulatory proposal and Record of Site Condition (Brownfields) regulatory amendments released May 1, 2019. This submission is due May 31, 2019. The proposed onsite and excess soil regulations are generally targeting source sites and are expected to significantly affect compliance efforts associated with management of excess soil in Ontario. The proposed revisions to the Record of Site Condition (brownfield) regulations are expected to address well-known practical issues in the current process (e.g. salt contamination).

This year, Alberta also introduced its Remediation Regulation, which came into effect January 1, 2019. The regulation sets out regulated timelines for implementation of a remedial action plan, and introduces a site-based Remediation Certificate as a site-based regulatory closure mechanism.

The TAC is currently made up of the following individuals:

- Monisha Nandi (ON) - Chair
- Chris Brown (AB) - Vice Chair and Secretary
- Members at large: Alan McCammon (BC), Vijay Kallur (BC), Ada Wang (AB), Jason Hudson (ON), Rene DeVries (ON), Mike Grinnell (ON), Monique Punt (ON), John Georgakopoulos (ON), Al Durand (ON), Martin Beaudoin (QC), John Henderson (NS), and Blanchard Harnum (NS).

Best regards,

**Monisha Nandi** - Chair, CBN Technical Advisory Committee



## **CBN Communications & Membership Committee Report:**

### **Key Accomplishments**

- The committee has been rebuilding its membership this year. If you are interested in joining, please contact [info@canadianbrownfieldsnetwork.ca](mailto:info@canadianbrownfieldsnetwork.ca); we'd be happy to have you
- The committee continues to focus on strengthening the CBN network, outreach to like-minded organizations, promoting CBN initiatives/events (e.g. the annual Conference) and building membership
- Membership numbers are at an all-time high, and subsidiary memberships for corporate members are also higher than they have ever been
- The committee continued to support Twitter, LinkedIn and Facebook accounts for CBN, to increase our social media presence
- The committee has begun work on enriching the website's content. To date, pages have been drafted to explain brownfields to the public and stakeholders who don't work closely with them. Much of the work on the site has flowed from items identified as a result of the 2018 Brownfields Summit
- Publication of the newsletter has been reduced to semi-annual - one issue on the Conference and one on the Brownies. For the first time, the Brownies issue included profiles of all winning projects

### **Work in Progress**

- Building a Twitter following (currently, we are at 127 followers)
- Further strengthening our LinkedIn group (currently, we have 96 members)
- Identifying additional opportunities to improve our "members only" benefits, particularly through enhanced relationships with similar organizations

- Reaching out to university students with a view to having them assist managing our social media presence and newsletter. New content pages on the website will be targeted at this group
- Ongoing updates of the CBN website
- Continuing to identify opportunities to educate stakeholders, including the broader public, about brownfield redevelopment through the website

### **2018-2019 Committee Membership**

- Berend Jan Velderman, Chair
- Meggen Janes, Waterfront Toronto
- Chris De Sousa, Ryerson University
- Grant Walsom, XCG Consulting (ex-officio)
- David Petrie, CBN Staff

Best regards,

**Berend Jan Velderman** - Chair, CBN Communications & Membership Committee

### **2019 Brownie Finalists**



The Actual Media/CBN Brownie Awards judging panel is pleased to announce the finalists for the 2019 edition of the awards. Once again this year, we had a very large number of high quality nominations, making the job of selecting the finalists a difficult one. Here are the projects/programs for the six categories:

#### **2019 Brownie Finalists**

##### **Category 1: REPROGRAM**

- Soil Reuse Program Approval, Toronto, ON
- Temporary Modular Housing, Vancouver, BC
- Waterloo Brownfields Financial Incentive, Waterloo, ON

##### **Category 2: REMEDIATE**

- Anaerobic Bioremediation, La Ronge, SK
- City of Sarnia Centennial Park, Sarnia, ON
- Petremont-Gerled Project, Varennes, QC

##### **Category 3: REINVEST**

- Lakeview Village, Mississauga, ON
- Park City Commons, Winnipeg, MB

- Reunion Crossing, Toronto, ON

#### Category 4: REBUILD

- 75 Billy Bishop, Toronto, ON
- Avenir Centre Sustainable Remediation, Moncton, NB
- Cherry Street Stormwater Lakefilling, Toronto, ON
- Emily Carr University of Art and Design, Vancouver, BC

#### Category 5: RENEW

- Armour Road, Peterborough, ON
- Greenrock Business Park, Nanaimo, BC
- The Barrel Yards, Waterloo, ON
- West Donlands Block 8, Toronto, ON

#### Category 6: REACH OUT

- 4 Avenue Flyover, Calgary, AB
- Tannery District, Cobourg, ON
- Waterfront Plan - Town of Ladysmith, Ladysmith, BC

The awards in these categories, along with Brownfielder of the Year and Best Large, Small and Overall Projects, will be presented at the Brownie Awards Gala Tuesday, November 26, at the Delta Toronto Hotel. We wish our finalists the best of luck!

Want to see these items "as they happen"? Follow us on Twitter ([@CdnBrownfields](#)) or join our [LinkedIn Group](#)

#### Do You Have Industry News to Share?

Has your organization been involved in a notable project? Do you have a new product or service offering that might be of interest to our members? If so, our **Industry News** section, Twitter feed and LinkedIn Group are good places to share. Our semi-annual newsletter publishing schedule is:

- mid-July
- mid-December

If you have news for us, please submit it to [davidp@canadianbrownfieldsnetwork.ca](mailto:davidp@canadianbrownfieldsnetwork.ca). Thanks for your support of CBN!



Be part of CBN's success in promoting brownfield property reuse as the preferred solution for developers - join us today! Our large and committed membership offers more opportunities for networking, increasing your chances to learn about best practices, gain business, hear about new projects and be exposed to the latest processes and techniques in remediation.

As a CBN member, you get access to our Members Only website, an opportunity to be heard by contributing to our submissions to various governments on issues of concern to the industry, and reduced rates at CBN and many partner events. You may also be selected to participate as a CBN speaker in brownfield streams/sessions we organize at partner events or at our Annual Brownfields Conference.

If you're interested in being part of the future, download the membership application from our [Membership Info page](#) or contact Meggen Janes, Chair of our Membership Task Force by e-mail at [mjanes@waterfrontoronto.ca](mailto:mjanes@waterfrontoronto.ca). Help shape tomorrow - join CBN today!

Already a member? Please forward this newsletter to someone you know who may be interested in the content or could benefit from CBN membership. Thank you!



### **CBN's LinkedIn Group - Your Invitation to Join**

The Canadian Brownfields Network has started a LinkedIn group, and you're invited to join and contribute. Our group will focus on all things brownfields:

- New trends in the brownfield industry
- Brownfields-related events and resources
- Brownfields news
- Municipalities active in brownfield redevelopment

The group will have something for all brownfields stakeholders. It's only open to CBN members, and we encourage you to join, participate in discussions, and contribute postings. To join, please click [here](#).



### **CBN's Twitter Feed - Please Follow Us!**

Always looking for ways of connecting with the brownfields community, CBN is now on Twitter. We post current news, trends and timely items. We also live-tweet from our events and those in which we participate. Be sure to stay current - sign up follow us [@CdnBrownfields!](#)



### **CBN's Facebook Page - Please Follow or Friend Us!**

We couldn't say we were active in social media without having a Facebook presence. Facebook is an additional way for us to get the latest CBN news and views out to members and brownfield stakeholders. You'll find us at <https://www.facebook.com/Canadianbrownfieldsnetwork/>.

### **Interested in Volunteering for CBN?**

Did you know that CBN has 4 Committees which, along with the Board of Directors, help us accomplish our goals? They are:

- Communications and Membership
- Finance and Insurance
- Government Relations
- Technical Advisory

If you would like to be a part of any of these Committees, please contact David Petrie by e-mail at [davidp@canadianbrownfieldsnetwork.ca](mailto:davidp@canadianbrownfieldsnetwork.ca).

**We appreciate your interest and support!**

### Send Us Your Comments!

Do you have any ideas on what can be included in future newsletters, or comments on the content of this one? Please send them to us by e-mailing [David Petrie](mailto:David.Petrie). If you'd like to start a discussion on any of the items in this newsletter, we encourage you to use our [LinkedIn group](#).

### CBN Corporate Members

- Arcadis Canada Inc.
- Canadian Fuels Association
- Chemco
- EnGlobe Corp.
- ERIS
- Geosyntec Consultants International Inc.
- GHD Limited
- Golder Associates
- Ground Force Environmental Ltd.
- Imperial Oil
- Jacobs
- Kilmer Brownfield Equity Fund
- Milestone Environmental Contracting
- Stantec Consulting Ltd.
- The Cannington Group Ltd.
- Vertex Environmental
- Waterfront Toronto
- Willms & Shier Environmental Lawyers LLP
- XCG Consulting Ltd.

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