

IMPROVING ONTARIO'S CONTAMINATED SITE REMEDIATION SYSTEM

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EXECUTIVE SUMMARY

“Brownfields,” or building sites contaminated by past users, need to undergo some level of remediation prior to their redevelopment. Ontario’s brownfield remediation rules underwent a major revision in 2011. The new rules are much more standardized and prescriptive than they were before. While this has, theoretically, removed much of the uncertainty about what is required for an environmental assessment and site clean-up, the new rules are also slowing down approvals for construction projects. Some professionals in the property remediation and development field have expressed concerns that projects are being put at risk due to unnecessary costs and delays, which create a bottleneck for economic development. They also say urban sprawl is being encouraged because it is costlier to remediate previously-developed urban lands than it is to build on land that has never been developed.

The authors interviewed 10 experienced insiders in the field of Ontario site remediation and risk assessment to get their frank, unbiased assessments of the Ontario brownfield regulations. While the experts agree the rules have removed much of the guesswork around meeting cleanup standards, and have clarified who is qualified to do the work, the rules have also created new problems that need to be addressed. Specifically, the interviewees highlighted bottlenecks and delays in the Ontario Ministry of the Environment and Climate Change, poor communication between the ministry and practitioners in the field, and an inconsistent application of the rules.

This paper summarizes the findings of the field interviews, then presents a set of policy recommendations aimed at speeding up the site assessment and remediation processes without compromising environmental quality. The recommendations are:

1. The ministry should publish a gazette of all current rules and expectations, and put updates out at regular intervals.
2. The ministry should establish an option for conferencing with a consultant prior to him or her undertaking a Risk Assessment.
3. The ministry should move to a double-blind peer review system for RAs.
4. The ministry should allow Qualified Persons to determine delineation parameters.
5. The ministry should not permit municipalities to demand redundant Records of Site Conditions.
6. The ministry should make provisions for developers to commit to risk management steps at an early stage, then conduct site assessments and RAs contingent on the implementation of the risk management methods..
7. The ministry should move to a self-reporting — random audit model for acceptance of risk assessments, as is currently done for records of site condition.

This paper explains each of these proposals and provides a rationale.

LIST OF ACRONYMS

APEC – Area of Potential Environmental Concern
CPU – Certificate of Property Use
ESA – Environmental Site Assessment
GTA – Greater Toronto Area
MOECC – Ministry of the Environment and Climate Change
MUST – Management of Underground Storage Tanks
O. Reg. 153/04 – Ontario Regulation 153 (2004)
O. Reg. 511/09 – Ontario Regulation 511/09 (2011)
QP – Qualified Person
RA – Risk Assessment
RSC – Record of Site Condition
SCS – Site Condition Standards
SRRA – Self-Reporting — Random Audit

DISCLAIMER

The views expressed in the report are those of the authors alone and should not be imputed to any of the participants in the study.

ACKNOWLEDGMENTS

Individuals with the following credentials were interviewed during the preparation of this report:

- Senior risk assessor
- Risk assessor
- Senior toxicologist
- Senior consultant/project manager
- Senior engineer
- Professional engineer
- Vice president, planning, operations
- Environmental lawyer
- Professional geoscientist (2)

The authors kept all names confidential in order to encourage frank expressions of opinion, and to emphasize that they alone are responsible for its contents.

The authors wish to thank Madeleine McKittrick for assistance in researching and preparing the draft.

INTRODUCTION AND PURPOSE OF THIS STUDY

Provincial land remediation rules encourage the cleanup of sites that may have been contaminated by past activity. They can be an effective way of protecting human and environmental health, but they can also affect construction costs and the speed with which new projects proceed. These rules can also accelerate urban sprawl by incentivizing rural greenfield development over the rehabilitation of old urban sites.

Ontario's site remediation rules (O.Reg. 153/04, modified by O.Reg. 511/09) were introduced in 2004 and amended in 2011. The province's experience over the past five years provides an opportunity to evaluate the pros and cons of a revised system. In the fall of 2015 one of the authors of this paper (McKittrick) was approached by a professional working in the field of site remediation. This person was concerned that the system was getting increasingly slow and costly, and that this was weakening the economy by slowing the pace of construction and development. The authors decided to analyze the structure of the policy and its impacts by interviewing people working in the field and summarizing their views in a report. The authors did not seek any external funding from any individual, corporation or government agency connected with the construction or remediation industries.

The authors approached about two dozen individuals to request interviews. Ten of them accepted the opportunity. Each interview was structured around a common set of questions. The interviews took place in the first half of 2016. Some interviewees received the first draft and provided comments. The authors are grateful for the professional input and advice they received throughout the project. The views expressed herein, and all errors and omissions, are solely the responsibility of the authors.

In general, the interviewees agreed on some definite strengths of the current system, as well as growing weaknesses and problems. Compared to the previous system, O.Reg. 153/04 is clear about what consultants must do to analyze the condition of a site and remediate it to an acceptable level. The rules also clarify who is a Qualified Person—namely someone who is authorized to serve as signatory and supervisor for site analyses and remediation. These changes put an end to a “wild west” situation, as one interviewee described it, with few standards, many consultants with unclear qualifications, and in some cases, commercial involvement with the land that placed them in a conflict of interest.

The current system, however, is becoming too costly and slow, the interviewees said. Approvals from the Ministry of the Environment and Climate Change are taking longer than prescribed, leading to costly delays in construction and mounting frustration. Consultants report inferior communication with the MOECC, and some current practices that cause unnecessary delays in an already lengthy process. The increasing cost of obtaining development approvals for remediated sites is leading to an increased preference for greenfield development over brownfield remediation and management, especially in areas outside the General Toronto Area. Developers are opting for dig-and-dump or site-capping solutions when undertaking remediation. This may resolve the human exposure risk but is not a good solution for the natural environment and ecological receptors like plants and animals. The additional costs of the system are not translating into commensurate benefits for people or the environment.

This study explains how the Ontario site remediation rules work, and will report what professionals working in the field have to say about it. The authors will present an analysis of the economic incentives created by the system and will suggest reforms that could reduce costs and speed up approvals without compromising the goals of the legislation.

BACKGROUND

Ontario's Current Brownfields Legislation

Suppose a developer acquires a site with a history of previous industrial or commercial activity, and wants to change the land use designation to a new form of activity, such as a residential development. This requires filing a Record of Site Condition with the MOECC. This is a lengthy and detailed inventory of the nature of potential or actual chemical contamination at a site. There are many circumstances in which filing an acceptable RSC is necessary for a development project to proceed. Getting to that stage will require at least one Environmental Site Assessment and possibly a Risk Assessment. Once an RA and its associated risk management measures are approved a Certificate of Property Use must be drafted by an MOECC-affiliated district engineer. The process is described in Figure 1.

Phase One and Phase Two Environmental Site Assessment

Filing an RSC requires an ESA. The first step in this process is called a Phase One ESA. This investigation uncovers any evidence of potentially contaminating activities, or any Areas of Potential Environmental Concern at the site. The law¹ (Schedule D Table 2) lists 59 potentially contaminating activities. Phase One ESAs are non-intrusive and rely on historical information, aerial photographs, information on neighbouring sites, consideration of whether the site is an area of natural significance, interviews with site representatives, topographic maps, water well records, and a review of past activity on the site. On the basis of this information, consultants determine whether a more detailed (Phase Two) ESA is needed. Generally, when filing an RSC for a more sensitive category of land use--in other words, a usage that might involve greater human exposure to contaminants in the ground--Phase Two ESAs are almost always required. The law obliges QPs to review all relevant information and issue a professional judgment on how to proceed with a contaminated site.

The developer may file an RSC based on a Phase One ESA, but in many cases the information collected during the Phase One investigation indicates a Phase Two ESA is warranted. This is an intrusive investigation which can include sampling, testing of soil and air (most commonly soil vapour or volatile organic compounds), sediment, groundwater, or surface water to determine the extent of contamination.

The regulation prescribes detailed Site Condition Standards for chemical parameters of concern, and the developer must bring the contaminants to within these standards. In O. Reg. 153/04, in order to file an RSC, developers must pursue a Phase Two ESA if the first phase reveals a potential for contamination. The QP, whom the developer retains to investigate the site of interest, must supervise the undertaking.. The regulation automatically requires a Phase Two ESA under a few notable conditions, such as if the property has ever been used as a garage, a hazardous materials site, a bulk liquid dispensing facility (such as a gasoline station), or for the operation of dry cleaning equipment.

In a Phase Two ESA, the developer generally installs boreholes through which the soil can be sampled. Groundwater contamination can be delineated by the installation of monitoring wells. The landowner usually installs monitoring wells in an existing borehole and may penetrate the ground deeper than boreholes to access the underlying groundwater table. The QP determines borehole and monitoring well locations during the Phase Two ESA planning phase and these are subject to change and updates throughout the process. According to O. Reg. 153/04, a minimum of three boreholes are required at any site to determine water flow direction and to sufficiently sample the contamination. In practice, developers usually install many more boreholes and monitoring wells to fully delineate the on-site contamination. There are also a variety of other sampling techniques to assess air, water, soil, sediment, and general environmental quality, including air sampling using a variety of instruments and soil and sediment sampling using analytical chemistry systems.

Through the installation of these boreholes and monitoring wells, the location and concentration

of contaminants in the land or water at a site are fully delineated and the geological/ hydrogeological conditions of the site are defined. Once developers compile this information remediation options can be proposed to address the environmental contamination. A QP conducts or supervises the entire investigation and is responsible for ensuring that everything is done in accordance with the regulations.

Remediation and Risk Assessment

Based on the outcome of the Phase Two ESA, the developer decides whether to proceed to remediation. The developer can undertake a site cleanup that will meet the standards set out in the legislation. However, if the developer deems this too costly, another option is to apply for site-specific adjustments to the standards under a process known as Risk Assessment, which extends the analysis to a determination of the likely actual exposure to sensitive receptors.² This option may be suitable if, for instance, the contamination only affects a small part of the site away from where the new use is proposed.

A RA can take one of two forms, respectively, a Tier 2 or a Tier 3.³ A Tier 2 RA means the developer must collect extensive data through intrusive sampling, which they then feed into a ministry-approved computational model along with a description of the risk management methods proposed. This yields a set of site-specific standards that are based on generic standards and adjusted for the influence of the proposed risk management measures. A Tier 3 RA incorporates this process and adds other elements. Tier 3 RAs also require data on exposure pathways that might not be included in the Tier 2 model, and involve a more detailed undertaking. Similarly, its output is a set of site-specific standards based on generic standards that have been adjusted for risk management methods and site characteristics.⁴ The Ontario government had traditionally promised that a Tier 2 RA will be reviewed by the ministry within eight weeks and a Tier 3 RA within 16–22 weeks, as the latter involves the use of outside consultants). The review will result in either the approval of the RA and the risk management plan, or a requirement for further analysis and review in the form

of addendums to the original RA.

While the RA option has the potential to reduce compliance costs, in practice it has become a bottleneck and a source of widespread frustration. Interviewees report that the ministry has approved very few Tier 2 RAs while the Tier 3 process is taking much longer than promised, largely because so many revisions are being requested and the expectations from the ministry are being poorly communicated. This paper will focus on these issues in the next section.

“It’s 16 weeks each time you submit an addendum in response to the comments on the previous round. A lot of the problem is that during the review/edit time, the MOECC changes their expectations and during the next round of review, new comments are added for things that previously met their expectations.”

- Interviewee

“One of the new features was the streamlined Tier 2 risk assessment. That has crashed and burned. It’s a complete failure, because with very, very few exceptions, there has not been a single Tier 2 RA submission that has been accepted by the ministry.”

- Interviewee

Remediation or sprawl?

The intent of the regulation, and eventual goal of the process, is the filing of an RSC so that a brownfield site can be developed. However, the other possibility is that developers abandon, rather than develop the site when they realize how much money and time must be spent to remediate the land. A developer in Ontario always has the option of looking for a site elsewhere, especially agricultural land adjacent to suburban areas where no contamination is present. The ministry should take this ‘sprawl’ option into account when it assesses the incentives created by the current brownfield regulation.

In very rough terms, an RA for a site large enough to erect a small fast food restaurant will now cost about \$300,000. An addendum can involve additional sampling and analysis as well as delays that add to the overall cost. The entire process can thus easily cost about half a million dollars. But even more significant is the time; the fact that projects can be put on hold for a year or two while the RA is processed, which adds to the management and financing costs. The uncertainty alone can be prohibitive. If it will cost half a million dollars to get a site ready for sale and it will only be worth a few hundred thousand dollars on the market, the land is essentially worthless and it will sit as brownfield.

Figures 2 and 3 illustrate the effect of the rising cost of obtaining an RSC. The horizontal axis shows distance from the Greater Toronto Area, and the vertical axis shows dollars per hectare. As indicated by the downward-sloping line, in general, the value of development-ready land in Ontario declines the further it is located away from the GTA. The horizontal line shows the remediation cost, on the assumption that it is the same everywhere. When the value of the land is above the remediation cost, site cleanup is economically feasible and developers will likely infill urban land. This is represented by the area to the left of the vertical dashed line labeled Remediation and Infill. But when the value of the land is below the cost of remediation, the developer will likely abandon the site and opt to build on a greenfield instead. This is represented by the area to the right of the vertical dashed line, labeled Sprawl. The division occurs at point A.

If a change in the standards or ministry expectations regarding site cleanup raises the cost of remediation, the outcome will conform to Figure 3. The dividing line between Remediation/Infill and Sprawl moves from A down to B. This means that less land is economically eligible for cleanup and remediation, and more developers will likely opt for building on greenfields. In this case, a change to the rules that is intended to yield a higher standard of cleanup may have the unintended side effect of leaving more abandoned brownfields and promoting greater urban sprawl.

"We don't see a lot of Risk Assessments in other cities [apart from Toronto] because it's too expensive to do it. It out-values the land... you have a brownfield there, it is just going to sit."

- Interviewee

"It works where...properties are worth millions of dollars an acre. It doesn't work so well in rural Ontario, where properties are worth tens of thousands of dollars. ...if companies don't want to spend the money to clean up the sites because they can't get anything out of it."

- Interviewee

Ontario Brownfield Regulations Prior to 2011

Ontario's regulatory regime for site remediation is fairly new, and many consultants noted that practitioners are still adjusting. Ontario has had environmental site assessment standards since the late 1980s, but these were originally only guidance documents that aimed to provide reference materials for contaminated site remediation professionals, especially with regards to petroleum hydrocarbons and heavy metals. The majority of remediation work was run on informal principles. For the most part, contaminated site remediation was done through dig-and-dump excavation that moved contaminated soils elsewhere and replaced them with clean fill. This approach was heavily influenced by Alberta's Management of Underground Storage Tanks guidance document that provided general clean-up standards for petroleum hydrocarbons.

In 1989, Ontario published the first formal brownfield guidance document. It outlined the general principles that should be used when decommissioning and cleaning up sites in Ontario that were impacted by heavy metals, and to a limited extent, petroleum hydrocarbons.

In 1996, the province released a revised Cleanup Guideline document. This outlined the recommendations for

property owners who were remediating or redeveloping contaminated property in Ontario. The ministry that is now the MOECC also published three additional documents that gave extra information to consultants and property owners to help with the remediation and redevelopment process. They gave consultants and owners a set of flexible options for site restoration. Overall, there was minimal authority behind these guidance documents, as it was not a regulation and did not change any legislative powers or the regulatory role of the MOECC.

In 2001, Ontario established a legislative framework for brownfield redevelopment, the *Brownfields Statute Law Amendment Act*. Three years later, Ontario Regulation 153/04- Record of Site Condition became law. It set specific requirements that needed to be followed when conducting site assessments, outlined a list of Defined Persons including the important role of Qualified Person, and described their purposes in conducting environmental site assessments and submitting proposals for RSCs. The legislation pinned specific liability on QPs for the integrity of their submissions to the ministry.

Many interviewees considered the situation before 2004 something of a “wild west” atmosphere since it didn’t take much for them to obtain approval for a piece of land to be redeveloped, nor was there an auditing process through which they would verify the quality of an environmental site assessment. Also, since the concept of a QP was not defined, there was no way to verify if RSC submitters had adequate scientific training or financial interests in the site.

“In the mid-to-late 1980s there was a bit of a second wave of environmentalism...it was partially driven by the fact that people were having to deal with land that had been contaminated in previous years... it was a bit of a wild west at that time.”

- Interviewee

The ministry received a lot of feedback about O. Reg. 153/04 and its deficiencies. In 2007, Ontario launched consultations on O. Reg. 153/04 and filed extensive amendments in 2009 under Ontario Regulation 511/09. Most of these came into effect on July 1, 2011 and included the amendments listed below.

- a) **A more transparent and efficient procedure for RSC submission and filing.** Additionally, the province added new ESA requirements in the 2011 version of O. Reg. 153/04, which clarified the guidelines and set out minimum requirements for Phase One and Phase Two ESAs.
- b) **A streamlined RA process.** Prior to 2011, RAs were extremely long processes that took the ministry from months to years to review. The process usually involved several cycles of RA review and revision. Once it reviewed an RA, the MOECC would send comments back to consultants who would then update the report and resubmit it with an addendum addressing ministry feedback. When the Tier Two RA was introduced in 2011, the province unofficially gave assurances it would keep the review period to approximately eight weeks. However, as we have noted, many of those interviewed felt this option had not been successfully pursued.
- c) **Strengthened standards and definitions.** Ontario introduced contaminant standards in the 2011 version of O. Reg. 153/04 in the form of a set of new SCS tables. Prior to 2011 there were five such tables, though they did not list all of the contaminants that consultants were encountering in their work. The province added four new tables that specify standards for the same contaminants under other types of site conditions and exposure pathways. At the same time, it revised the allowable contaminant levels when new scientific data or analytical methods warranted a change. Table 1 summarizes the changes, noting that in most cases the standard was made more stringent. In some cases, however, the standard was not changed and in some it was relaxed.

TABLE 1				
Distribution of Changes in Site Contamination Standards as of 2011				
		Background	Potable Ground Water	Non-Potable Ground Water
	Increased	87	325	135
Soil	Decreased	25	355	297
	Stayed Same	66	102	56
	Increased	46	41	79
Water	Decreased	43	53	74
	Stayed Same	22	40	9

'Increased' means the reference concentration rose, i.e. the ministry relaxed the standard. 'Background' denotes the estimated natural level. Data source: Maxxam Analytics (2010).

The new rules also specified a number of Defined Persons, who are related to the process of redeveloping land. The ministry defined two types of qualified persons based on the role they play in the process. A person qualified to conduct an ESA had to be a Professional Engineer or a Professional Geoscientist. A person qualified to conduct a RA had to hold a bachelor's degree in science, engineering or applied technology from a post-secondary institution, or have experience conducting supervisions of environmental site assessments. Those qualified to conduct RAs also had to hold one of the following credentials: a doctoral degree in science or engineering with five years' experience; a master's degree in science or engineering with seven years' experience; or, in any other case, a minimum of eight years' experience in conducting or supervising environmental site assessments.

Eventually the MOECC will decide whether to accept an RA application and authorize filing an RSC, seek revisions to the application, or reject it altogether. The MOECC acts as a regulator throughout the process of submitting RA applications by auditing submissions and the results and findings of ESAs. With each amendment added to the regulation, the ministry becomes an increasingly significant force.

Separate from the RA approval process is the process of obtaining a CPU. These are provided by an MOECC-affiliated official called a District Engineer. CPU issuance is closely connected to RA approval since the District Engineer will draft it based on the risk management plan. Interviewees expressed concern that District Engineers sometimes constitute another bottleneck in the system. Developers and consultants argue District Engineers sometimes delay issuing CPUs for unreasonable lengths of time. This paper does not make any specific recommendations to deal with this issue but does recommend the ministry examine it at some point.

"With the 2004 [version of O.Reg.] I'd say what stands out is it's standardized their approach... [that] you have a prescriptive thing [for] how you do a risk assessment in Ontario, everybody's following it."

- Interviewee

"I think [the regulation is] trying to do the right thing in a sense. It's trying to level the playing field; it's trying to drive a certain minimal level of technical rigour."

- Interviewee

INTERVIEWS WITH PROFESSIONALS

In order to get data on the strengths and weaknesses of Ontario's brownfields regulation, the authors conducted interviews with 10 professionals over a five-month period, from February to June 2016. Each interview followed the same structure and consisted of the following questions.

1. What is your professional involvement with the remediation of contaminated sites? How long have you been working in this field?
2. How has the introduction of O. Reg 153/04 changed your own work, and based on your observations, how has it changed the process of remediating contaminated sites more generally?
3. What do you consider to be the most influential component(s) of the new framework?
4. Have you observed any unintended consequences from O. Reg 153/04?
5. Do you find compliance with site remediation standards more difficult than before? If so, do you believe the changes are likely to yield an improvement in environmental quality large enough to justify the increased costs and challenges?

Each interview was recorded with the subject's approval. The interviewees consisted of 10 QPs or consultants, one environmental lawyer, one university instructor in site remediation, and one vice president of planning operations for a development group.

Findings

1) Revisions provided clear rules and standardized procedures.

Interviewees uniformly noted that both the 2004 and 2011 revisions helped them by bringing into place clear standards and a comprehensive regulatory structure. The expanded SCS tables removed confusion

and ambiguity. The revised standards and legislation outlined in O. Reg. 153/04 and O. Reg. 511/09 provided highly prescriptive instructions for ESAs and RAs and defined once and for all who was qualified to conduct the different aspects of remediation work.

The 2011 amendments further unified the reporting and application structures. Previously, reports could have different structures with different elements like headers and subtitles. The 2011 version introduced prescriptive templates that took the guesswork out of preparing applications.

"In 2004 there was no reporting structure. You could have a report with some headers and subtitles and things like that. In 2011, there's a table that tells you everything it needs—every single thing. What it has done [is] refined that process for all consultants, so every report will now look the same."

- Interviewee

2) Despite the new clarity, many aspects of the process are still unclear.

Interviewees highlighted communication between consultants and the MOECC as a problem area. In order to maintain independence, ministry staff keep communication with consultants to a minimum during the preparation of a RA. During the application preparation period, or during the 16- to 22-week review period for a Tier 3 RA, application requirements sometimes change within the ministry, meaning the application must be returned. In other cases, an RA is returned after 16 weeks with a request for more testing that could have been done in the first place if the ministry had indicated it was necessary for that site. This pushes back the process and adds to the cost to developers.

Also, despite the level of detail in the guidelines, many areas require expert judgment and interpretation. Consultants find it difficult to anticipate how ministry staff will assess RSC submissions that have been selected for audit. For example, what may seem to be a reasonable approach by a QP may be turned down by

the ministry based on a judgment criterion that was not known in advance by the applicant. A further form of inconsistency is that different MOECC staff have at times interpreted identical standards differently.

“The most influential thing is the fact that every couple months there is a new flavour of the month, which is that we’ll go along interpreting the regulation a certain way and think that something’s acceptable, and then all of a sudden the ministry will come back and say ‘Oh we changed how we do this.’”

- Interviewee

“The real problem is that the ministry is not one voice but is, rather, many individuals who each may interpret things quite differently, resulting in an inconsistent response. An applicant QP doesn’t know who will review, so even if the QP is aware of the variability, they can do nothing to prepare.”

- Interviewee

3) Peer reviewers of RAs are in a potential conflict of interest.

RAs are reviewed in a single-blind system, meaning that external peer reviewers engaged by the ministry know whose work they are reviewing. Since the consultants are commercial competitors they may have an incentive to disparage the work excessively or delay its approval in order to pit the client against their consultant.

“I have some very specific examples...where I know my risk assessment has been held up because somebody has a bone to pick with me...the blind review process, to me, is just dysfunctional.”

- Interviewee

4) Remediation/Risk Assessment is rarely economically feasible outside the GTA.

The process is so costly and clean-up guidelines so strict that consultants find investors are typically unwilling to undertake brownfield rehabilitation, except in the GTA. The value of the land in many parts of the province is simply not high enough to justify the expense. The difficulty of obtaining financing for projects that may have unpredictable regulatory delays of two years or more effectively tilts the playing field in favour of large developers who either have internal funds or who have access to larger lines of credit.

5) Delineation is a particular area of concern.

A number of interviewees flagged delineation as a particular sore spot. Developers often consider ministry requirements for complete delineation of the contamination on a site excessive and overly conservative for the site’s intended use. Consultants have ended up in disputes with ministry staff when they try to apply professional judgment to the question of how far to take the sampling and testing. These disputes, among other things, have led to long processing delays when the ministry returns an application for further sampling after a consultant has already taken what he or she believes to be an adequate number of samples.

“You cannot get a Record of Site Condition and now you cannot get a Risk Assessment without completely delineating every chemical contaminant in all four directions laterally—so north, west, east, south—plus vertically. So for some contaminants, it’s really not relevant, you know, how deep it extends. Or in some cases, it’s about the interpretation of the delineation and you wind up butting heads with the ministry and drilling more holes.”

- Interviewee

“Some of the delineation requirements and some of the requirements for investigation are starting to be more of a box-checking exercise as opposed to something driven by a technical need for the project...it’s becoming increasingly prescriptive...a lot of those requirements are taking professional judgement out of the equation.”

- Interviewee

Processing delays are becoming acute

For large property development projects, time is of the essence. The 2011 revisions substantially tightened the requirements for generic site cleanup, and aimed to provide streamlined options for site-specific criteria through the RA process. This latter goal has not been achieved, however, as RAs are now routinely subject to what many interviewees feel to be excessive delays in processing. The 16 to 22 week processing windows are no guarantee of timeliness if, after 16 weeks, the report is returned with a request for a small amount of additional information or revisions to accommodate a newly-implemented study parameter, potentially opening up a new 16-week processing window.

“Because there’s all this administrative crap that goes along with it, it just delays things... it was supposed to be 16 weeks all in, now it’s become about 16 weeks upon 16 weeks upon 16 weeks...it needs to be accelerated.”

- Interviewee

“I find myself relying on the goodwill of the ministry, and that’s how I navigate the system and try to move things forward in a political way, because there’s no way to move it through in an administrative way. They take their 22 weeks to review.”

- Interviewee

Some RSCs filings are unnecessary

Some consultants argued that municipalities sometimes order developers to obtain an RSC even for construction projects that don’t involve a change in the current land use. One explanation for this is a municipality’s desire to obtain better site condition records. The current archive of RSCs in Ontario is, by all accounts, a mix of reliable and unreliable data. For RSCs conducted prior to 2011, a study may have been inadequate or compromised by poor methodology. While this is regrettable, the original issuance did represent the acceptable standards at the time.

“We used to be able to do [RSCs] in two to three months. Now it’s taking six, eight, 10 months. And this is in non-brownfield situations, where they’re putting it in a policy document saying ‘You have to get a Record of Site Condition, this is our policy under the official plan,’ whereas it’s not regulated. It’s not necessarily the kind of use that requires a Record of Site Condition.”

- Interviewee

“I think there’s a lot more to worry about [when it comes to] checking all the boxes than [when it comes to] doing the science.”

- Interviewee

RECOMMENDATIONS

Based on the data collected during this project, the authors present the following recommendations for improving the regulatory system.

1) The ministry should publish a gazette of all current rules and expectations, updated at regular intervals.

Consultants expressed frustration that during the long application process, especially for an RA, the ministry may change the way it interprets a standard or delineation guideline, or a staff member may read the application and interpret a standard in a different way than his or her colleagues. These changes may not be well-communicated and may not be known at all by QPs until a report is returned for revision.

This paper recommends that the MOECC publish a gazette, or an official handbook, of all current interpretive guidelines, and establish a fixed schedule for releasing modifications, such as once every six months. The MOECC should emulate the Canada Revenue Agency, which issues interpretive bulletins on a regular basis, providing clarity for taxpayers and the professionals who advise them.

The authors further recommend adopting a new rule whereby when a consultant initiates an ESA, the applicable rules (including for all subsequent RA addenda on the same site) will be those published as of the date of the original ESA, irrespective of the number of subsequent revisions or reapplications. In other words, if during the review period an update to the gazette is published, the ESA or RA under review will be assessed against the guidelines as they stood prior to the revision.

2) The ministry should offer the option to confer with a consultant prior to him or her undertaking a Risk Assessment.

The MOECC should make a provision for consultants to have a short meeting or teleconference with relevant ministry staff early in the process of preparing an ESA

or a RA, for the sole purpose of obtaining advice about whether the sampling and testing procedures are likely to be adequate. The MOECC may prefer to reserve the right not to make any firm commitments at such a meeting, but at least it may provide the opportunity to rectify any easily-identified problems prior to the work being done.

3) The ministry should move to a double-blind peer review system for Risk Assessments.

The MOECC should move to a double-blind peer review process, in which peer reviewers do not know the identity of the individuals or firms who prepared the report. While it would still be the case that reviewers would know they are reviewing potential commercial competitors, it would diminish the chance that specific rivalries or conflicts would colour the review process.

4) The ministry should allow Qualified Persons to determine delineation parameters.

Delineation is a process requiring expert judgment. The province has defined in law those individuals whose training and experience qualifies them to both conduct ESAs and RAs and supervise remediation. It would therefore seem reasonable to rely on their judgment in the delineation process. However, it is also reasonable to suppose that a QP working for a consulting company may have a conflict of interest.

Therefore, when a QP has obtained a supporting second opinion from an independent QP with sufficient expertise on the delineation parameters in an RA, the ministry should not demand a change in those parameters unless it also obtains a second opinion from an independent QP. The point here is that, if two independent QPs agree on the delineation parameters, and the ministry still deems that insufficient grounds to accept them, it calls into question the whole notion of a QP. If the MOECC is satisfied that Ontario QPs are capable of their jobs, they should accept their professional judgment, especially where doing so can clear a bottleneck in the process.

5) The ministry should consider placing limits on the ability of municipalities to demand Records of Site Conditions.

The ministry should consider limiting the ability of a municipality to request a new RSC for a development proposal involving the same land use as currently in place. One way to implement this is to give developers the option to appeal such an order, unless the municipality presents credible information and data that the current RSC was deficient or, if no RSC exists, that the site is potentially contaminated.

6) The ministry should allow developers to commit to risk management steps at an early stage, then conduct site assessments and Risk Assessments contingent on the implementation of the risk management methods.

The rules currently require that developers conduct any sampling and analysis of a site, whether for ESA or RA purposes, on the conditions prior to any risk management measures being implemented. There are situations where this is likely to be wasteful. For instance, if the developer plans to remove the soil from the site and cap it as part of the building project, it makes no sense that an ESA or an RA must be done on the site in its original condition. The rules effectively require analysis of soil that will not even be present on the site once it is in use.

When a developer is willing to commit in advance to specific risk management measures such as capping or soil removal, the ministry should allow such work prior to the ESA or RA analysis. For many developers this would reduce the cost of the approvals process.

7) The ministry should move to a self-reporting — random audit model to accept Risk Assessments, as is currently done for Records of Site Condition.

This is the paper's most ambitious proposal, and is aimed at eliminating the bottleneck associated with RA processing delays within the ministry.

Many consultants lamented the fact that MOECC

staffing is inadequate for the task they face. But the reality is, it will likely never be possible to have a large enough staff to handle the volume of applications in a timely way. Ontario is a vast province with thousands of potential development sites. The industry involved in developing and constructing buildings is itself extremely large. In some ways, in order to fulfill the mandate of the current legislation, it would be necessary to have a ministry staff almost as large as the construction industry itself. This will never be feasible.

The same problem exists in many other critical areas of government. For instance, the federal tax agency needs to issue Notices of Assessment, refunds and invoices for millions of returns every year. It cannot possibly audit them all prior to doing so. Instead, it uses a Self-Reporting — Random Audit model (Malik 1993, Livernois and McKenna 1999), in which notices and refunds are automatically issued based on the information supplied by the taxpayer, and then a subset of returns are randomly selected for audit. The SRRRA system is widely used in government; examples include applications for welfare benefits and the regime governing airborne pollutants from sites subject to a Certificate of Approval from the Environment Minister. As well, some public transit systems rely on the honour system supplemented by random ticket checks.

SRRRA systems can be designed in such a way that they yield more truthful self-reporting and higher compliance at a lower cost than auditing every submission (Harrington 1988, Malik 1993, Livernois and McKenna 1999; see McKittrick 2010 ch. 6 for a summary). SRRAs create an incentive for the private sector to carry out greater monitoring and enforcement activity. For instance, in the tax system, accounting firms grow their reputation for accuracy and sound judgment every time their clients are audited and their books verified. Environmental consultants who help companies monitor and control their waste emissions likewise acquire a reputation for competence and skill when their clients are audited and no problems are found.

In the brownfield context, the authors argue an SRRRA system could work as follows. The MOECC would automatically approve an RA after it receives a Tier 3 RA and a report of site remediation as needed to

meet the relevant standards, and after it verifies that the submitted documents satisfy the basic reporting requirements.. For up to three months after approving an RA, the MOECC would have the option to audit it, including having the samples re-tested by independent labs. If no problems are found, or if problems are found that amount to simple good-faith errors that can be routinely corrected, no further action will be taken. If fraud is detected, severe penalties would be

imposed on the QP and the developer would face new cleanup requirements. For this approach to work, the ministry must give QPs clear instructions about what the requirements are when they file an RA, and apply the rules reasonably so that QPs are not guessing at what is expected. The benefits of this approach include the elimination of substantial delays in RSC issuance, while creating incentives for high compliance and professionalism, and the reduction of MOECC costs.

CONCLUSIONS

Ontario brownfield regulation has moved to a very prescriptive format, intended to create certainty for practitioners wanting to conduct site assessments and supervise remediation. Developers, however, are concerned about delays and unnecessary costs. This paper summarizes findings from interviews with leading professionals in Ontario site remediation, and makes a series of recommendations aimed at streamlining the

existing process without compromising environmental protection. Because of the importance of an efficient, cost-effective land approvals process for the continued development of Ontario's economy, we urge the Ontario Ministry of the Environment and Climate Change to consider these recommendations carefully and to seek further ways to improve and streamline the current regulatory system.

APPENDIX

Figures

FIGURE 1

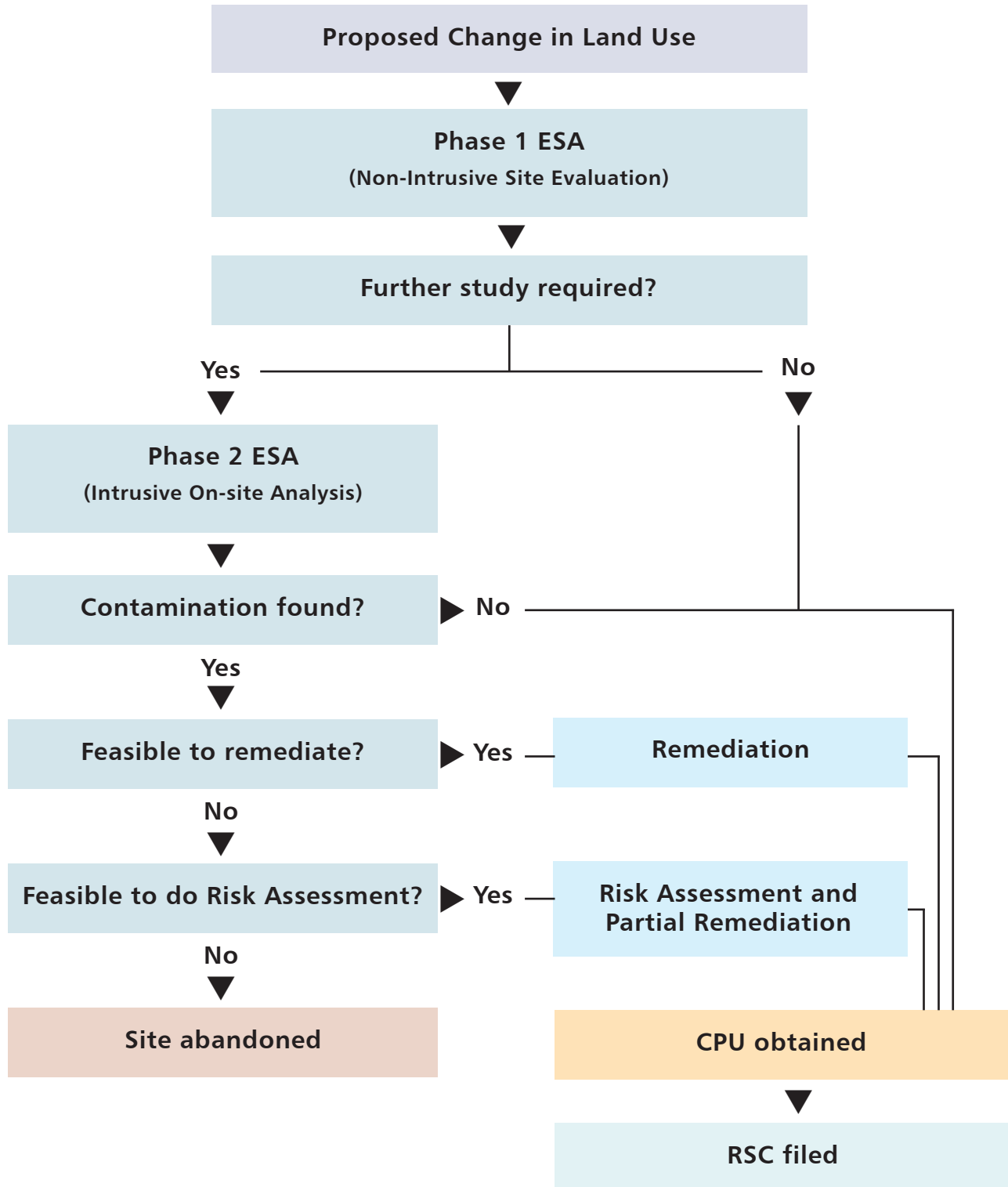


Figure adapted from one by Joseph Herrington, Course notes to Introduction to Brownfields Redevelopment, University of Toronto, 2015.

FIGURE 2

Remediation Cost vs Distance from GTA

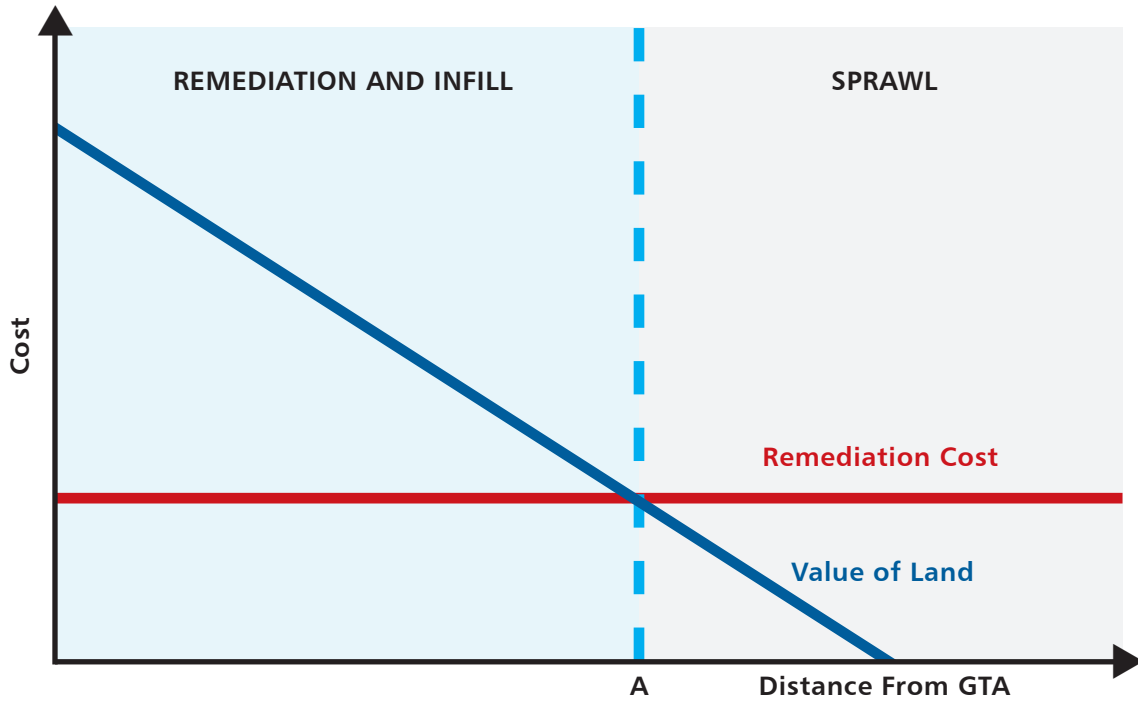
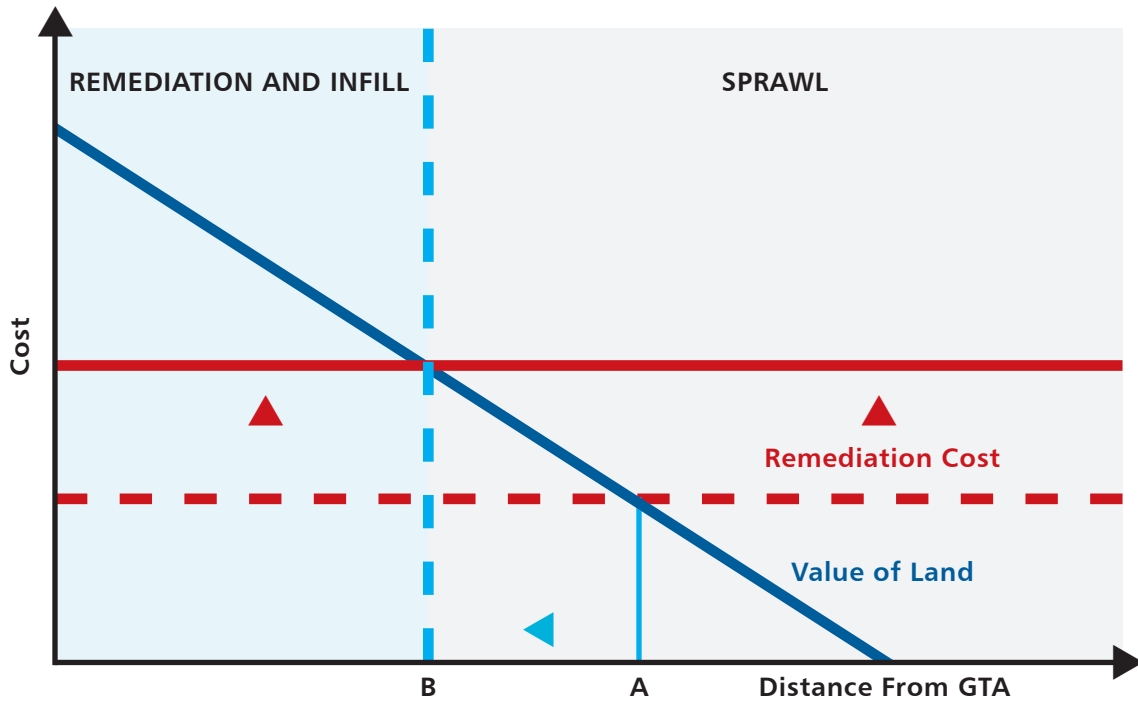


FIGURE 3

Increased Remediation Cost vs Distance from GTA



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ENDNOTES

1. The legislation is online at <https://www.ontario.ca/laws/regulation/040153>. Accessed June 20, 2016.
2. Risk Assessment is not only a feature in Ontario law, but in other provinces and at the federal level for Aboriginal lands.
3. Tier 1 refers to an earlier form of Risk Assessment not currently in use.
4. There is also a streamlined Tier 3 that includes elements of both a Tier 2 and Tier 3 RA.

