How Ontario's rules for dealing with excavated dirt aim to clean up the industry

Matthew McClearn May 10, 2023

Deep in a pit on a construction site in downtown Toronto hemmed in by high-rise buildings, an excavator deftly shovels bucket after bucket of dirt and mud into a triple-axle dump truck. Filled within minutes, the truck disappears up a steep ramp into heavy city traffic. Another takes its place.

Excavating and moving dirt is a routine operation ahead of building condo and office towers, and for water and sewer, transit, pipeline and highway construction. By one estimate, Ontario – Canada's most populous province – generates more than 25 million cubic metres of excess silt, clay, gravel and other soils annually, enough to fill Toronto's Rogers Centre more than 15 times. But it's a mystery where it all goes, because those myriad truckloads have moved with little documentation and less supervision.

This belies the large sums of money involved. In 2016, the Ontario Society of Professional Engineers partnered with two other construction industry organizations in the province to study 24 projects of various sizes. They found that managing excess soil represented an average of 14 per cent of total project costs.

In 2012, it was estimated that soil management for a single large project – Metrolinx's Eglinton Crosstown Light Rail Transit project in Toronto – might cost more than $100-million. The final tab is another mystery: Metrolinx refused to answer questions from The Globe and Mail about how much soil it moved, what it contained or where it went.

What's clear is that in Ontario, soil went places it shouldn't have.

Often those trucks drove to landfill sites, where two valuable resources – reusable soil and landfill space – were squandered simultaneously. They sometimes heaped contaminated soil on farmland or rural properties, with or without owners' consent. Sometimes they emptied onto vacant city lots, wetlands or industrial parks under the cloak of darkness. Allegations of organized criminal involvement were not uncommon.

Peter Sutton, vice-president of environmental services at Terrapex Environmental, a Toronto-based consulting and geotechnical services firm, said there were virtually no rules governing where soil went.

"And so people just moved soil around based on what they could get away with, or what they thought was appropriate."

Over several years, Ontario's Ministry of the Environment, Conservation and Parks has gradually introduced new rules governing how all this dirt is handled. As of January, many sites that generate or receive excess soil must file notices on a public registry detailing the volumes to be excavated, where they will go, the names and contact information of the people responsible, and other details.

By bringing the movement of soil out from the shadows, the ministry hopes it will be put to more creative and responsible uses, closer to where it was dug up. Observers told The Globe that Ontario now has among the best regulatory environments for excess soil of any Canadian province – a triumph for the circular economy. But they also warned that little will change without adequate enforcement.

Previously, the way in which excess soil was handled depended largely on the professionalism of the parties involved. For those inclined to protect their reputations and avoid lawsuits, there was no shortage of best practices to follow. Managers of large projects, or those involving progressive municipalities or contractors, were more likely to rigorously test their soil, and hunt for appropriate new homes for it.

With forethought, excess soil can be stockpiled on construction sites and reused later (though finding space can be difficult in urban settings). Failing that, one might find another site nearby that needs soil, which can be significantly cheaper than disposal. Fewer truckloads also mean less wear-and-tear on highways, plus reduced tailpipe and greenhouse gas emissions. And the need for digging up virgin material is reduced.

But the free-wheeling era before the new rules encouraged none of that. Lawsuits from this time provide fleeting glimpses of activity that otherwise unfolded largely out of sight.

A decade ago, Plus Development Group constructed a condominium at 251 King St. East, just a couple of blocks away from The Globe's headquarters in downtown Toronto. It hired Roni Excavating in early 2013 to dig and dispose of a "box" of approximately 7,000 cubic metres for the building's foundation and parking.

Roni quoted about $450,000, on the understanding that the soil wasn't contaminated. Roni trucked it to four sites – including one owned by a couple that Giocondo Niro, Roni's owner, had done business with many times before.

Troubles began when the owner of the receiving site asked to see a soil report. Upon receiving that report, the owner insisted Roni recollect the soil. Mr. Niro visited the excavation site and detected the scent of diesel. This smelled like trouble for everyone involved: contaminated fill costs substantially more to dispose of.

A legal dispute ensued when Plus Development refused to pay Roni more than the original estimate. While ruling in Roni's favour, the judge deemed Mr. Niro naïve for accepting soil prior to carefully investigating its contents, and was incredulous that Mr. Niro had operated this way for 33 years.

“The reason given by Mr. Niro for conducting business in this manner is that such jobs are often time-sensitive and the parties often conduct business informally,” the decision noted.

Surprising though it may seem to outsiders, countless soil transfers were arranged in similar fashion. Property owners and developers routinely hired general contractors, who in turn often subcontracted excavation and soil removal.

“Historically, the soil issues were downloaded to the excavation contractor and the haulers,” said Grant Walsom, a partner with environmental engineering firm XCG Consulting Ltd. “They said, ‘Yeah, you guys look after it. We need this material out of here. Find a home for it.’ ”

Often, that meant a landfill; it reduced litigation risk and required less effort than hunting for creative alternatives. This practice became known as “dig-and-dump.”

But just how much soil was disposed of, versus reused, is unclear because there was virtually no data collection. Typically, each truckload was tracked by an antiquated system of tear-off paper tickets not unlike those long used by airlines: The excavation site, hauler and receiving site each tore off a stub. Auditing this paper trail was a nightmare.

Unsurprisingly, misrepresentations flourished. Janet Bobechko, an environmental lawyer at the firm WeirFoulds LLP, said some soil haulers “wouldn’t necessarily take it to the location it was meant to go to.” Realizing this, project managers sometimes hired students to follow subcontractors’ trucks to confirm destinations.

The Lake Simcoe Region Conservation Authority’s jurisdiction lies north of Toronto. With major highways nearby, it became a popular destination for soil haulers. Spokesperson Katarina Zeppieri wrote in an e-mail that while her organization observed occasional reuse of excess soil for restoration projects, it also witnessed “a significant number” of illegal dumpings in floodplains, wetlands and other environmentally sensitive areas, often resulting in enforcement actions.

“This means lengthy trials,” she wrote, “and given our limited resources, some illegal filling cannot be addressed.”

Things came to a head a decade ago amid the condo boom in the Greater Toronto Area. With ever greater volumes of soil leaving the city for neighbouring counties, complaints multiplied. Municipalities struggled to cope with the fallout. Some changed bylaws to regulate soil use in site alterations and commercial fill operations. Some banned fill importation entirely.

The Ontario environment ministry began developing a regulatory framework advised by numerous volunteers including lawyers and consultants. In part, these efforts were inspired by an initiative in Britain called Contaminated Land: Applications in Real Environments (CL:AIRE), a non-profit initiative often cited as a leader in encouraging soil reuse.

Ontario's new requirements have been introduced in phases. The first batch, which spelled out criteria for reusing excess soil, took effect in 2021 and set out rules governing excavation, soil testing, data tracking and many other aspects of soil handling.

As of January, projects involving large soil transfers must file notice on a new provincial registry managed by the Resource Productivity and Recovery Authority, a regulator set up by the province to enforce circular economy laws. They must retain qualified professionals to assess past uses of the land, draw up plans to sample and analyze its soils, and track soil transfers. (Originally implemented at the beginning of last year, these were suspended temporarily last April.)

"Every truckload has to be tracked," Ms. Bobechko, the environmental lawyer, said. "It has to have the proper documentation in relation to where the material was generated, the chemical constituents of it and where it's going."

Law firms have warned clients that the new rules impose greater responsibilities and legal liabilities for parties generating excess soil. They'll need to order assessments of their sites' history, plan to sample and analyze the soil, and determine where they'll send it – and most of this must be done before excavators arrive.

All this implies significant up-front costs, and time spent. And there's more to come: As of 2025, dumping reusable soil in a landfill will not be permitted, with few exceptions.

"There is limited landfill capacity in Ontario," Gary Wheeler, a spokesman for the environment ministry, wrote in a statement. "It is preferred that this capacity be used for other waste rather than a resource that could be reused."

Some observers warn that demand for soil storage, processing and reuse sites will likely outstrip availability. In a recent commentary, Rob Kennaley, a lawyer with Kennaley Construction Law, advised that this could lead to delays, and that clients should line up sites "as early in the process as is possible" – and get it in writing.

Terrapex's Mr. Sutton said the new rules are broadly consistent with how diligent parties have managed excess soil for years. They have already stimulated companies such as Toronto-based SoilFLO to develop digital tools to replace the cumbersome tickets and other antiquated tracking systems that have dominated the industry for so many years.

However, it’s not yet clear how much this new regulatory framework is changing old habits. So far, the registry contains barely a couple hundred notices. Industry participants told The Globe that’s a paltry number relative to the abundance of development and infrastructure projects underway.

“Over the three years since the regulation was enacted, there’s still quite a number of people in the industry that haven’t embraced it,” Mr. Walsom, the engineer with XCG, said.

Experts interviewed by The Globe agreed on this point: Enforcement of the new rules will be crucial, because the increased costs of complying with them will incentivize some to circumvent them.

“We’re really applying rules, belatedly, to an industry that has existed for a long time,” Mr. Sutton said. “And in order to do that effectively, those rules have to be seen as having real teeth.”

The ministry said it’s targeting facilities and sites based on their compliance histories, as well as the risks their activities present to human health and the environment. Since 2021, enforcement staff have conducted more than 700 inspections of trucks, excavation and receiving sites. But it hasn’t doled out any penalties yet.

“All issues of non-compliance have been addressed through an education and outreach approach,” Mr. Wheeler, the ministry spokesman, wrote.

Andy Manahan, an independent consultant who has long advocated for excess soil regulations, said he’s worried that the ministry lacks sufficient resources to enforce the new rules. He predicted some “high-profile situations where some fines are levied,” but added that some dig-and-dumps will continue, motivated by economic considerations.

“I don’t think we’re going to get a behavioural change overnight. It’s going to be a slower process.”