

Wrapping up remediation at Port Granby

While there are still some key construction activities on the horizon for the Port Granby Project, the removal of historic low-level radioactive waste from the legacy waste management facility on the shoreline of Lake Ontario is nearing completion.

During the course of remediation more waste was discovered than the 650,000 tonnes originally anticipated; approximately 1.25 million tonnes of waste has been transferred to the long-term waste management facility for safe storage in the engineered aboveground mound. The mound is located 700 metres north of the legacy site.



While the increase has extended the timeline of remediation activities, the initial plans for the mound included contingency and the additional material can be accommodated without significantly changing the mound's height or drumlin shape.

The original design elevation of the mound estimated the highest point to be 131 metres above sea level (MASL). The ground area surrounding the mound sits at 119 MASL and with the additional volume of waste accounted for, the final maximum height of the mound will be approximately 134 MASL, resembling a grassed hill to blend in with the surrounding topography. The completed mound will stand at 12 to 15 metres above the surrounding ground level.

Focus on environmental preservation



Canadian Nuclear Laboratories (CNL) is implementing the Port Hope Area Initiative (PHAI) on behalf of Atomic Energy of Canada Limited, a federal Crown corporation, with the

mandate to clean up and restore the lands while ensuring the area is left in an improved condition.

CNL has made a concerted effort to avoid unintended negative environmental impacts during remediation. This is why the decision was made to leave portions of the natural environment undisturbed when approximately 800 m³ of marginally contaminated shallow soil was identified in the Port Granby bluffs.

In 2019 a comprehensive risk assessment was undertaken on the bluffs, located outside the project site boundary. While the area had previously been identified as containing some marginally contaminated soil, the review confirmed the waste would not result in notable environmental hazard or risk if left in its remote location, especially considering natural attenuation and dilution over time. The location and instability of the slope in the area would require significant work in the bluffs, making remediation extremely difficult and



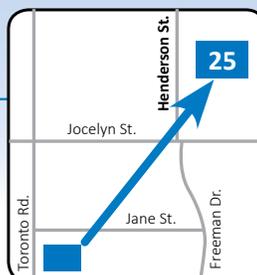
removing a large area of trees and brush. After reviewing the results with the Municipality of Clarington, a decision was made to leave this material in place.



We're moving...
...just around the corner

As of January 2, 2020,
visit us at:

25 Henderson St., Port Hope
905.885.0291 • info@phai.ca • PHAI.ca



The Historic Waste Program Management Office will close at **noon on Tuesday, December 24** and **reopen in our new location at 8:30 a.m. on Thursday, January 2, 2020.**

For urgent matters please call 905.885.0291 any time.

We wish you a happy and safe holiday season.



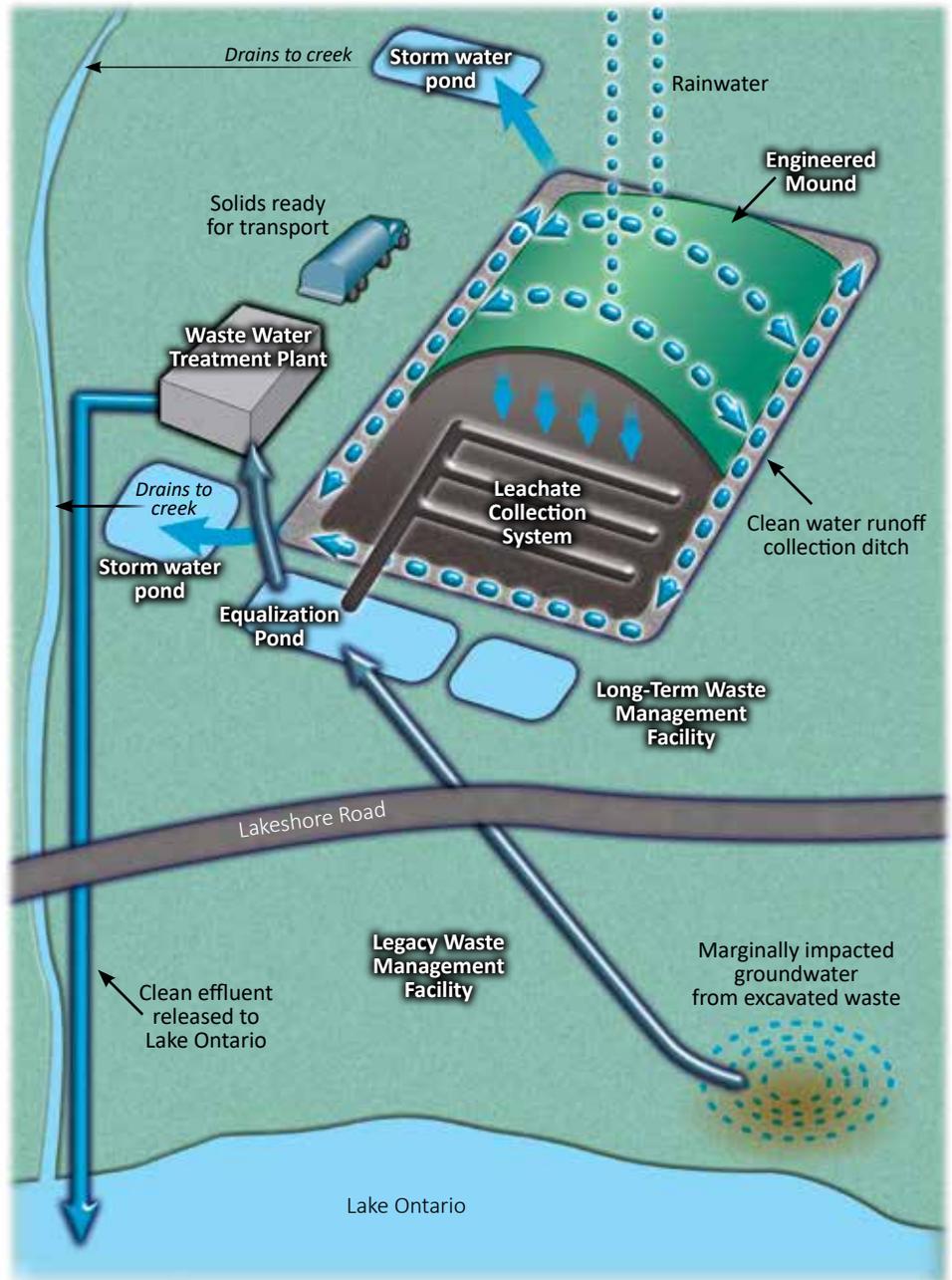
Water management at the Port Granby site

The Port Granby waste water treatment plant at the long-term waste management facility was specifically designed to treat impacted groundwater and surface water during construction and for decades after all the contaminated soil has been removed from the legacy site.

As part of this process, contaminated solids are removed from the waste water. Clean water is then discharged to Lake Ontario and the residual solid material is placed into the engineered storage mound. With capping of the mound now underway, the solids from the plant will be trucked to a licensed facility for long-term safe storage. Once the project is complete, the volume of material being transported off the site is expected to significantly decrease.

The plant will continue to operate for many years after the project is finished, treating contaminated water from within the closed mound (leachate) as well as marginally impacted groundwater from beneath the excavation site at the legacy waste management facility.

Once capped and closed, the storage mound is designed to divert clean water (rain and snow) to ditches around the perimeter and into nearby storm water ponds before being discharged off site.



Amended Licence

Following Canadian Nuclear Safety Commission review, the Port Granby Project licence was amended in April, reflecting the waste water treatment plant's capability of treating and releasing clean water to Lake Ontario.

The plant has performed to this new standard since being commissioned in 2016, proving effective in removing contaminants from waste water and meeting stringent discharge criteria.

The amendment to the licence is confirmation that the plant is removing a broader list of radioactive and hazardous substances as part of its operation and CNL is achieving enhanced protection of the Great Lakes Basin ecosystem.