



# Municipality of Port Hope

## Staff Report

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### Report Title: Lions Park Industrial Waste Remediation

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**Report to:** Works & Engineering Committee

**Date of meeting:** May 3, 2022

**Report Author:**

David Smith

**Department responsible:**

Office of the CAO

**Report Number:** WE-15-22

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### Recommendation:

That a resolution be presented to Council to:

1. Confirm direction to remediate the Lions Park industrial waste site as per the Agreement with Canada; and
2. Direct staff to ensure that a remediation and restoration plan is developed which includes an appropriate replanting program based on the current 1:1 replacement practice with a design which aligns with the goals and recommendations of the Forest Master Plan, Leisure Service Master Plan and other strategic municipal priorities; and
3. Direct staff to ensure that the replanting program consider the short/medium term impact to the neighbours and is designed to regenerate and enhance this public space;
4. Direct Parks, Recreation and Culture (PRC) staff, in consultation with the PRC Advisory Committee and other stakeholders, to investigate parkland renewal and redevelopment opportunities for Lions Park and develop recommendations to revitalize this underutilized community asset for consideration in a future budget proposal.

### Highlights:

- The Lions Park remediation differs from stand alone Low-Level Radioactive Waste (LLRW) remediations due to the presence of a significant amount of highly toxic industrial waste in concentrations in excess of 100 times the provincial standards.
- Three options were considered in addition to the full remediation plan per the Legal Agreement, and full remediation remains the preferred option.

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- Full remediation and replanting is the only option that supports key priorities including; toxic industrial waste removal; safe handling and storage; permanent protection of human and animal health; elimination of future liability and costs, access to all public open spaces; and the long term enhancement and protection of the greater woodlot.
  - Full remediation is supported by AECL and CNL as the best option (see Attachment #1).
  - Fencing the woodlot or a portion of the wood lot transfers risks, liabilities and costs to future Port Hope generations.
  - Lions Park is a substandard, underutilized park and its remediation is an opportunity to rejuvenate the entire park.

**Background:**

The PHAI project can be broadly divided into 2 main categories; 1) the removal of historical LLRW that is prevalent in many locations throughout our community and 2) the removal of toxic industrial waste at five specific, long identified locations.

A legal agreement was signed between the Government of Canada and the Municipality of Port Hope (the “Legal Agreement”) to remediate LLRW throughout the community. The agreement also called for the remediation of the toxic industrial waste at five specific sites. This inclusion was designed to relieve MPH of the prohibitive responsibility and cost of completing the remediations.

One of the industrial sites, Lions Recreation Centre Park at 29 Thomas Street, is scheduled for remediation in 2022/2023. Lions Park includes a significant amount of industrial waste (12,200 m<sup>3</sup>) plus 2,500 m<sup>3</sup> of LLRW. The area to be remediated is generally situated to the north and east (industrial waste location shown in green and LLRW in purple) of the existing Lions Recreation Centre building, as illustrated in *Figure 1* below.

According to environmental studies conducted by Golder Associates Ltd. on behalf of Canadian Nuclear Laboratories (CNL), the industrial waste contains large concentrations of metals and other hazardous substances which exceed provincial environmental standards and are considered hazardous to human health. It is reported that much of the industrial waste originated from the former Crane plant on the centre pier (the site of which is currently undergoing extensive remediation along with the harbour and adjacent lands) and includes lead, petroleum hydrocarbons (PHC), polycyclic aromatic hydrocarbons (PAH), and other harmful contaminants.

The strategic objective for Lions Park, pursuant to the Legal Agreement, is to remediate the contaminated lands using a risk-based approach and file a Record of Site Condition (RSC) with the Ministry of Environment, Conservation and Parks (MoECP) in accordance with the applicable regulations of the *Environmental Protection Act*.

As this site is characterized by predominantly industrial waste, any future changes to LLRW clean up criteria would not be applicable and thus would not change the proposed remediation strategy as it may in other locations identified for clean up.

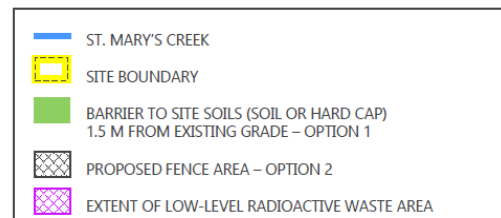
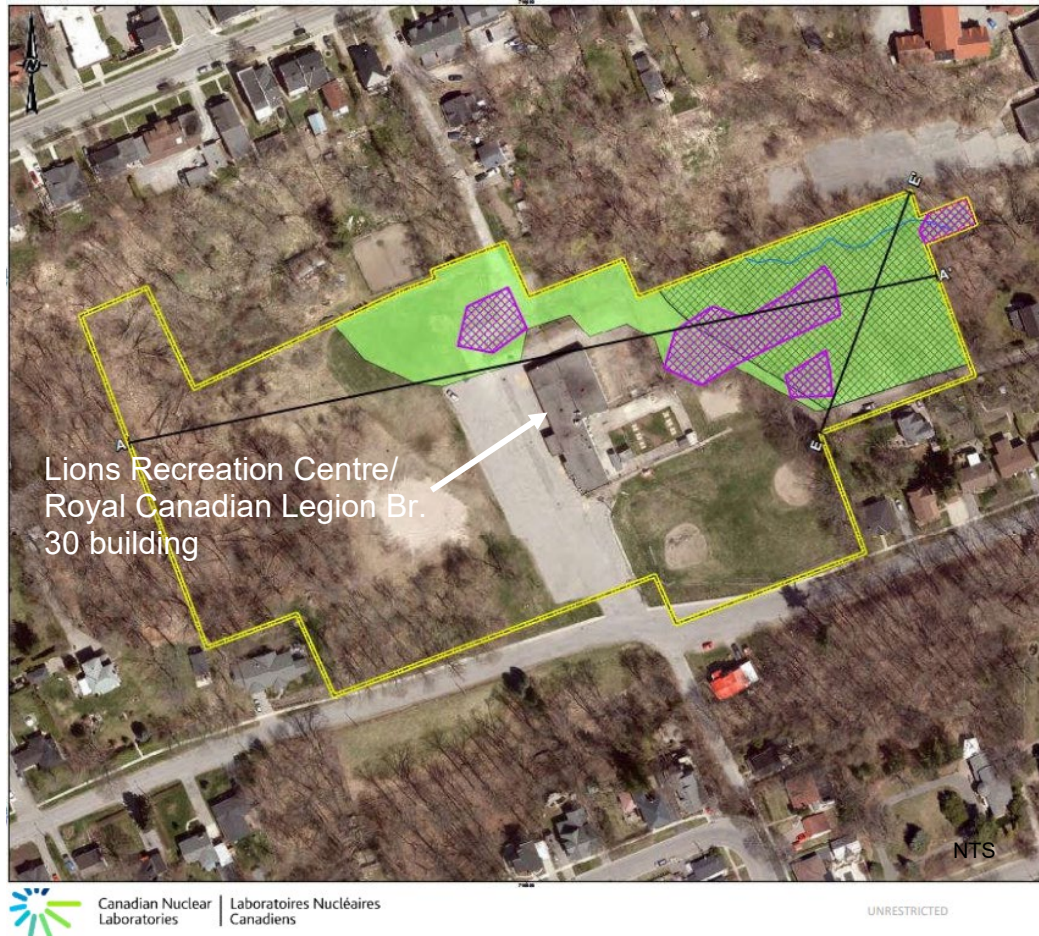


Figure 1: Lions Recreation Centre Park

### Discussion:

The environmental site investigations have determined that the industrial waste is situated at or just below the surface and greatly exceed provincial maximum levels, some by as much as 100 times (see *Figure 2* below). After careful review, CNL, MPH staff and AECL have all concluded that, due to the high levels of toxic industrial waste, the originally recommended approach to remediate the site in accordance with the Legal Agreement is still appropriate.

A remediation and restoration plan, including a comprehensive replanting plan, will be prepared by CNL for review by MPH prior to project commencement.

**CNL Assessment to Date**

**Lions Recreation Centre Park Site Characterization**

Name of contaminate	Acceptable levels (parts per million)	Levels found at Lions Park (parts per million)	Depth of waste in the soil (in metres )
Antimony	1.3	1,700.0	0.4 – 1.2
Arsenic	18.0	54.0	0.2 - 0.4
Barium	220.0	21,000.0	0.4 – 1.2
Boron	1.5	193.0	0.6 – 1.2
Lead	120.0	14,000.0	0.4 – 1.2
Uranium	2.5	210.0	0.0 – 0.2
Zinc	290.0	33,000.0	0.4 – 1.2
Petroleum hydrocarbon	240.0	1,600.0	0.6 – 1.2
Naphthalene	0.09	0.1	0.7 – 1.2

*Figure 2: CNL Environmental Assessment Data*

As noted in the report to Council on March 15, 2022, the area affected by the remediation is characterized by a large number of individual trees and dense wooded areas, as well as open lawn/outdoor space. A watercourse (St. Mary’s Creek) traverses the north-eastern sector of the site within a wooded ravine. The removal of the toxic industrial and LLRW waste from the site in accordance with the Legal Agreement would result in the removal and replacement of a substantial number of trees. Understanding the sensitivity of the removal of trees, MPH staff asked CNL to provide alternate options for consideration.

**Options**

In response to the request by MPH staff, CNL provided 3 options for consideration, which are in addition to the original plan to remediate the site as per the Legal Agreement. A brief summary of the options and a list of pros and cons are outlined below:

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## 1. Remediation (as per Agreement with Canada)

This option involves the removal, safe handling, and permanent storage of toxic industrial waste over the entirety of the Lions Park contaminated site as outlined in Figure 1. Trees will be removed to allow access to the site and facilitate remediation. Clean soil will be brought in to restore the disturbed areas. Upon completion of the remediation, trees will be replaced on a one for one basis under the current practice as part of the remediation and restoration plan. The replanting program will be designed to regenerate the woodlot over time and ensure the health and longevity of the greater woodlot. It is a permanent solution with a beginning and end.

### Pros

- Achieves intent of the goal of the long-standing Legal Agreement to remediate contaminated lands in the community.
- Resolves contamination issue and does not pass on to future generations.
- Rejuvenates a woodlot in decline using hardy, native species and provides an opportunity for long-term woodlot management.
- Minimizes future risk and liability.
- Avoids impact on public health and safety.
- Protects land values and investments of nearby residents.
- Provides impetus for broader park rejuvenation and enhancement.
- Permits unrestricted human access and passive use of remediated lands

### Cons

- Disrupts the local neighbourhood for up to 12 months.
- Impacts the urban tree canopy, ecosystem services and visual aesthetics as replanting matures.

## 2. Partial Remediation – Mature Tree Protection

This option was designed at the request of MPH staff and includes the remediation and restoration work outlined in Option 1 above but seeks to protect 6-8 mature trees. A small layer of surface soil (5-10 cm) in specific measured areas (i.e., drip line/root zones) around the mature trees would be manually removed and replaced with clean soil as an interim measure. These individual trees would require fenced zones around them to prevent human access for reasons of health and safety. At the end of the trees' lifespan, future remediation and restoration work would be the responsibility of MPH.

### Pros

- Extends the life of a limited number of mature trees on the site.
- Provides some visual relief to the site due to the broader tree removal program.

- Rejuvenates a woodlot in decline using hardy, native species and provides an opportunity for long-term woodlot management.
- Permits human access over a large section of the remediated lands (trails, lookouts, etc.), with the exception of the fenced tree protection areas.

### **Cons**

- Retains contaminated soil beneath the surface surrounding the trees.
- No guarantee that the trees would survive the remediation process.
- Prevents tree planting/replacement within protected areas unless the soil is remediated.
- Imposes long-term costs for MPH to remediate contaminated soil at the end of tree lifespan.
- Perimeter fencing around trees would impede human access in certain areas of the park for an indefinite period of time and impact long-term park planning and redevelopment.
- Passes human health risk and liability on to future generations.
- Construction disruption to the neighbourhood.
- Impacts habitat and visual aesthetics until replanting matures.
- Future remediation likely to negatively impact replanted trees.

### **3. Restrict Access**

This option involves fencing off the contaminated area occupied by dense vegetation/trees (the eastern section of the site) with 6 – 8 ft high industrial fencing thus preventing human access except in very controlled circumstances. Toxic waste would be left in place. The fenced off areas would be clearly signed as a contaminated area. The balance of the contaminated lands would be remediated.

#### **Pros**

- Immediate temporary solution.
- Protects existing trees over their lifespan.
- Reduces construction disruption.

#### **Cons**

- Retains contaminated soil within the fenced-off area.
- Prohibits human access or use within the fenced-off area for an indefinite period of time.
- Imposes long-term costs for MPH to monitor and remediate contaminated soil in future if required.
- Passes health risk and liability on to future generations.
- Exacerbates Port Hope's reputation as a contaminated community.
- Reduction of adjacent property values.

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#### 4. Combination of Options

This option is a combination of Options 1, 2 and 3 above whereby individual mature trees would be subject to shallow remediation and their perimeter zones fenced off, and constrained access areas (ie. wooded ravine, densely vegetated areas) would also be fenced off from human use. Contaminated soil would remain within the fenced off areas, while the balance of the site would be remediated.

##### Pros

- Protects a portion of densely vegetated areas on the site.
- Extends the life of a number of mature trees on the site.
- Reduces construction disruption.

##### Cons

- Retains contaminated soil beneath protected trees and within the densely vegetated areas.
- No guarantee that the protected trees would survive the remediation process.
- Prevents tree planting/replacement within protected areas unless the soil is remediated.
- Imposes long-term costs for MPH to monitor and remediate contaminated soil at the end of tree lifespan.
- Passes human health risk and liability on to future generations.
- Impacts long-term park planning and redevelopment.
- Prohibits human access or use within the fenced areas for an indefinite period of time.
- Exacerbates Port Hope's reputation as a contaminated community.
- Potential to reduce adjacent property values.
- Future remediation likely to negatively impact replanted trees.

#### Options Conclusion

As noted above, CNL, MPH staff and AECL considered all of the options and concluded that the originally recommended approach by CNL to remediate the site in accordance with the Legal Agreement remains the appropriate and recommended approach given the extremely high levels of toxic industrial waste present. It is acknowledged that the work under the full remediation option will cause extensive disruption and result in the removal and replacement of a large number of trees, many of which are invasive and in decline. This option will include a remediation and restoration plan, including a comprehensive replanting plan, will be prepared by CNL for review and input by MPH to project commencement with the purpose of regenerating the woodlot and ensuring the long-term management and enhancement of the greater woodlot. The restoration program may also serve as an impetus for rejuvenation and revitalization of this underutilized site.

## **Lions Park Overview**

Lions Park is a small urban park and community recreation centre located steps away from Port Hope's iconic downtown. The north-eastern section of the park contains a ravine and small woodlot which is comprised of invasive tree species and has been described as in decline. Small urban woodlots face significant challenges and have difficulty thriving without proper maintenance and care. The high level of toxic industrial waste situated within the Lions Park woodlot precludes any forest management efforts. If left untouched, with or without fencing, the woodlot will be more susceptible to disease, crowding, invasive species encroachment and/or environmental damage which can be detrimental to its long-term health and survival.

The remediation and restoration plan for Lions Park outlined in the terms of the Legal Agreement and current operating procedures consists of the preparation and implementation of a replanting plan which includes a 1:1 tree replacement program. The replanting plan will be professionally designed by landscape architects/arborists and will include diverse, hardy species which are native to the area and are appropriately sized and spaced to optimize healthy forest regeneration. The removal of the industrial contamination will enable MPH to properly monitor and manage the woodlot over time, which is critical to the long-term health of urban forests. In addition, the remediation will transform the woodlot from an unusable open space into a safe and accessible recreational asset which would have positive impact to the local neighbourhood and downtown area.

Lions Park is owned by MPH with a building and some outdoor space leased to the Port Hope Lions Club and Royal Canadian Legion Branch 30 who operate the facility primarily for indoor events and activities. The outdoor component of the park is substandard and in various states of repair with most amenities being removed over time. Its once prominent role in our community has long passed.

Although Lions Park is substandard and underutilized, it was understood that remediation was approaching so no upgrades or investments have been made. They are pending remediation.

The Leisure Services Master Plan cites an opportunity to investigate alternative uses and rejuvenate Lions Park. Its location and natural amenities, if cared for and maintained, make it full of potential. The Master Plan also identifies a need to prioritize opportunities to connect people with nature and build recreational capacity. The PHAI remediation of the Lions Park site could act as an impetus to renewal efforts for this underutilized park property. To take advantage of this unique opportunity, MPH staff recommends that a park master plan be created specific to Lions Park to identify new recreational uses, facilities and programming options, using the new woodlot as the cornerstone. Consultation with the PRC Advisory Committee, stakeholders and residents would be a critical component of this process.

As recently as 2019, title transfers occurred at this site resulting in full MPH ownership in preparation of the long planned remediation.



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This site has never been considered for private or commercial development contrary to comments circulating in the public.

### **Comparison to Other Sites**

The Lions Park site differs from most other PHAI sites as it contains a significant amount of toxic industrial waste in addition to LLRW. The recommended remediation approach for Lions Park is unique to its specific context and cannot be extended to other LLRW locations.

It is inappropriate to connect or compare the Lions Park tree removals and replacement to the Penryn Woodlot. The primary motivation of the Lions Park project is to protect human and animal health and responsibly dispose of industrial waste. The trees removed as part of the Lions Park remediation project will be replaced and properly maintained over time, thus ensuring that the community's tree canopy and important ecological systems will be restored. It is not a commercially-driven land development exercise where sections of forest are removed to facilitate urban growth.

### **Communication and Public Engagement:**

The PHAI project is regularly communicated to the public via Council presentations, project website updates and mailings to the community. The industrial sites have been long identified for remediation. Lions Park has been subject to extensive site investigative work over a number of years, with over 100 boreholes, 200 soil samples, 6 monitoring wells and a regular presence by CNL staff and their contractors.

In March, staff brought an early report to Council to raise awareness of the upcoming remediation months in advance of it commencing. Council received the report for information. Shortly after this awareness was created, CNL hosted a public information meeting to better inform the public of the technical aspects of the project. Positive feedback was received as the meeting explained many of the technical questions residents had. Members of the public have been engaged and have had the opportunity to express their position. Many misconceptions and inaccurate information are currently circulating. Members of the public are requested to review municipal reports or visit the PHAI website for factual, accurate and up to date information.

CNL has confirmed their intent to work with the adjacent neighbours to accommodate any special requests during the design of the replanting program. For example, fast growing, or favourite species could be strategically planted.

If the development of a post remediation park master plan for Lions Park is supported, MPH staff will further engage with the PRC Advisory Committee and develop a public consultation and communication strategy as a key component of the process.

### **Financial Considerations:**

Public Sector Accounting Standards require the recognition of a financial liability for remediation of contaminated sites where contaminants exceed the environmental standard. The amount of the financial liability is based on a reasonable estimate of

costs to remediate the property in order to achieve compliance with environmental standards.

The costs of the full remediation are covered by the federal government if completed at this time. One-time costs of the partial or no remediation options would also be covered.

If full remediation is not chosen, the MPH should budget and develop a reserve of \$30M-\$40M as estimated by AECL/CNL for future remediation and in the meantime a perpetual care reserve should be developed.

If the recommendation to prepare a master plan to redevelop the overall park is endorsed, a budget for this project would be prepared for Council's consideration as part of the 2023 budget process.

**Conclusion:**

This Council has consistently demonstrated its commitment to the environment and tree canopy. The ongoing efforts to secure permanent protection of 700 acres of environmentally sensitive lands in Wesleyville, the passing of a Tree By-law, and the refusal to lower standards related to the Penryn Woodlot are just some examples of this commitment.

Taking responsibility of a long standing toxic industrial waste dump and ensuring the replacement of the trees and long-term protection of the woodlot continues that commitment. Council also has demonstrated a strong interest in protecting the health and safety of its residents and the general public. The community has the means and the opportunity to resolve this legacy issue now in partnership with CNL, AECL and the Government of Canada for the benefit of existing residents and future generations.

**Attachments:**

Attachment 1 – Letter from Director of Decommissioning and Environmental Remediation, Atomic Energy of Canada Limited