

**Reid Park Redevelopment 2017
40 Reid Avenue**

**Executive Summary for
Environmental Risk Management Program**

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Reid Park Redevelopment 2017

40 Reid Avenue

Executive Summary for Environmental Risk Management Program

Commencing in the spring, 2017, the City of Ottawa will be redeveloping Reid Park to better meet the recreational needs of the surrounding community. The planned redevelopment, which has been the subject of public consultation over several years, will include the installation of new play equipment, shade shelter, fitness stations, pathways, park furniture and trees; the relocation of the basketball court; the removal of the existing parking lot; the partial demolition of the existing park building (former Reid farmhouse) with the retention of its heritage stone walls, and; overall park landscaping to establish a winter sliding area and a dog park.

Based on environmental studies which were completed leading up to the planned redevelopment, portions of the site soils have been found to have concentrations of metals and polycyclic aromatic hydrocarbons (PAHs) exceeding the current provincial standards for a parkland property. The park redevelopment project has therefore been expanded to include an Environmental Risk Management Program (ERMP). The ERMP is designed to mitigate future exposure to these contaminants using an approach referred to as 'soil capping'.

Whereas the City will be taking these steps to address future exposure to these soils by the users of Reid Park, their current and historic presence at the site should not be perceived as a cause for alarm. The potential risks associated with these levels of contamination are calculated based on a lifetime worth of exposure and would generally require prolonged and/or repeated direct contact in order for an actual hazard to occur. Ottawa Public Health (OPH) has reviewed the environmental studies for the site and they are supportive of the ERMP strategy. For any concerns or health related questions, community members are welcome to contact OPH at (613) 580-6744.

The park redevelopment project and ERMP is expected to commence in May and be completed in December (2017). The Lawn Bowling Club is not included in the project area. Impact to the Club will be limited to security improvements to its perimeter fencing.

Further information pertaining to the history of the Reid Park property, the environmental conditions and the planned Environmental Risk Management Program are provided in the following information sheets with Q & As.

Information Sheet – Questions And Answers Reid Park, 40 Reid Avenue

Environmental Risk Management Program

Q1 – What was the historical use of this site?

A1 – Historically, the City of Ottawa property located at 40 Reid Avenue was part of Reid Farm, established circa 1830s. The farm was subdivided in the 1920s, which is the likely timeframe for when the current park property was initially conveyed to the City. The site was developed as Reid Park sometime between 1948-1958, complete with a lawn bowling field, wading pool and seasonal outdoor rink. The original Reid Farmhouse was built around 1840 and still remains at the site today; having undergone a number of modifications and renovations over the years while serving as the Reid Park Fieldhouse and Elmdale Drama Centre building since the 1950s and 1960s. In more recent years, the building has been closed to the public and used for storage purposes.



Reid Park – circa 1958

The Reid Park property runs parallel along the south side of Highway 417, which was formerly a CNR railway alignment until the construction of the Queensway between 1958 and 1965. A municipal works yard (the former Elmdale/Victoria Ward Yard) was also present on the upper northeast plateau of the property until its removal in the late 1960s.

Q2 – What environmental investigations have been completed at the site?

A2 – A series of environmental investigations have been completed at Reid Park (40 Reid Avenue) beginning with a Phase I Environmental Site Assessment (ESA) in May, 2013. The Phase I ESA identified several issues of potential environmental concern at the site including the former municipal works yard at the northeast corner of the site, and historical infilling around the area of the former fieldhouse building. A Phase II ESA was recommended to investigate the potential presence of soil and/or groundwater impacts at the site.

An initial Phase II ESA program was completed in 2013, including the drilling of environmental boreholes at the northeast corner of the site in the vicinity of the former municipal works yard and fieldhouse building. A series of geotechnical boreholes were also advanced throughout the remainder of the park (excluding the lawn bowling club). Based on the boreholes drilled at the site in 2013, fill material was found to be generally widespread across the park which contained various waste and debris. Chemical analysis of the fill material identified concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals which exceed the applicable Ministry of Environment and Climate Change (MOECC) Site Condition Standards (SCS) for parkland property use. Only limited shallow groundwater was observed during the ESAs at the site and, of the groundwater samples which were able to be collected, no issues were identified.

Supplemental environmental investigations were commissioned by the City in 2016 to confirm the general extent of the soil impacts beneath the site. A Risk Assessment Study, also commissioned in 2016, was used to develop Property Specific Standards (PSS) for the identified contaminants of concern (COC) and provide recommendations for risk management. Based on the additional borehole drilling and soil sampling completed in 2016, the soils which are exceeding the PSS were estimated to cover a relatively substantial area, consisting approximately 5,600 m².

As a result of these findings, the City's Environmental Remediation Unit (ERU) is planning to implement a risk management program at the park which will focus on preventing direct contact with the identified soil contamination.

Q3 – What types of contaminants were found at the site?

A3 – The environmental investigations completed at Reid Park have identified soils with concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals at levels exceeding the MOECC SCSs and the PSS developed for the site.

PAHs are a group of more than 100 chemicals that are generated from the incomplete combustion of fuels, waste or other organic substances. The dominant sources of PAHs in the environment are associated with human activity and they are commonly found in older urban areas, particularly those used for industrial purposes and/or manufacturing. PAHs are contained in asphalt, crude oil, coal, coal tar pitch, creosote, vehicle exhaust and can occur throughout the environment in the air, attached to dust particles, or as solids in soil or sediment.

Metals contamination in urban soils can be attributed to a number of sources including building materials, paints, fertilizers, treated timber, aged infrastructure, vehicle emissions or other general commercial/industrial wastes.

The main source of the PAHs and metals at Reid Park appears to be associated with the poor quality of the fill material beneath the site, as evidenced by the various waste and debris identified in the fill during the recent environmental investigations.

Q4 – Why are PAHs and metals in soil a potential health risk?

A4 – PAHs and metals can be harmful to human health under some circumstances. Several PAH compounds are potential cancer-causing agents and benzo[a]pyrene is a known carcinogen. PAHs can also be skin irritants.

Everyone is exposed to some amounts of PAHs and metals through air, soil, household dust, food, drinking water and various consumer/household products. In order for PAH and metal contaminated soil to become a hazard, there must be direct contact with or disturbance of the contaminated soil. The effects of PAHs and metals will depend on the extent of exposure (duration and frequency), the amount one is exposed to (relative concentration), the nature of the exposure (via inhalation, ingestion or skin contact) along with general characteristics associated with the person being exposed (age, pre-existing health conditions, etc.). Children are more susceptible to PAH and metal exposure as they tend to play on the ground surface and may consume small amounts of soil due to frequent hand-to-mouth activities.

It should be noted that although PAH and metal contamination has been identified in the soil at the site, direct contact or disturbance of the soil must occur in order for any risk to occur. Furthermore, prolonged and repeated direct exposure would generally be required for any actual hazard to occur.

Q5 – Does the contamination currently pose a human health risk?

A5 – A Screening Level Risk Assessment (SLRA) study has been completed for Reid Park to assess the potential human health risks associated with the elevated PAHs and metals found in the soil. The SLRA determined there was a potential risk from direct contact with certain PAH and metal compounds that are present at concentrations greater than the levels used by the MOECC to denote a potential unacceptable risk.

Consistent with the Ontario MOECC approach, the SLRA risk estimates are based on a number of conservative assumptions regarding the duration and intensity of exposure. The findings relate to lifetime exposure limits and do not signify any immediate or acute human health risk. Ottawa Public Health (OPH) has reviewed the environmental studies for the site and they are supportive of the ERMP strategy. For any concerns or health related questions, community members are welcome to contact OPH at (613) 580-6744.

Q6 – What is the City’s plan to address the contaminants at Reid Park?

A6 – Reid Park is scheduled to be redeveloped in the spring/summer of 2017. The City will implement a risk management program to address the contaminated soils at the same time as the planned redevelopment. The risk management program has been designed to prevent direct contact with the contaminated soils at the site, using an approach referred to as ‘soil capping’. This approach will involve the importation and placement of approximately 0.5 m of clean soil directly over top of the existing impacted soils. A geotextile will also be placed as a demarcation barrier between the clean soil cap and the underlying pre-existing soils.

The addition of the soil cap will result in some alterations to the elevations and grading of the site however the redevelopment landscape design will ensure smooth transitions with existing features and neighboring properties.

Q7 – Will the community be exposed to unacceptable levels of contamination during the remediation project?

A7 – During the project, the work areas will be surrounded by construction fencing and only authorized personnel will be able to access the site. This will eliminate any direct exposure to the impacted soil during the project. To limit potential exposure from inhalation of dust particulate, the contractor will be required to develop and implement a Dust Control Plan as part of the project. The plan will include steps to prevent fugitive dust emissions at the site and adjacent properties as well as to prevent vehicle tracking of soil onto the surrounding municipal roadways. An environmental consultant retained by the City will be on-site for the duration of the project to ensure that dust mitigation measures and other project specifications are being implemented.

Q8 – Will existing mature trees in Reid Park be negatively impacted by the remediation project?

Where possible, efforts will be made to safeguard existing trees and canopy cover at the park. However, based on the scale of the planned park redevelopment and risk management program, it will not be possible to save all of the trees, particularly in the central area of the park where the majority of the work is taking place. Removed and/or lost trees will be replaced with new large caliper plantings that have been incorporated into the park redevelopment plan.

In cases where existing trees are being retained, alternative risk management measures will be adopted to avoid disturbance of the critical root zones. Potential exposure to contaminated soil via direct contact will be mitigated around the trees by installing a shallow barrier just below the sod and topsoil. The barrier is a permeable geotextile which is specially designed to act as a physical barrier while still allowing for air exchange and percolation of water through the ground.

Q9 – How will the site be monitored to ensure that the risk management measures are successful?

A9 – An environmental consultant retained by the City will be on-site for the duration of the project to supervise the risk management program. Following completion of the project, the site will be inspected and maintained on a regular basis to ensure the continued integrity of the clean soil cap. Any required repairs will be made forthwith and a record of all inspections, deficiencies and repairs will be maintained by the City.

Q10 – Is Public Health involved in this project?

A10 – Ottawa Public Health was consulted as part of the project planning, they reviewed the environmental studies for the site and are supportive of the ERMP strategy. For any concerns or health related questions, community members are welcome to contact OPH at (613) 580-6744.

Q11 – When is the remediation work expected to begin and for how long is the park expected to be closed?

The estimated start date for the park upgrades and risk management program is May, 2017 and it is anticipated that the site should be re-opened to the public by around December, 2017.

If you have further questions regarding the environmental conditions and/or risk management program that have not been addressed, please contact:

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