

2.0 BACKGROUND INFORMATION

2.1 Site Description

Lansdowne Park and Sylvia Holden Commemorative Park, collectively referred to hereinafter as the “Site”, are located on the southeast corner of the intersection of Bank Street and Holmwood Avenue in Ottawa, Ontario. A key plan showing the location of the Site is provided on Figure 1. Referenced by municipal address 945 – 1015 Bank Street, the Site measures approximately 15.6 hectares and is bordered by Bank Street to the west, Holmwood Avenue to the north and Queen Elizabeth Driveway and the Rideau Canal to the east and south. The Site lies in a typical municipal urban setting in an area of mixed residential, commercial and open space land uses.

Lansdowne Park is currently improved with six permanent structures which include: Coliseum Building, Horticultural Building, Aberdeen Pavilion (a.k.a Cattle Castle), Civic Centre, Frank Clair Stadium and Eddie Friel Building (hereinafter collectively referred to as the “Site buildings”). These buildings comprise approximately 27,200 square metres in total area and are used to host a variety of sports, entertainment, exhibition and convention events. The remainder of the Lansdowne Park is asphalt surfaced, primarily for use as at grade parking during events. An aerial image of the Site is provided on Figure 2.

Occupants of the Site include: Aramark Canada, a management company providing service for the concession stands and kitchen areas through the Civic Centre; and Coliseum Inc., an organized soccer league that leases Frank Clair Stadium and erects an air-filled dome over the playing field to allow its use for the winter season; and the Ottawa 67's Junior A hockey club.

Sylvia Holden Commemorative Park, located at the northwest corner of the Site, is a passive park and open green space established in 1995 in memory of Sylvia Holden. The park measures approximately 0.44 hectares and is improved with interlocking stone walkways and gardens at its west end. The remainder of the park is landscaped with grass sod and mature trees.

2.2 Site History

The historical use and chronology of the Site have been described in detail by Commonwealth Historic Resource Management Limited (“CHRML”) in its report entitled “Lansdowne Park Heritage Brief”, dated March 2010. An abbreviated summary of the historical use and chronology based on CHRML (2010) is provided in this section.

As early as 1868 the Ottawa Agricultural Society (OAS) had acquired 19 acres of land out on what is now the south and central portions of Lansdowne Park for use as a show-ground. In 1869 the OAS held the first agricultural show on the Site and by 1874 had purchased an additional 15 acres of private land to the north. The first real exhibition was held on the Site in 1875 when the City of Ottawa hosted the thirteenth annual Exhibition of the Provincial Agricultural and Arts Association. Several buildings were present at the Site including a Main

Building consisting of an octagonal two storey barn with eight single storey wings, the Ladies and Arts Building and a Horticultural Hall, both of which were single storey gable roofed frame structures. These buildings would remain on the Site for Provincial Exhibitions held in 1879 and 1887. By 1887, a number of other structures were on the Site including: Manitoba Hall, the Dairy Building, a Grandstand, a Bandstand, and an assortment of stables.

The Site underwent many improvements following the formation of CCEA in 1888 including the erection of a new Horticultural Hall, Grandstand, and a Machinery Hall. The first annual Agriculture and Industrial Exhibition was held in 1888 and a notable first occurred when electricity was used to light the Site and buildings.

In 1890 the Exhibition Grounds were renamed Lansdowne Park after the Marquis of Lansdowne, Governor General between 1883 and 1888. The opening of the Aberdeen Pavilion for the 10th annual Central Canada Exhibition of 1898 epitomized the progression of the Site to a significant national and international venue for the display of advancements in agriculture, livestock and the burgeoning realm of manufactured goods.

The Coliseum was built in 1903 as a fat stock and poultry show building and in 1905 a new Dairy Building was constructed. The Coliseum was enlarged in 1906 and the main part built as an auditorium and show ring named Howick Hall. Several structures on the Site were destroyed by fire in 1907 including the Ladies and Arts Building, the Experimental Farms Building, the Dairy Building, and the Grandstand. In 1909 a new steel and concrete Grandstand was built to provide seating for nearly 10,000 people reflecting the CCEA's growing commitment to developing year round sports facilities on the Site. The Horticulture Building was constructed in 1914 to serve as an exhibition building during the summer and a curling rink in the winter.

Lansdowne Park was taken over by the Department of National Defence during World War I for use in training troops prior to being sent overseas. At the end of the War a new Press Building and Machinery Building were constructed on the Site in 1920. The Machinery Building burnt in 1944 and was replaced by the General Purpose Building that same year. During World War II it served as an induction centre for thousands of Canadian troops heading overseas and was the home to The Cameron Highlanders of Ottawa (4th Princess Louise Dragoon Guards).

Two buildings were constructed on the Site in the 1950s: a new livestock pavilion (1950) adjoining the Coliseum, and the McElroy Building (1957) was opened for cultural, international, and scientific events. Additions to the Manufacturer's Annex and Pure Food Building were completed in 1953 and 1955, respectively.

During the 1960s a number of the then existing buildings were converted into Curl-O-Dromes including the General Purpose Building (1961), the McElroy Building (1963), and the Horticulture Building. The first permanent bleachers were installed in 1962 on the south side of the 1909 Grandstand. Frank Clair Stadium and the Civic Centre were constructed in 1967. The 1909 Grandstand, a Demonstration Building, and Bandstand were demolished to make way for the stadium.

In the 1973 the City of Ottawa assumed administration of Lansdowne Park and the south bleachers were removed and rebuilt by the City in 1975. The General Purpose and McElroy Buildings which abutted the Queen Elizabeth Driveway and a number of other buildings adjoining the Coliseum were demolished in the 1990s. Both the Coliseum and Aberdeen Pavilion were renovated in the 1990s.

2.3 Redevelopment Plan

In June 2010, Ottawa City Council approved the Lansdowne Partnership Plan (LPP), an innovative and dynamic solution to redevelop Lansdowne Park through a partnership between the City of Ottawa and the Ottawa Sports and Entertainment Group (OSEG). This plan involves three major components of redevelopment including:

- Refurbishment of Frank Clair Stadium (sports stadium) and Civic Centre (arena complex);
- Creation of a large urban park; and,
- Construction of a mixed-use area that includes retail, office, and residential uses.

By refurbishing the stadium complex, the redevelopment plan will provide for a renewed iconic open air stadium and indoor arena complex that will serve as a venue for multiple special events (CFL, soccer, varsity sports, concerts, hockey). A primary objective of the refurbished stadium is to seamlessly integrate the facility into the new urban setting by using varied and natural features. Landscaped earthen berms will be constructed along the south and east perimeters of the stadium, which will provide that connection between the stadium and the new urban park.

The urban park component of the redevelopment plan will enable Lansdowne Park to be re-integrated with the Rideau Canal Corridor as the site once was connected historically. Creation of the large urban park component will be accomplished by removing the majority of the asphalt currently existing on the site and installing a “front lawn” for Lansdowne Park. The “front lawn” will stretch across the eastern portion of the overall site along the Queen Elizabeth Driveway and the Rideau Canal. This urban park feature will also incorporate the site’s two heritage structures, the Horticulture Building and the Aberdeen Pavilion, as centerpieces for the revitalized Lansdowne Park.

The primary objective of the proposed mixed-use area is to create a unique urban village that includes a mix of commercial and residential buildings, open spaces and corridors, which will all serve a variety of purposes. This component of the redevelopment plan provides a unique pedestrian environment focused on a retailing area that will complement and support activities at Lansdowne and be integrated with existing commercial uses along Bank Street. In addition, the mixed use area will include residential uses that integrate with the surrounding community and provide an 18-hour cycle of activity for the overall site.

2.4 Regulatory Framework

2.4.1 Brownfields Regulation

The legislative and regulatory requirements for Brownfields and contaminated sites in Ontario are established by *Ontario Regulation 153/04 - Records of Site Condition, Part XV.1 of the Environmental Protection Act* (“O.Reg. 153/04”). The regulation defines the processes that must be followed to demonstrate that a property is safe for redevelopment, the content of Phase I and Phase II ESAs, as well as laboratory analytical protocols and accreditation requirements. Under the regulation, certain changes in property use and/or the municipal approvals process may trigger the requirement for the filing of a Record of Site Condition (RSC). A RSC must be filed when there is a change from industrial, commercial or community property uses to more sensitive uses including residential, institutional, parkland or agricultural or other property use. O.Reg. 153 also specifies the qualifications that a Qualified Person (QP) must meet in undertaking certain activities related to the filing of a RSC.

O.Reg. 153/04 provides two (2) approaches for cleaning up contaminated sites including: 1) restoration to generic Site Condition Standards (SCS) comprised of background standards and effects-based standards; and 2) preparation of a Risk Assessment. The generic SCS are set out in the document entitled *Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act*. The generic effects-based SCS have been developed using a risk-based approach and are provided in a series of tables to reflect several site-specific characteristics including: 1) the existing/proposed property use; 2) the existing/potential groundwater use; 3) depth to bedrock; 4) clean-up depth; 5) soil texture; and 6) proximity to a water body. First released on March 9, 2004, the generic SCS were revised on July 27, 2009 and again on April 15, 2011 to increase the protection of human health and the environment by providing strengthened SCS based on updated toxicological information, develop SCS for several new contaminants, and provide clarification and specific SCS which apply to sensitive site conditions. The new SCS came into effect July 1, 2011; however, property owners who have initiated remediation may continue to use the EPA 2004 SCS for an additional 18 month period provided that they filed a Notice of Transition prior to December 31, 2010 and that they submit the RSC prior to January 1, 2013.

In some cases, it may be difficult for a property to meet the generic SCS. In these situations, the property owner could then consider developing Property Specific Standards (PSS) through preparation and acceptance of a Risk Assessment. The Risk Assessment approach allows for the incorporation of site-specific conditions in the development of soil, groundwater, and, where appropriate, sediment standards. The use of Risk Assessment includes: an assessment of potential risks; the setting of site specific, risk-based Property Specific Standards (PSS); and the identification of any risk management measures that may be required.

Based on the Site characteristics determined through the Phase I and II ESAs, it has been determined that the appropriate generic SCS applicable to the Site are the EPA Table 3 SCS (non-potable groundwater use) for sites with coarse textured soil (hereinafter referred to as “EPA Table 3 SCS”).

2.4.2 Application to Site Redevelopment

The revitalized Lansdowne Park will include residential, commercial/community and parkland property uses. A plan depicting the future residential, commercial/community and parkland property uses for the redeveloped Lansdowne Park is provided on Figure 4. These property use areas have also be superimposed onto the proposed Site redevelopment plan (Figure 3).

The northwestern and north central portions of the Site and the western frontage along Bank Street will be redeveloped to include residential property use, and as such, will be subject to the filing of a RSC as the future use of this area is being changed to a more sensitive land use. In support of the generic clean-up approach the City of Ottawa submitted a Notice of Transition to the MOE on November 25, 2010 to allow use of the EPA 2004 Standards for that portion of the Site being redeveloped to residential property use. The Notice of Transition was acknowledged by the MOE in its letter to the City of Ottawa Dated December 22, 2010. The remaining portion of the Site will therefore be subject to the EPA 2011 Standards

The future property use of the eastern and southern portions of the Site to be redeveloped as the “front lawn” and the South and East Berms will be consistent with parkland property use as defined under O.Reg. 153/04. Similar to the residential area, the future property use of this portion of the Site will constitute a change to a more sensitive property use and will necessitate the filing of a RSC. This portion of the Site includes the Eastern Landfill, which contains contaminants at concentrations greater than the applicable generic Table 3 SCS. A Risk Assessment will be completed in support of the redevelopment of the parkland use area to develop PSS and identify any necessary risk management measures that will need to be implemented as part of the development plan.

Property use for the remainder of the Site will continue to include mixed commercial and community property uses. As such, there will be no change of property use and no requirement to file a RSC for these lands.

2.5 Previous Investigations

In support of the Lansdowne Park redevelopment plan, the City of Ottawa retained AMEC to undertake various environmental studies of the Site. These included: a Phase I Environmental Site Assessment (ESA) (AMEC, 2010a) to identify any areas of actual or potential environmental concern and to provide a preliminary determination as to likelihood that one or more contaminants are present at the Site; and a Phase II ESA (AMEC 2010b) to determine the location and concentration of contaminants at the Site and their concentrations relative to the generic EPA Table 3 SCS.

The Phase I ESA identified several Areas of Environmental Concern (AECs) that had previously impacted soil and groundwater quality at the Site, as well as several Areas of Potential Environmental Concern (APECs) that may be impacting the Site. The AECs were primarily realized through a review of existing environmental reports previously prepared by others in reference to the Site. APECs included several previously identified concerns that were either

not assessed during previous subsurface investigations completed at the Site, or were, in AMEC's opinion, not subject to a sufficient level of investigation to dismiss them as an APEC (or AEC).

This Phase II ESA was carried out in two stages. The initial work program included the advancement of 37 boreholes, 29 of which were instrumented with groundwater monitoring wells. These test location were strategically selected to assess the APECs and AECs identified during the Phase I ESA. An additional 27 boreholes were advanced in the vicinities of the Coliseum Building, former Coliseum Annex, Horticultural Building and former East Lavatory to further define the extent of polynuclear aromatic hydrocarbon (PAH) impact in shallow soil and to delineate the extent of construction rubble and debris likely associated with the previous demolition of several former on-Site structures (i.e., Coliseum Annex, East and West Lavatories). Through the sampling programs, a total of 107 soil samples and 60 groundwater samples, exclusive of the number of samples employed for quality assurance/quality control (QA/QC) purposes, were submitted for chemical analyses of various contaminants of potential concern (COPC) including petroleum hydrocarbons (PHC), volatile organic compounds (VOC), PAH, metals, polychlorinated biphenyls (PCB), and select general chemistry parameters. Thirty-eight (38) soil samples were also submitted for pH determination.

In addition to the Phase II ESA, a preliminary geotechnical investigation was also carried out at the Site on behalf of OSEG (Paterson Group, 2010) resulting in 11 additional boreholes being advanced at the Site. In addition to the Phase II ESA, subsurface investigations were previously carried out to address potential remnant heating oil impacts in the vicinity of the former Coliseum Annex and former East Lavatory boiler rooms by John D. Paterson and Associates (JDPA) (1998, 1999). In 2003, the City carried out an investigation of Lansdowne Park as part of its Old Landfill Management Strategy (OLMS) (JDPA, 2003).

A plan showing the locations of all test holes advanced at the Site during the 2010, 2003, 1999 and 1998 site investigations is provided on Figure 5.

Through the Phase I and II ESAs, three areas of soil impact characterized by elevated levels of PAH and/or heavy metals at concentrations exceeding the generic EPA 2004 and 2011 Table 3 SCS for residential/parkland/institutional (R/P/I) property uses were identified at the Site. The areas of impact include: 1) an area of shallow PAH impacted soil at the front of the Horticultural Building; 2) an area of shallow to moderate depth PAH impacted soil in the vicinity of the former Coliseum Annex Building; and 3) a closed landfill located beneath the eastern portion of the Site characterized by PAH and heavy metal soil impacts. A fourth area of impact characterized by exceedances of the EPA 2011 Table 3 SCS for R/P/I property uses was also identified in the vicinity and to the east of the former East Lavatory. Inert construction and demolition rubble including brick, concrete and other miscellaneous materials were also identified in each of these impact areas except at the front of the Horticultural Building.

A second landfill thought to have been present beneath the South Side Stands of Frank Clair Stadium was determined to be non-existent (AMEC 2010b). It is suspected that anecdotal

information regarding the southern landfill originated as a result of historic uncertainty regarding the actual location of the Eastern Landfill. Such uncertainty may have been exacerbated by the presence of minor quantities of inert construction and demolition rubble in the fill beneath the South side stands and surrounding area.

No groundwater impacts exceeding EPA 2004 Table 3 SCS were identified at the Site. Elevated concentrations of chloroform exceeding the EPA 2011 Table 3 SCS, but below EPA 2004 Table 3 SCS, occur in groundwater at several of the monitoring wells installed at the Site due to a strengthening of the EPA Table 3 SCS from 430 µg/L to 2.4 µg/L as a result of the O.Reg. 511/09 amendment. Based on their distribution relative to municipal servicing, the chloroform concentrations are attributed to leaking water and sanitary sewer infrastructure at the Site, some of which is reported to be in excess of 100 years old.

Additional investigations have recently been completed at the Site to further define the extent of the soil and groundwater impacts in some areas in support of future remedial and risk management actions.