



March 2016

REPORT ON

Phase I Environmental Site Assessment 101 Wurtemberg Street Ottawa, Ontario

Submitted to:
Claridge Residential Inc.
2001-210 Gladstone Avenue
Ottawa, Ontario
K2P 0Y6

Attention: Mr. Jim Burghout

REPORT



Report Number: 1651694

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Executive Summary

Golder Associates Ltd. (“Golder”) was retained by Claridge Residential Inc. (“Claridge”) to conduct a Phase I Environmental Site Assessment (“Phase I ESA”) for the property located at 101 Wurtemburg Street, in Ottawa, Ontario (hereinafter collectively referred to as the “Site” or “Phase One Property”) as shown on Figures 1 and 2. The Site is occupied by a residential house, which is currently vacant. The Site is owned by Claridge and has an approximate area of 770 m². The general Site location is shown on Figure 1.

It is understood that the Site is proposed to be redeveloped with a high-rise apartment building and that the house will be demolished prior to the Site re-development.

This Phase I ESA was completed in accordance with the Ontario Regulation (O.Reg.) 153/04 (as amended) and is an upgrade of the Phase I ESA completed in accordance with the Canadian Standards Association document entitled Phase I ESA, Z768 01 (R2006) conducted for the Site in February 2011 for Claridge by Golder. It is understood that this Phase I ESA is being carried out for Site Plan Application with the City of Ottawa (“the City”) and that a Record of Site Condition (RSC) pursuant to *Ontario Regulation 153/04 – Records of Site Condition – Part XV.1 of the Act*, made under the *Environmental Protection Act*, will not be filed for the Site. The 2011 Phase I ESA was upgraded to meet the Phase I ESA requirements as stipulated in the O.Reg. 153/04 (as amended) in order to comply with the City’s current Official Plan requirements that all Phase I ESA reports that are submitted for Site Plan Approval have to be completed in accordance with the O.Reg.153/04 as amended.

The Executive Summary highlights key points from the report only; for complete information and findings, as well as the limitations, the reader should examine the complete report.

The Phase I ESA was completed in accordance with the requirements of Schedule D of O.Reg.153/04 as amended and included a review of available current and historical information regarding the Site and surrounding properties, a Site reconnaissance, interviews, evaluation of readily available information, and reporting, subject to the limitations outlined in Section 8.0 of this report. Since the Site has been used for residential purposes it is not considered an enhanced investigation property as defined by O. Reg. 153/04.

Based on the information provided in the City of Ottawa geo-map, the description of the Site is Plan 43586 S46 Clarence; Closed N8 Lot 6 Wurtemburg E. The Site municipal address is 101 Wurtemburg Street, Ottawa, Ontario.

At the time of the Site visit on February 26, 2016, the Site was occupied by a single, detached two storey, split-level residential building built between 1951 and 1965 and a backyard. The ground surface was snow covered. The residential house has been vacant since at least 2010. At the time of the Site visit the house had no power or heating and was in very poor condition. Prior to the Site development with the residential house, the Site was a part of the Clarence Street right of way which previously terminated just east of Wurtemburg Street.

At the time of the Phase I ESA, the neighbouring properties within the Phase One Study Area were used for commercial and residential purposes with some parkland to the south of the Site.



Based on the information collected as part of this Phase One ESA, the following potentially contaminating activity (PCA) was identified:

- Importation of fill material of unknown quality (PCA #30).

The review of the Slope Stability Assessment for the Site performed by Golder in 2010, indicated that fill material is present at the east end of the Site with a thickness up to 3 m. In addition, the aerial photograph review indicates that an in-ground swimming pool existed on Site between 1988 and 2002. Due to the unknown origin and quality of the fill material placed at the east end of the Site and the fill material used to fill in the former in-ground swimming pool, the fill material is considered to be a PCA. This PCA resulted in one APEC as shown on Figure 2.

In addition, the following building related issues were identified at the Site:

- Based on the year of the house construction (between 1951 and 1965), asbestos-containing materials (ACMs) (friable and non-friable) may be present in the house, given that the use of friable ACMs was generally discontinued in the late 1970s/early 1980s. It is understood that the house will be demolished prior to the Site redevelopment. As such, the suspected ACMs should be sampled in accordance with the O.Reg. 278/05 to confirm the presence/absence of asbestos in these materials. All ACMs should be abated prior to demolition activities.
- Based on the year of the house construction (between 1951 and 1965), lead-containing paints may be present in the building. Although the house was repainted since its construction, it is possible that the original paint layer may be lead-containing. The water piping is copper; however lead solder may be present on the water pipe joints. Lead related issues should be dealt prior to house demolition.

The above building related issues were addressed with a designated substances survey (DSS), completed by Golder, which was carried out concurrently with this Phase One ESA. The findings of the DSS are presented under separate cover.

In order to address the fill quality issues, the following is recommended in conjunction with re-developing the Site:

- Characterize the fill quality during the excavation activities to be carried out at the Site as part of the re-development by collecting fill samples and submission for laboratory analysis of the potential chemicals of concern (COCs) which include the following parameters: petroleum hydrocarbon fractions F1 to F4 (PHC F1 to F4), benzene, toluene, ethylbenzene, xylenes (BTEX), metals and polycyclic aromatic hydrocarbons (PAHs). Results would be used to determine appropriate off-Site reuse of the fill and characterise fill remaining on the site.



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1.0 INTRODUCTION

1.1 Phase I Property Information

Golder Associates Ltd. (“Golder”) was retained by Claridge Residential Inc. (“Claridge”) to conduct a Phase I Environmental Site Assessment (“Phase I ESA”) for the property located at 101 Wurtemburg Street, in Ottawa, Ontario (hereinafter collectively referred to as the “Site” or “Phase One Property”) as shown on Figures 1 and 2. The Site is occupied by a single, detached two storey, split-level residential house with associated backyard. The house was built between 1955 and 1968 and is currently vacant. The Site is owned by Claridge and has an approximate area of 770 m². The general Site location is shown on Figure 1.

It is understood that the Site is proposed to be redeveloped with a high-rise apartment building and that the house will be demolished prior to the Site re-development.

Based on the information provided by the City of Ottawa geo-map, the description of the Site is Plan 43586 S46 Clarence; Closed N8 Lot 6 Wurtemburg E. The Site municipal address is 101 Wurtemburg Street, Ottawa, Ontario.

Contact information for the Site including the current owner is provided as follows:

Table 1: Phase I ESA Property Information

Address	Current Site Owner	Contact Information
101 Wurtemburg Street	Claridge Residential Inc.	Jim Burghout Claridge Residential Inc. 2001-210 Gladstone Avenue Ottawa, Ontario K2P 0Y6 Email: jim.burghout@claridgehomes.com Tel: 613-233-6030

A Site plan is provided as Figure 2. A plan of survey for the Site is included in Appendix A.



2.0 SCOPE OF INVESTIGATION

A Phase I ESA is a preliminary qualitative assessment of the environmental condition of a property, based on a review of current activities and historical information for the subject property and also a review of relevant and readily available environmental information for the surrounding properties within 250 m radius of the boundaries of the Site (collectively referred as “Phase I Study Area”).

According to Ontario Regulation (O.Reg. 153/04) the objectives of a Phase I ESA are:

- 1) To develop a preliminary determination of the likelihood that one or more contaminants have affected any land or water on, in or under the Phase I Study Area.
- 2) To assess the need for Phase II Environmental Site work.
- 3) To provide a basis for carrying out any Phase II Environmental Site work.
- 4) Provide adequate preliminary information about environmental conditions in the land or water on, in or under the Phase One Property for the conduct of a risk assessment following completion of a Phase II ESA, if needed.
- 5) To identify and report on evidence of actual and/or potential contamination on the Site from current and historical activities at the Site or from adjacent properties.

This Phase I ESA was completed in accordance with the Ontario Regulation (O.Reg.) 153/04 (as amended) and is an upgrade of the Phase I ESA completed in accordance with the Canadian Standards Association document entitled Phase I ESA, Z768 01 conducted for the Site in February 2011 for Claridge by Golder. It is understood that this Phase I ESA is being carried out for Site Plan Application with the City of Ottawa (“the City”) and that a Record of Site Condition (RSC) pursuant to *Ontario Regulation 153/04 – Records of Site Condition – Part XV.1 of the Act*, made under the *Environmental Protection Act*, will not be filed for the Site. The 2011 Phase I ESA was upgraded to meet the Phase I ESA requirements as stipulated in the O.Reg. 153/04 (as amended) in order to comply with the City’s current Official Plan requirements that all Phase I ESA reports that are submitted for Site Plan Approval have to be completed in accordance with the O.Reg.153/04 as amended.

Given that the Site has been used for residential purposes, the Site is not considered an enhanced investigation property as defined by O.Reg. 153/04 (as amended).



3.0 HISTORICAL RECORDS REVIEW

3.1 General

3.1.1 Phase I Study Area Determination

For the purpose of this Phase I ESA, the Phase I Study Area is defined as the Site and the area within approximately 250 m of the boundaries of the Site. Based on Golder's review of the historical and current information completed as part of the Phase I ESA for the area surrounding the Site and observations made during the Site visit, it was concluded that assessing information pertaining to properties within 250 m of the Site was sufficient to achieve the objective of the Phase I ESA.

3.1.2 First Developed Use Determination

Based on the information obtained from documentation reviewed (discussed in the next sections of this report), the Site was first developed between 1951 and 1965 with the current residential house. Prior to the Site development with the residential house the Site was part of the Clarence Street right of way which previously extended east of Wurtemberg Street. The following rationale was used to support that the Site was developed with the current residential house between 1951 and 1965:

- The 1925 (revised 1948) and 1956 fire insurance plans (FIPs) and the 1933 and 1951 aerial photographs show the Site undeveloped and being occupied by the right of way of Clarence Street which previously terminated immediately east of Wurtemberg Street;
- The 1965 aerial photograph shows the Site developed with the current residential house.

3.1.3 Review of Fire Insurance Maps and Reports

Golder conducted a search of available Fire Insurance Plans (FIPs) at the National Archives in Ottawa, Ontario to review fire insurance plans or drawings for the Site. FIPs from 1925 (revised in 1948) and 1956 were available for the Site. The review of the FIP indicated the following relevant environmental data:

- The Site was vacant in the 1925 (revised in 1948) and 1956 FIPs and it overlapped with the most east end of Clarence Street which previously extended slightly east of Wurtemberg Street;
- The surrounding lands in immediate vicinity of the Site are occupied by the New Zealand High Commission, and residential houses; and,
- No underground storage tanks (USTs) or aboveground storage tanks (ASTs) were indicated on the Site or on the adjacent properties on 1948 and 1956 FIPs.

3.1.4 Chain of Title

Chain of Title information was not ordered as it was deemed that other information from the records review would satisfy the objectives of the records search and that the information to be provided in a Chain of Title would not contribute additional environmental information relevant to the Phase I ESA. The Site is currently owned by Claridge.



3.1.5 Environmental Reports

2011 Golder Phase I ESA

A Phase I ESA in accordance with CSA Phase I ESA Standard Z768 01 was completed for the Site by Golder in 2011 described in the environmental report entitled *"Phase I Environmental Site Assessment, 101 Wurtemberg Street, Ottawa, Ontario"* prepared for Claridge, dated February 2011 (2011 Golder Phase I ESA). The Phase I ESA was completed for due diligence purposes as part of the proposed redevelopment of the Site. At the time of the 2011 Golder Phase I ESA, the Site was occupied by the current residential house which was vacant. Access to the building was not provided to Golder during the 2011 Phase I ESA Site visit and as such, the interior areas were not assessed. At the time of the Site visit, the exterior ground surface was snow-covered, which limited the observations for potential presence of stains or stressed vegetation. The 2011 Phase I ESA identified one issue of potential environmental concern related to potential subsurface impacts at the Site as identified below:

- Based on a review of the Slope Stability Assessment for the Site performed by Golder (2010), fill material is present at the east end of the Site with a range in thickness between 0-3 m. In addition, the aerial photograph review indicates that an in-ground swimming pool existed on Site between 1988 and 2002. Due to the unknown origin and quality of the fill material at the east end of the site and the fill material used to fill in the former in-ground swimming pool, the fill material is considered to be an issue of potential environmental concern.

In addition, the 2011 Phase I ESA identified potential environmental concerns related to the potential presence of asbestos containing building materials (ACMs), polychlorinated biphenyls (PCB)-containing materials and equipment, urea formaldehyde foam insulation (UFFI), and lead-containing paint and lead solder in the building at the Site.

2010 Slope Stability Assessment

A Slope Stability Assessment was conducted for the Site by Golder for Claridge in July 2010. Based on the information provided in the report in general, the subsurface conditions at the Site consist of:

- Up to about 3 m of fill material (but likely less than 1 m in the table land area closest to the slope);
- Approximately 7 to 10 m of silty clay, of which the upper portion has been weathered to a stiff crust. The bottom 6 m are unweathered and have a firm to stiff consistency;
- Approximately 2 to 5 m of compact to dense sand (fine sand and silty sand);
- Glacial till extended to about 28 m depth (but likely thickening from south to north); and,
- Shale bedrock.

Based on a review of the subsurface conditions reported in the 2010 Slope Stability Assessment, it appears that fill material is present mainly on the east part of the Site. The origin and quality of the fill is unknown.



3.1.6 Review of Street Directories

A review of City Directories at the National Archives in Ottawa, Ontario was completed for the Site and addresses within approximately 250 m of the Site for years 1880, 1890, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, 1999/2000, 2009/2010. The following was of note based on the street directories review:

- The Site was listed since at least 1970 and was occupied by Jules Morin until 1990 when it was listed as vacant. In 1999/2000 the Site was occupied by Stephen Shulte;
- 111 Wurtemberg Street (approximately 25 m south of the Site, east side of Wurtemberg Street) was listed as Seignior Apartments in 1980 and 1990 street directories. The same address was not listed in the other street directories searched;
- 95 Wurtemberg Street (approximately 25 m north of the Site, east side of Wurtemberg Street) was listed as the USSR trade mission building in 1980 and 1990 street directories. The address was not listed in the other street directories searched;
- 105 Wurtemberg Street (located on the east side of Wurtemberg Street and south of the Site) was listed as New Zealand Embassy in 1950 and occupied by a physician in 1920 and 1930 street directories. This address currently does not exist and as such, the exact location of this former facility with respect to the Site is unknown;
- 197 Wurtemberg Street (approximately 140 m southeast of the Site) was listed as the Embassy of Turkey in 1960, 1970, 1980, 1990, 1999/2000 and 2009/10; and,
- The surrounding lands were listed mainly as residential properties with the exception of the above mentioned listings.

The review of the street directories indicated that the Site was occupied by a residential building since at least 1970.

Surrounding properties were occupied mainly by residential properties.

The review of the street directories does not indicate any obvious issues of potential environmental concern.

3.2 Environmental Source Information

3.2.1 Ministry of the Environment and Climate Change Correspondence

The Ontario Ministry of Environment and Climate Change (“MOECC”) was contacted (refer to copy of correspondence in Appendix B) to provide an Index Report with respect to active orders and approvals for the Site as detailed below:

- Active orders under the Environmental Protection Act (EPA), the Ontario Water Resources Act (OWRA), and the Pesticides Act (PA); and,
- Approvals under Sections 9 and 39 of the EPA as well as Sections 52 and 53 of the OWRA.

A formal response from the MOECC was received by Golder on February 29, 2016. The review of the MOECC response indicated that no Active Orders or Environment Compliance Approvals have been issued for the Site.



3.2.2 City of Ottawa Correspondence

As part of the 2011 Golder Phase I ESA, Golder forwarded a request to the City of Ottawa (City) for the following information for the Site:

- Active orders under the EPA, the OWRA, and the PA;
- Approvals;
- Reports relating to environmental concerns;
- Records of non-compliance or regulatory concerns;
- Dumping infractions, spills or discharges to the environment;
- Violations of sewer use or environmental by-laws;
- Historic information related to landfill or dump sites on or in proximity to the property; and,
- Any other environmental information.

A formal response from the City was received by Golder (included in Appendix B). The review of the City's response indicated the following:

- The Disposal and Environmental Remediation Unit indicated that the Site is located within 300 m of several former landfill sites located in the geographic area of Vanier which is also a known Risk Management Area for known soil contamination, specifically lead and mercury. However, it was indicated that the Risk Management area and the former landfills are separated from the Site to the east by the Rideau River.
- The search of the Historical Land Use Inventory (HLUI) indicated that there are no activities associated with the Site or surrounding properties located within 50 m of the Site.

The review of the City's response did not indicate any issues of potential environmental concern.

3.2.3 City of Ottawa Document Review

1988 Intera Report

Prior to the 2001 amalgamation, the City did not have a consolidated database of environmental concerns for City properties and typically referred all inquiries to the *1988 Mapping and Assessment of Former Industrial Sites, City of Ottawa, Intera Technologies Ltd.* (hereafter known as the "1988 Intera Report"). This report describes an inventory and assessment study of former industrial sites that were active in the former (prior to the 2001 amalgamation) City of Ottawa from 1850 to 1984 that likely produced or handled hazardous wastes and materials. The sites were subsequently screened to identify higher priority sites which were subdivided into Group I, Group II and Group III sites.

- Group I Sites – Sufficient evidence to indicate that wastes are present on-Site and that there is a high potential for environmental impact;
- Group II Sites – Sufficient evidence to indicate that wastes are likely remnant on-Site; and,
- Group III Sites – Unlikely that significant quantities of waste exist at the Site today and therefore the potential for environmental impact is minimal.



The review of the 1988 Intera Report indicated that there are no former industrial sites on the Site or within 250 m of the Site.

Old Landfill Management Strategy – Phase I – Identification of Sites, City of Ottawa

The review of the 2004 *City of Ottawa Waste Disposal Sites Inventory* as described in the report entitled “*Old Landfill Management Strategy, Phase 1-Identification of Sites, City of Ottawa, Ontario*”, completed by Golder for the City of Ottawa, dated October 2004 indicated the following:

- The former private dump (Site ID # Ur-25) was located approximately 300 m east of the Site at Kingsview Park (Vanier), across Rideau River. This former landfill is the same landfill site identified in the City of Ottawa correspondence discussed in section 3.2.2 of this report. Given that the former private dump is located on the opposite side of the Rideau River the historical presence of this dump is not considered to represent a potentially contaminating activity (PCA) that may result in area of potential environmental concern (APEC) for the Site.

3.2.4 Ministry of Natural Resources (MNR)

An information request was sent to the Ministry of Natural Resources (“MNR”) February 18, 2016 (refer to copy of correspondence in Appendix B).

At the time of writing this report, a response from MNR had not been received. If a response is received within 12 months of the request submittal, Golder will review the response and will advise of any noteworthy findings.

Given the Site is currently occupied by a residential house which is located in the City of Ottawa, it is unlikely that species of risk are present on the Site.

3.2.5 Technical Standards and Safety Authority Correspondence

The Technical Standards and Safety Authority (TSSA) was contacted via e-mail (refer to copy of correspondence in Appendix B) to determine if any commercial fuel underground storage tanks (USTs) were registered on the Site or on the surrounding properties within 250 m of the Site. It should be noted that there is currently no requirement in Ontario to register private underground fuel oil storage tanks for heating purposes. The TSSA has maintained records since 1989.

Mrs. Sarah Quibell of the TSSA replied on February 19, 2016 and indicated that the TSSA had no registrations for USTs for the Site, currently or historically, nor are there any records of USTs on adjacent properties.

3.2.6 Ontario Ministry of Environment and Climate Change Database Review

3.2.6.1 MOECC Database on PCB Storage Sites, 2000

Based on a search (250 m radius from Site) of the MOECC database of PCB Storage Sites, the Site is not a registered PCB Storage Site and no registered PCB Storage Sites are known to be located within approximately 250 m of the Site.

3.2.6.2 Waste Disposal Site Inventory, June 1991

A search of the 1991 MOECC (*Waste Disposal Site Inventory*) indicates one record of a closed waste disposal Site within 500 m of the Site. The MOECC waste disposal inventory identified the presence of the former disposal site Ur-25 listed in the 2004 City of Ottawa Waste Disposal Sites Inventory discussed in Sections 3.2.2 and 3.2.3 of this report.



3.2.6.3 Inventory of Coal Gasification Plant Waste Sites in Ontario, April 1987

A review of the (*Inventory of Coal Gasification Plant Waste Sites in Ontario*) (250 m radius from the Site) was carried out. The latter classification includes tar distillation plants, creosoting plants, roofing felt and tarred paper products manufacturers, by-product charcoal and coke oven plants of the iron and steel industry, industrial manufactured gas plants, and wood distillation plants.

The review indicated that there are no registered former coal gasification plants or industrial sites producing and/or using coal tar or related tars within 250 m of the Site.

3.2.6.4 MOECC Database on Registered Waste Generators, 2001

A review of the MOECC database on registered waste generators indicates no records of registered waste generators on the Site or within 250 m of the Site.

3.2.6.5 MOECC Database on Brownfields Environmental Site Registry - Records of Site Condition (“RSC”), October 2004

A search of the brownfields environmental site registry was carried out for the Site to determine whether a record of site condition has been filed for the Site. The search indicated that no RSC has been filed for the Site.

3.2.7 Environment Canada National Pollutant Release Inventory (“NPRI”), 2006

The NPRI provides information for the facility’s total releases to air, water and land and also includes any disposal and /or recycling the facility may have. The search of the Environment Canada NPRI (within 250 m of the Site) indicated that there are no registered facilities located within 250 m of the Site.

3.3 Physical Settings Sources

3.3.1 Aerial Photographs

Selected aerial photographs for the Site were obtained from the National Air Photo Library (“NAPL”) in Ottawa, Ontario for years 1933, 1951, 1978, 1988, and 1990. In addition, the aerial photographs for 1965, 1976, 1991, 1999, 2005, 2007, and 2014 from the City of Ottawa geo-map (<http://maps.ottawa.ca/geoOttawa/>) were reviewed on-line. Golder selected aerial photographs based on availability and date intervals, in order to help develop an understanding of the history of the development of the Site and surrounding properties (within 250 m). Copies of all the aerial photographs obtained from the National Air Photo Library are presented in Appendix D.

Information obtained from the review of relevant aerial photographs is summarized in the table below.

Table 2: Aerial Photographs

Date Scale	Site	Surrounding Property Direction			
		North	East	South	West
1933	The Site is vacant and appears to be occupied by the east end of Clarence Street which extended slightly east of Wurtemberg Street	Residential properties	Rideau River	Residential properties	Wurtemberg Street followed by Clarence Street and residential properties



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Date Scale	Site	Surrounding Property Direction			
		North	East	South	West
1951	As per 1933	As per 1933	As per 1933	As per 1933	As per 1933
1965	The Site is developed with the current house and Clarence Street terminates at Wurtemberg Street.	The residential property immediately north is now vacant land followed by a residential house	As per 1955	Developed with current multi-storey apartment building	As per 1955
1976-1978	As per 1965	The property immediately to the north appears is developed with the current Trade Representative Office of the Embassy of Russia	As per 1965	As per 1965	As per 1965
1988-1991	The Site is still developed with the current residential house with the addition of a swimming pool	As per 1976-78	As per 1976-78	As per 1976-78	As per 1976-78
1999	As per 1988-91	As per 1988-91	As per 1988-91	As per 1988-91	As per 1988-91
2005	As per 1999 except the swimming pool is no longer visible	As per 1999	As per 1999	As per 1999	As per 1999
2007	As per 2005	As per 2005	As per 2005	As per 2005	As per 2005
2014	As per 2007	As per 2007	As per 2007	As per 2007	As per 2007



The review of aerial photographs of the Site and surrounding area indicates that the Site was undeveloped prior to 1965 when the Site was developed with the current Site residential building. The surrounding lands to the north, south and west were developed with residential houses prior to 1933 and have been occupied mainly by residential houses and apartment buildings to the west and south and more recently by an office building (to the north).

The aerial photograph review of the Site and surrounding area (within approximately 250 m) indicates that an in-ground swimming pool existed on Site between 1988 and 2005. Due to the unknown origin and quality of the fill material used to fill in the former in-ground swimming pool, it is considered that the fill material is an issue of potential environmental concern. No other obvious issues of potential environmental concern were identified in the aerial photograph review.

3.3.2 Topography, Hydrology, Geology

The following records were reviewed to identify topographic, geologic and hydrogeological conditions at the Site. A topographic map (Ontario Base Map) showing the Site and the Phase One Study Area and the location of any water bodies is provided in Figure 3. Refer to Section 5.0 for additional information on Site features, as observed at the time of the Site visit.

Topic	Conditions	Comment / Source
Topography of Site and Surrounding Area	The Site is generally flat, however, there is a slight slope downward to the northwest and a steep slope at the east end of the Site towards the Rideau River.	Site visit observations and Figure 3 – Topographic Map.
Overburden Soils	<p>Offshore marine deposits: clay and silt underlying erosion terraces</p> <p>Based on a review of the subsurface conditions reported in the 2010 Slope Stability Assessment the subsurface conditions at the Site consist of:</p> <ul style="list-style-type: none"> ▪ Up to about 3 m of fill material (but likely less than 1 m in the table land area closest to the slope); ▪ Approximately 7 to 10 m of silty clay, of which the upper portion has been weathered to a stiff crust. The bottom 6 m are unweathered and have a firm to stiff consistency; ▪ Approximately 2 to 5 m of compact to dense sand (fine sand and silty sand); ▪ Glacial till extended to about 28 m depth (but likely thickening from south to north); and, ▪ Shale bedrock. 	<p>Map 1506A, <i>Surficial Geology</i>, Ottawa, Ontario, Belanger J. R., Urban Geology of the National Capital Area, Geological Survey of Canada, Open file D3256, 2001.</p> <p>2010 Slope Stability Assessment</p>



**PHASE I ENVIRONMENTAL SITE ASSESSMENT
101 WURTEMBERG STREET, OTTAWA, ON**

Topic	Conditions	Comment / Source
Type of Bedrock	Shale and limestone bedrock	Map 1508A. <i>Generalized Bedrock Geology</i> , Ottawa, Ontario, Belanger J. R., Urban Geology of the National Capital Area, Geological Survey of Canada, Open file D3256, 2001.
	Shale bedrock	2010 Slope Stability Assessment
Depth to Bedrock	15 to 25 m	Map 1508A. <i>Generalized Bedrock Geology</i> , Ottawa, Ontario, Belanger J. R., Urban Geology of the National Capital Area, Geological Survey of Canada, Open file D3256, 2001
	28 m	2010 Slope Stability Assessment
Inferred Local Groundwater Flow	East, toward Rideau River located immediately east of the Site	Site observations, Figure 3 – Topographic Map
Site Grade Relative to the Adjoining Properties	The Site is generally at grade with the surrounding lands west, south and north and significantly above Rideau River to the east. There is a significant elevation difference between the Site and the surrounding lands (Rideau River) east of the Site.	Site observations
Depth to Groundwater	Unknown	

3.3.3 Fill Materials

Topic	Conditions	Comment / Source
Fill Materials	No piles of fill material were observed on the Site. Fill material has been used for construction purposes (backfill around the building). There is also potential fill where the swimming pool previously existed and fill may be present at the east end of the Site according to the 2010 Slope Stability Assessment.	Aerial photographs and 2010 Slope Stability Assessment.



3.3.4 Water Bodies and Area(s) of Natural Significance

Topic	Conditions	Comment / Source
Nearest Open Water Body	The nearest permanent watercourse is the Rideau River located immediately east of the Site	Site observations, Figure 3- Topographic map
Areas of Natural Significance (“ANS”)	Based on the information obtained from the City of Ottawa geo-map, no evaluated wetlands are located on the Site or within the Phase One Study Area. No areas of natural or scientific interest (ANSI) are located on the Site or within 250 m of the Site. Based on the ANS map, a wetland is located approximately 200 m southwest of the Site in the area of the Macdonald Gardens Park. At the time of the preparation of this report a response from MNR had not been received. However, given the Site is currently occupied by a residential house which is located in the City of Ottawa, it is unlikely that species of risk are present on the Site.	ANS Map review and the City of Ottawa geomap

3.3.5 Water Wells

Topic	Conditions	Comment / Source
Water Wells on Site (location, stratigraphy of the overburden, from ground surface to bedrock, depth to bedrock, depth to water table, drilling date, use)	Based on the review of the MOEE Water Well database no water wells are located on the Site.	MOEE Water Well database, Site observations, the Site Representative
Water Wells on the Neighbouring Properties (location, stratigraphy of the overburden, from ground surface to bedrock, depth to bedrock, depth to water table, drilling rate, use)	Based on the review of the MOEE Water Well database, no water wells are located in the Phase One Study Area (within 250 metres of the Site).	MOEE Water Well database

3.4 Site Operating Records

The Site has been used only for residential purposes and no operations other than related to the residential Site use have been carried out at the Phase One Property. As such, no Site operating records would be available to be provided to Golder for review.



4.0 INTERVIEWS

As part of the 2011 Phase I ESA completed at the Site, Mr. Jim Burghout at Claridge (the “Site Representative”) was interviewed by Golder. In addition, as part of this Phase I ESA, Golder contacted Mr. Jim Burghout to obtain any new information regarding the Site, if there have been any changes since 2011. Based on the information provided by the Site Representative during the 2011 and 2016 Golder Phase I ESAs, the following information pertinent to the Phase I ESA was obtained:

- The current Site building has always been used as a residential dwelling. The house is vacant and is in poor condition.
- The house will be demolished.
- The current Site owner is Claridge Residential Inc.
- The Site Representative indicated that he is not aware of the presence of any historical or current fuel underground storage tanks (“USTs”) on the Site. In addition, he indicated that he is not aware of the presence of any historical or current fuel aboveground storage tanks (“ASTs”) on the Site.
- No storage, handling or management of chemicals takes place at the Site.
- There have not been any fuel or chemical spills or releases.
- No asbestos-containing material (“ACM”) survey has been previously conducted at the Site.
- Information regarding the fill origin and quality was requested from the Site Representative, and he indicated that no information was known.
- The house is connected to the municipal water supply and the municipal storm and sanitary sewers.
- There are no water wells on the Site and there is no septic system on the Site.
- The house was previously heated with natural gas. The house is currently not heated. The Site Representative is not aware of the former presence of heating oil storage tanks.
- The Site Representative indicated that there are no changes in the Site use or conditions since 2011.

The information provided by the Site Representative does not indicate any issues of potential environmental concern.



5.0 SITE RECONNAISSANCE

5.1 General Requirements

Ms. Maria Staneva, environmental engineer at Golder, conducted a Site visit on February 26, 2016. The duration of the Site visits was approximately 1 hour. The Site visits included a tour of the Site and a cursory inspection of neighbouring properties from the Site and publicly accessible areas. Sections 5.2 to 5.4 present the observations made during the Site visits. The Site visits were documented with photographs and additional notes.

At the time of the Site visit, the weather conditions were sunny, there was snow on the ground and the temperature was approximately -25°C. The presence of snow on the ground restricted the observations for potential evidence of stains, sheens or stressed vegetation. Photographs of some of the features noted during the Site visit are attached in Appendix E.

5.2 Site Specific Observations

At the time of the Site visit, the Site was occupied by an abandoned house and no operations or any other activities were being carried out at the Site. As the house has not been heated for a long period of time there was significant accumulation of ice on the stairs and the floors. In addition, there was no power, the house was structurally damaged and it was in very poor condition. Golder accessed only the entrance of the house and did not inspect the basement or the other parts of the house due to the unsafe conditions.

The specific observations made during the Site reconnaissance are presented herein.

5.2.1 Site Details

Topic	Observations	Comment / Source
Total Area of the Site	768 m ²	City of Ottawa geo-map
Number and Age of Buildings on the Site	One residential house built between 1951 and 1965. Single, detached, two storey, split level house, square footprint	Site observations, FIPs, aerial photographs
Building Area	185 m ² (2000 sq. ft.)	2011 Phase I ESA
Number of Floors (include all levels, whether above or below ground)	Two floors	Site observations
Number of Levels Below Ground Level	One level basement	Site observations



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Topic	Observations	Comment / Source
Approximate Percentage of Site Consisting of Landscaped/Grassed/Bare Ground Areas	70% of the Site consists of landscaped/grassed backyard	Site observations
Approximate Percentage of Site Consisting of Paved or Other Sealed Surface Materials	1% - Site entrance	Site observations
Number and Details of all Aboveground Storage Tanks (“ASTs”)	No ASTs were observed on the exterior areas of the Site. The Site Representative indicated that he is not aware of the presence of any former AST on the Site. No evidence of former ASTs was noted from outside. Due to unsafe conditions, the basement of the house was not inspected for potential evidence of a former ASTs.	Site observations, Site Representative
Number and Details of all Underground Storage Tanks (“USTs”)	No evidence (fill/vent pipes extending through walls or slabs/ground surface, no staining or any obvious odours) was observed during the Site visit to indicate the current presence of fuel or chemical USTs.	Site observations, TSSA, Site Representative
Asbestos-Containing Materials (“ACMs”)	<p>Based on the year of the house construction (between 1951 and 1965), it is Golder’s opinion that ACMs (friable and non-friable) may be present in the house, given that the use of friable ACMs was generally discontinued in the late 1970s/early 1980s.</p> <p>Concurrently with the Phase I ESA a pre-demolition designated substance survey (DSS) was completed at the house by Golder. The DSS report will be provided to Claridge under a separate cover.</p>	Site observations



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Topic	Observations	Comment / Source
Polychlorinated Biphenyls (“PCB”) Containing Materials and Equipment	<p>Based on the year of the house construction (between 1951 and 1965), the fluorescent light ballasts within the house may contain PCBs, since the use of PCB-containing materials in products, equipment, machinery, electrical transformers and capacitors was discontinued in the early 1980s. However, given that the light ballasts were replaced over the years, Golder is of the opinion that most of the fluorescent light ballasts within the building do not likely contain PCBs. No pad-mounted electrical transformers were observed on the exterior of the Site.</p>	Site observations
Lead-Based Paints (“LBPs”)	<p>Based on the year of the house construction (between 1951 and 1965), lead-containing paints may be present in the building. Although the house was repainted since its construction, it is possible that the original paint layer may be lead-containing and lead solder may be present on the water pipe joints. Lead related issues should be dealt with during demolition of the house.</p> <p>Concurrently with the Phase I ESA a pre-demolition DSS including sampling and analysis of potentially lead-containing paint has been completed at the house by Golder. The DSS report will be provided to Claridge under a separate cover.</p>	Site observations
Potable and Non-Potable Water Sources	<p>The residential house is connected to the municipal water supply. There are no non-potable water sources at the Site.</p>	Site observations, interview
Utility Lines Present (i.e. Electrical, Natural Gas, other)	<p>The residential house is serviced with electricity, natural gas, municipal water and sewer. The house is currently not occupied and it is understood that the electrical and the natural gas services were disconnected.</p>	Site observations, interview



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Topic	Observations	Comment / Source
Entry and Exit Points for Site Buildings	There is one entry and exit point for the residential house	Site observations
Existing and Former Heating System(s) (include fuel type / source)	The house was heated with natural gas. As the house is abandoned, the house is currently not heated. The type of former heating is unknown, however, no obvious evidence (fill/vent pipes extending through walls, wall openings, indication of former fill and vent pipes attachments to the walls, staining or any obvious odours) was noted from the outside during the Site visit to indicate the former presence of heating oil AST.	Site observations, interview
Existing and Former Cooling System(s) (include fuel type / source)	There is no cooling system at the Site.	Site observations
Drains, Pits, and Sumps (include current use, if any, and former use)	Due to unsafe conditions, the basement of the house was not accessed during the Site visit and as such, no observations were made for potential presence of drains, pits or sumps.	Site observations
Unidentified Substances	None identified	Site observations
Stains or Corrosion Located near a Potential Discharge Location	None identified	Site observations
Location of any Current and Former Wells	No wells were observed or reported to be present on the Site during the Site visit.	Site observations, MOECC Water Well database
Sanitary/Process Wastewater Receptor	No process wastewater is generated at the Site. The Site is not occupied and no sanitary water is generated at the Site. The Site is connected to the municipal sanitary sewer.	Site observations, interview
Sanitary Sewer Connection	Unknown	Site observations



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Topic	Observations	Comment / Source
Septic Systems	None identified	Site observations, interview
Storm Water Flow	The surface water run-off is towards storm sewers on Wurtemberg Street.	Site observations, interview
Storm Sewer Connection	The storm sewers are located on adjacent roadways.	Site observations
Ground Cover (i.e. grass, gravel, soil, or pavement, etc.)	The east part of the Site is grass covered	Site observations
Current or Former Railway Lines or Spurs	No railway lines or spurs were observed or reported on the Site.	Site observations and aerial photographs
Presence of Stained Soil, Pavement, or Stressed Vegetation	None identified. However, it should be noted that during the Site visit, the ground surface was snow covered which restricted the observations for potential presence of stains or stressed vegetation.	Site observations
Presence of Fill and/or Debris Materials	No piles of fill material or debris were observed during the Site visit. Fill has been used to fill in the former swimming pool previously located at the backyard as well fill was placed at the east end of the Site according to the 2010 Slope Stability Assessment.	Site observations, 2010 Slope Stability report, aerial photographs.
Operations at the Property	The Site has been used for residential purposes. The residential house on the Site has not been occupied since at least 2010 until present. No operations are currently carried out at the Site.	Site observations
Hazardous Materials	No hazardous wastes were observed or reported to be produced or originated at the Site.	Site observations, Site Representative
Products Manufactured at the Site	No manufacturing activities have been carried out at the Site.	Site observations Site Representative
By-Products and Wastes at the Site	No by-products or wastes were observed or reported to be generated at the Site.	Site observations Site Representative
Raw Material Handling and Storage Locations	No raw materials were observed to be stored or handled on-Site.	Site observations Site Representative



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Topic	Observations	Comment / Source
Details of Drums, Totes, and Bins	No drums, totes, bins or other storage containers were observed or reported to be stored on the Site.	Site observations Site Representative
Oil/Water Separators	None identified or reported.	Site observations Site Representative
Vehicle and Equipment Maintenance Areas	None identified or reported.	Site observations, Site Representative and aerial photographs
Spills	None identified or reported	Site observations Site Representative
Liquid Discharge Points	None identified or reported.	Site observations
Hydraulic Lift Equipment	None identified or reported.	Site observations
Potentially Contaminating Activity	No potentially contaminating activities were observed at the Site during the Site visit.	Site observations.

The location of the Site features is presented on Figure 2.

5.2.2 Enhanced Investigation Property

The Site has been used for residential purposes. As such, the Site is not considered to be an enhanced investigation property as stipulated in O.Reg. 153/04 (as amended).

5.3 Surrounding Land Use within 250 m of the Site

During the Site visit, a visual reconnaissance of the outdoor operations of the surrounding land use within 250 m of the Site was carried out. The visual reconnaissance was conducted from the subject Site and publicly accessible areas and identified land uses which may potentially impact the Site.

Based on visual observations during the Site visit, adjacent property use is for residential and commercial (office) purposes. A summary of adjacent land use is as follows:

North (Inferred cross gradient)

- An office building (The Embassy of the Russian Federation – Trade Representative Office).

South (Inferred cross gradient)

- The Seignior apartment buildings. Vent and fill pipes labelled as diesel likely associated with an AST were observed to extend from the wall of the parking garage associated with the adjacent apartment building. The pipes are likely associated with a backup generator for the apartment building complex. A tank fill monitor was mounted on the exterior of the parking garage, indicating that there is a system in place to prevent spills and overfills of the AST. This AST is not considered to be a PCA that results in an APEC on the Site.

East (Inferred down gradient)

- Rideau River.



West (Inferred up gradient)

- Wurtemberg Street followed by Clarence Street East and residential properties.

No current industrial complexes, retail fuel outlets or dry cleaning facilities are present in the immediate vicinity of the Site or within 250 m of the Site. Based on current adjacent land uses no PCAs were identified.

5.4 Written Description of Investigation

At the time of the Phase I ESA Site visit (February 26, 2016), the Site was occupied by a detached two storey vacant residential house with approximate area of 185 m² and a backyard east of the house. The Site has an approximate area of 770 m². The house was built between 1951 and 1965 and as part of the Site redevelopment it will be demolished. Concurrently with this Phase I ESA, a pre-demolition DSS has been carried out on the Site. The civic address of the Site is 101 Wurtemberg Street, Ottawa, Ontario. The access to the Site is via Wurtemberg Street.

As the house has not been heated for long period of time there was significant accumulation of ice on the stairs and the floors. In addition, there was no power, the house was structurally damaged and it was in very poor condition. Golder only accessed the entrance of the house and did not inspect the basement or the other parts of the house due to the unsafe structural conditions.

Based on the observation made from outside, no ASTs were noted on the Site, and no evidence (fill/vent pipes extending through walls or slabs/ground surface, staining or any obvious odours) of former or current presence of USTs was observed. In addition, no evidence of USTs was noted on the surrounding lands from publically accessible areas. Vent and fill pipes labelled as diesel likely associated with an AST was observed to extend from the wall of the parking garage of the adjacent apartment building. The pipes are likely associated with a backup generator for the apartment building complex. A tank fill monitor was mounted on the exterior of the parking garage, indicating that there is a system in place to prevent spills and overfills of the AST.

The surrounding land use is largely residential with some commercial (office) to the north. The Rideau River is located immediately east of the Site.

The Site is generally flat but there is a significant elevation difference between the Site and the surrounding lands east of the Site (Rideau River). At the time of the Site visit the ground surface was snow covered which limited the observations for potential presence of staining or distressed vegetation.

No railway lines or spurs were present on the Site. No monitoring or water supply wells were present on the Site.

At the time of the Site visit, no piles of fill material were observed on the Site. However, based on the slope stability assessment completed for the Site by Golder (2010), fill material may be present on the east part of the Site ranging in thickness between 0-3 m. Fill material was also used to fill in the former swimming pool previously located in the backyard. Given that the origin and the quality of the fill material are unknown, it is considered that presence of fill material is a PCA (PCA#30- Importation of fill material of unknown quality). This PCA resulted in one APEC at the east part of the Site where the fill material is suspected to be present (refer to Figure 2). The potential issue with the fill can be addressed during the Site redevelopment with the new high rise apartment building. Review and evaluation of information



5.5 Current and Past Uses of the Site

The following table summarizes the property uses of the Site over time:

Year	Name of the Owner	Description of Property Use	Property Use	Other Observations from Aerial photographs, FIPs, etc.
Prior to 1965	Unknown, most likely private parties	Undeveloped land which was part of the most east end of Clarence Street which previously terminated just east of Wurtemberg Street. No operations have been carried out at the Site.	Community	The 1925 (revised 1948) and 1956 FIPs and 1933 and 1951 aerial photographs show the Site undeveloped. The 1965 aerial photograph shows the Site developed with the current residential house.
1965-2010	Unknown, likely private parties	The Site is occupied by a residential house and was used for residential purposes.	Residential	The 1965 aerial photograph shows the Site developed with the current residential house. The subsequent aerial photographs (1978, 1988, 1990, 1999, 2005, 2007, and 2014) show the Site still developed with the residential house.
2010 to present	Claridge Residential Inc.	As per above. The house located on the Site has not been occupied. No operations have been carried out at the Site.	Residential	As per above. At the time of the Site visit (February 26, 2016), the Site was still occupied by the residential house which was vacant.

5.6 Potentially Contaminating Activities (PCAs)

Potentially contaminating activities, current or historical, carried out at the Site or in the Phase I ESA Study Area, may trigger a Phase II ESA. Based on the information obtained as part of this Phase I ESA, the following potentially contaminating activities were identified:

Location of PCA (See Figure 2)	Potentially Contaminating Activities as per Table 2 of Reg.153/04 and description of the PCA	Information Source	Rationale for Potential Contribution of the PCA to an APEC
On Site	PCA#30. Importation of fill material of unknown quality	2010 Slope Stability Assessment, aerial photographs	This PCA is located on-Site and is considered to represent an APEC.



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Location of PCA (See Figure 2)	Potentially Contaminating Activities as per Table 2 of Reg.153/04 and description of the PCA	Information Source	Rationale for Potential Contribution of the PCA to an APEC
	Fill material is present at the east end of the Site with a range in thickness between 0-3 m. In addition, fill material was used to fill in the former in-ground swimming pool existed on Site between 1988 and 2002.		

5.7 Areas of Potential Environmental Concern (APECs)

Based on the information obtained as part of this Phase I ESA, one PCA associated with the use of fill of unknown quality at the Site was identified on the Site. This PCA has resulted in one APEC on the Site as presented below and as shown on Figure 2.

APEC	Location of APEC on the Site (as indicated on Figure 4)	PCA and Description of the Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern (COCs)	Media Potentially Impacted (groundwater, soil and/or sediment)
APEC 1 Placing of fill material at the east part of the Site and to fill in a former swimming pool previously located at the backyard	The east part of the Site	PCA #30. Importation of fill material of unknown quality Fill material is present at the east end of the Site with a range in thickness between 0-3 m. In addition, fill material was used to fill in the former in-ground swimming pool that existed on Site between 1988 and 2002.	On-Site	Metals, petroleum hydrocarbons F1 to F4 (PHCs F1 to F4), benzene, toluene, ethylbenzene, xylenes, (BTEX), polycyclic aromatic hydrocarbons (PAHs).	Soil



5.8 Conceptual Site Model

A Conceptual Site Model of the Phase I Study Area (as required by O.Reg. 153/04) is presented in a series of Figures 1 to 7 (Figure 1: Key Plan, Figure 2: Phase One Property Boundary and Phase One Study Area, Figure 3: Topographic Map, Figure 4: Bedrock Geology Map, Figure 5: Surficial Geology Map, Figure 6: Areas of Natural Significance and Figure 7: Physiography Map) showing:

- Existing buildings and structures;
- Water bodies and areas of natural significance located in the Phase I Study Area;
- Drinking water wells on the Phase I Property;
- Roads (including names) within the Phase I Study Area;
- Uses of properties adjacent to the Phase I Property;
- Areas where any PCA has occurred in the Phase I Study Area, including any storage tanks (if identified); and,
- Areas of potential environmental concern (if identified).

The following describes the Phase I ESA Conceptual Site Model (CSM) based on the information obtained and reviewed as part of this Phase I ESA:

- The Site is 768 m² in area and was developed with a two storey detached residential house between 1951 and 1965. Prior to the Site development with the residential house the Site was undeveloped land and was part of the east end of Clarence Street which previously terminated just east of Wurtemberg Street. The house has not been occupied since at least 2010. The Site is generally flat but there is a significant elevation difference between the Site and the surrounding lands east of the Site (Rideau River). ;
- Surface water runoff is towards storm sewers located on the surrounding roadways (Wurtemberg and Clarence Street);
- According to the MOECC water well database no water supply wells are located on the Site or within Phase One Study Area;
- At the time of the Phase I ESA, the neighbouring properties within the Phase I Study Area were used mainly for residential purposes (residential houses and apartment buildings) with some commercial uses (Russian Federation Trade Office) to the north;
- The Site borders Rideau River to the east;
- No areas of natural significance were identified at the Site or within 30 m of the Site; however, a response from MNR has not been received to confirm whether or not the Site is considered an environmentally sensitive area as defined by O.Reg. 153/04 (as amended);



- The subsurface conditions at the Site consists of:
 - Up to about 3 m of fill material (but likely less than 1 m in the table land area closest to the slope);
 - Approximately 7 to 10 m of silty clay, of which the upper portion has been weathered to a stiff crust. The bottom 6 m are unweathered and have a firm to stiff consistency;
 - Approximately 2 to 5 m of compact to dense sand (fine sand and silty sand);
 - Glacial till extended to about 28 m depth (but likely thickening from south to north); and,
 - Shale bedrock.
- The depth to the groundwater is unknown but it is expected to be at a depth close to the surface water elevation of the Rideau River bordering the Site.
- The groundwater flow direction on the Site is interpreted to be to the east, toward the Rideau River located immediately east of the Site.
- Underground utilities (water lines and natural gas lines) are present at the Phase One Property. No impacts to the groundwater are expected and as such, the underground utilities are not considered to affect contaminant migration.
- Based on the information obtained and reviewed as part of this Phase One ESA the following PCA was identified on the Site:
 - PCA#30 - Importation of fill material of unknown quality. Fill material of unknown quality is present at the east end of the Site with a thickness up to 3 m. In addition, fill material was used to fill in the former in-ground swimming pool existed on Site between 1988 and 2002 (refer to Figure 2)
- The above PCA#30 resulted in 1 APEC shown on Figure 2;
- The potential COCs associated with the APEC1 on the Site include the following parameters: PHC F1 to F4, BTEX, metals and PAHs.

5.8.1 Uncertainty and Absence of Information

At the time of the Site visit, the ground surface was snow covered which restricted the observations for potential presence of stains, discoloration or distressed vegetation on the Site. In addition, due to safety concerns, the residential building located on the Site was inspected from the entrance and no observations were made of the basement or the other parts of the building. However, based on the information obtained from the review of the other sources of information, these limitations are not considered to affect the validity of the findings of this assessment.



6.0 CONCLUSIONS

Based on the information collected as part of this Phase One ESA, one PCA#30 (Importation of fill of unknown quality) was identified on the Site. Based on the 2010 Slope Stability Assessment completed by Golder for the Site, fill of unknown quality was placed in the east part of the Site. The fill thickness was found to be up to 3 m. In addition, fill material was used to fill in the former in-ground swimming pool that existed on Site between 1988 and 2002. This PCA resulted in one APEC (APEC1) as shown on Figure 2.

In addition, the following building related issues were identified at the Site:

- Based on the year of the house construction (between 1951 and 1965), ACMs (friable and non-friable) may be present in the house, given that the use of friable ACMs was generally discontinued in the late 1970s/early 1980s. It is understood that the house will be demolished prior to the Site redevelopment with the high rise apartment building. As such, the suspected ACMs should be sampled in accordance with the O.Reg. 278/05 to confirm the presence/absence of asbestos in these materials. All ACMs should be abated prior to demolition activities.
- Based on the year of the house construction (between 1951 and 1965), lead-containing paints may be present in the building. Although the house was repainted since its construction, it is possible that the original paint layer may be lead-containing. The water piping is copper; however lead solder may be present on the water pipe joints. Lead related issues should be dealt prior to house demolition.

The above building related issues were addressed with a DSS, completed by Golder, which was carried out concurrently with this Phase One ESA. The findings of the DSS are presented under separate cover.

In order to address the fill quality issues, the following is recommended in conjunction with re-developing the Site:

- Characterize the fill quality during the excavation activities to be carried out at the Site during the re-development by collecting fill samples and submission for laboratory analysis of the potential chemicals of concern which include the following parameters: PHC F1 to F4, BTEX, metals and PAHs.

6.1 Need for Phase II ESA

Given that an APEC associated with the presence of fill of unknown quality (PCA#30) was identified on the Site, according to O.Reg. 153/04 (as amended), a Phase II ESA will be required to assess the fill quality. The fill quality characterization can be completed during the Site redevelopment.

6.2 Record of Site Condition Based on Phase I Environmental Site Assessment Alone

The Site has been used for residential purpose and following the redevelopment with the high rise apartment building will continue to be used for residential purposes. Given that there is no change in the land use from less sensitive to more sensitive, there is no mandatory requirement to file a RSC for the Site.



7.0 QUALIFICATIONS OF THE ASSESSORS

Maria Staneva, M. Eng., P. Eng., Environmental Engineer

Maria Staneva is a Due Diligence Assessor/Environmental Engineer with Golder Associates in Ottawa. She has a Bachelor degree in civil engineering and majored in water and wastewater treatment. She also has a Master's degree in Environmental engineering. She is responsible for project managing and conducting numerous environmental site assessment Phase I, Phase II and Phase III in accordance with the federal and provincial requirements (Reg. 153/04) including conducting contaminated site investigations, interviews, site visits, obtaining and reviewing historical and regulatory records, report writing, project management and proposal preparation. She is involved in developing and managing work programs for Phase II and III ESA including design and implementation of a sampling and analysis plan, identifying the presence/absence and delineation of contamination, results interpretation and report writing, developing remedial action plans and remedial options evaluation, developing Phase I and Phase II ESA conceptual site models in accordance with O.Reg.153/04, and filing of RSCs with the MOE.

Tim Robertson, P.Eng., Environmental Engineer/Associate – Senior Reviewer

Tim Robertson is an Associate and Environmental Engineer with Golder. With more than 19 years' experience, Tim is responsible for the technical oversight and project direction for Brownfield redevelopments, contaminated site assessments, remediation and risk management plans. Tim is involved with all aspects of project delivery including project management, health and safety, cost estimation, stakeholder engagement and project planning and forecasting. He is a Qualified Person for Site Assessments under Ontario Regulation 153/04 of Ontario's Environmental Protection Act.



8.0 LIMITATIONS AND USE OF REPORT

This report (the "Report") was prepared for the exclusive use of Claridge Residential Inc. The Report summarizes Golder's review of available data in accordance with the principal components of CSA Z768-01 *Phase I Environmental Site Assessment*, as well as Ontario Regulation 153/04 *Records of Site Condition*, as amended (RSC Regulations). The Report is based on data and information collected at the time of this Assessment, and must be considered in its entirety. It is based solely on the conditions on the Site encountered at the time of the site visit on February 26, 2016, as reported herein. Except as otherwise may be requested, Golder disclaims any obligation to update this Report for events taking place, or with respect to information that becomes available to Golder after the time during which Golder conducted the work. No soil, water, liquid, gas, product or chemical sampling and analytical testing other than that described herein at or in the vicinity of the Site was conducted as part of this Work.

In evaluating the property, Golder has relied in good faith on information provided by other individuals, companies or government agencies noted in the Report. Golder has assumed that the information provided is factual and accurate and Golder has not independently verified the accuracy or completeness of such information. Golder accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this Report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted. Golder makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to periodic amendment. In addition, regulatory statutes are subject to interpretation and these interpretations may change over time.

The scope and the period of Golder's assessment are described in this Report, and are subject to restrictions, assumptions and limitations.

Golder did not perform a complete assessment of all possible conditions or circumstances that may exist at the Site. Conditions may therefore exist which were not detected given the nature of the inquiry Golder was retained to undertake with respect to the Site. Accordingly, additional environmental studies and actions may be required. In addition, it is recognized that the passage of time affects the information provided in the Report. Golder's opinions are based upon information that existed at the time of the writing of the Report. It is understood that the services provided for in the scope of work allowed Golder to form no more than an opinion of the actual conditions at the Site at the time the Site was visited, and cannot be used to assess the effect of any subsequent changes in any laws, regulations, the environmental quality of the Site or its surroundings. Asbestos and mould surveys were not performed. If a service is not expressly indicated, do not assume it has been provided.

Any use which a third party makes of this Report, or any reliance on or decisions to be made based on it, are the sole responsibility of the third parties. Should additional parties require reliance on this Report, written authorization from Golder will be required. Golder disclaims responsibility of consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.



9.0 STATEMENT OF COMPLETION

The undersigned confirm that this Phase I Environmental Site Assessment was conducted in a manner consistent with the expected standard of care for the consulting industry in. The findings and conclusions presented herein are based on our review of relevant and readily available information, as noted in this report.



10.0 REFERENCES

The following is a list of persons contacted and references reviewed for the purposes of preparing this report:

Source	Date
Ontario Regulation 153/04 as amended	October 31, 2011
Canadian Standards Association Document Z768-01 (R2012) 'Phase I – Environmental Site Assessments'	November 2001
Map 1506A, <i>Surficial Geology</i> , Ottawa, Ontario, Belanger J. R., Urban Geology of the National Capital Area, Geological Survey of Canada, Open file D3256, 2001.	2001
Map 1508A. <i>Generalized Bedrock Geology</i> , Ottawa, Ontario, Belanger J. R., Urban Geology of the National Capital Area, Geological Survey of Canada, Open file D3256, 2001.	2001
<i>Golder Associates Ltd. GIS Database</i> (Reference - Digital Basemap Data supplied by DMTI Spatial Inc., Canmap, 2006).	2006
Aerial Photographs - National Air Photo Library, Ottawa and the City of Ottawa geo-map (http://maps.ottawa.ca/geoOttawa/)	National Air Photo Library : 1933, 1951, 1978, 1988, and 1990 City of Ottawa geo-map: 1965, 1976, 1991, 1999, 2005, 2007, and 2014
Fire Insurance Plans - National Archives in Ottawa	1925 (revised 1948), 1956
Street Directories	1880, 1890, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, 1999/2000, 2009/2010
Ontario Ministry of the Environment and Climate Change	Online Water Well Database
City of Ottawa	February 14, 2011
Ministry of Natural Resources	Pending
Technical Standards and Safety Authority	February 19, 2016
Report entitled " <i>Slope Stability Assessment, 101 Wurtemberg Street, Ottawa, ON</i> " prepared by Golder for Claridge	2010



11.0 CLOSURE

We trust that the information presented in this report meets your current requirements. Should you have any questions or concerns, please do not hesitate to contact the undersigned.

GOLDER ASSOCIATES LTD.

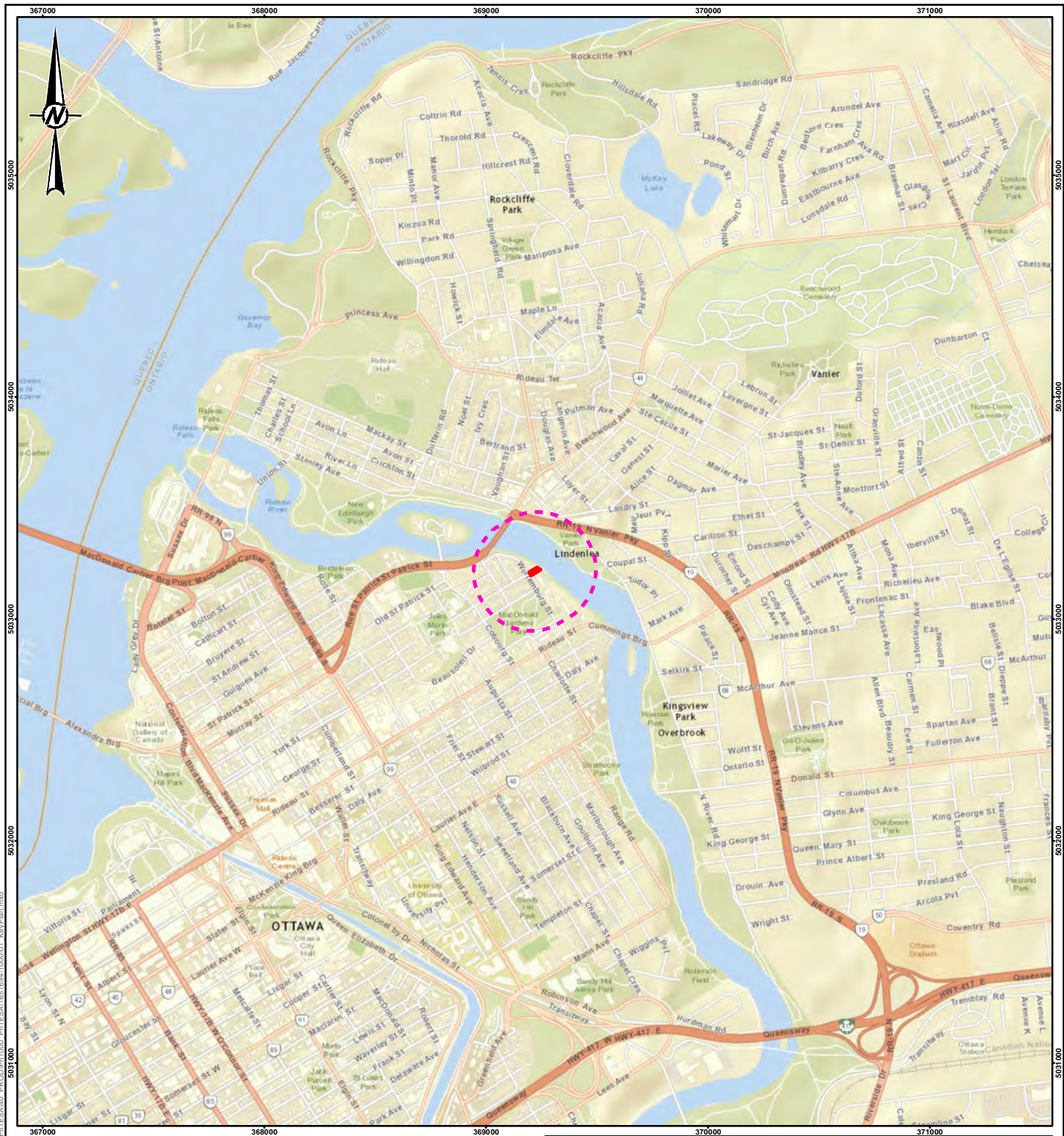
Maria Staneva, M.Eng., P.Eng.
Environmental Engineer

Tim Robertson, P.Eng., QP_{ESA}
Environmental Engineer/Associate

MS/TDR/hw/ca

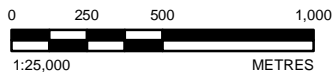
\\golder.gds\gal\ottawa\active\2016\3 proj\1651694 claridge phase i esa 101 wurtemberg\04_reporting\2016 reg 153_04 ph. i esa\report\reg153 ph. i esa, 101 wurtemberg str, ottawa, claridge, march 2016.doc

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LEGEND

- PHASE ONE PROPERTY
- PHASE ONE STUDY AREA



NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)

1. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, DELORME, USGS, INTERMAP, INCREMENT P CORP., NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI (THAILAND), MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
 2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
 COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
CLARIDGE HOMES CORPORATION

PROJECT
**REG. 153/04 PHASE I ESA,
 101 WURTEMBERG STREET, OTTAWA, ONTARIO**

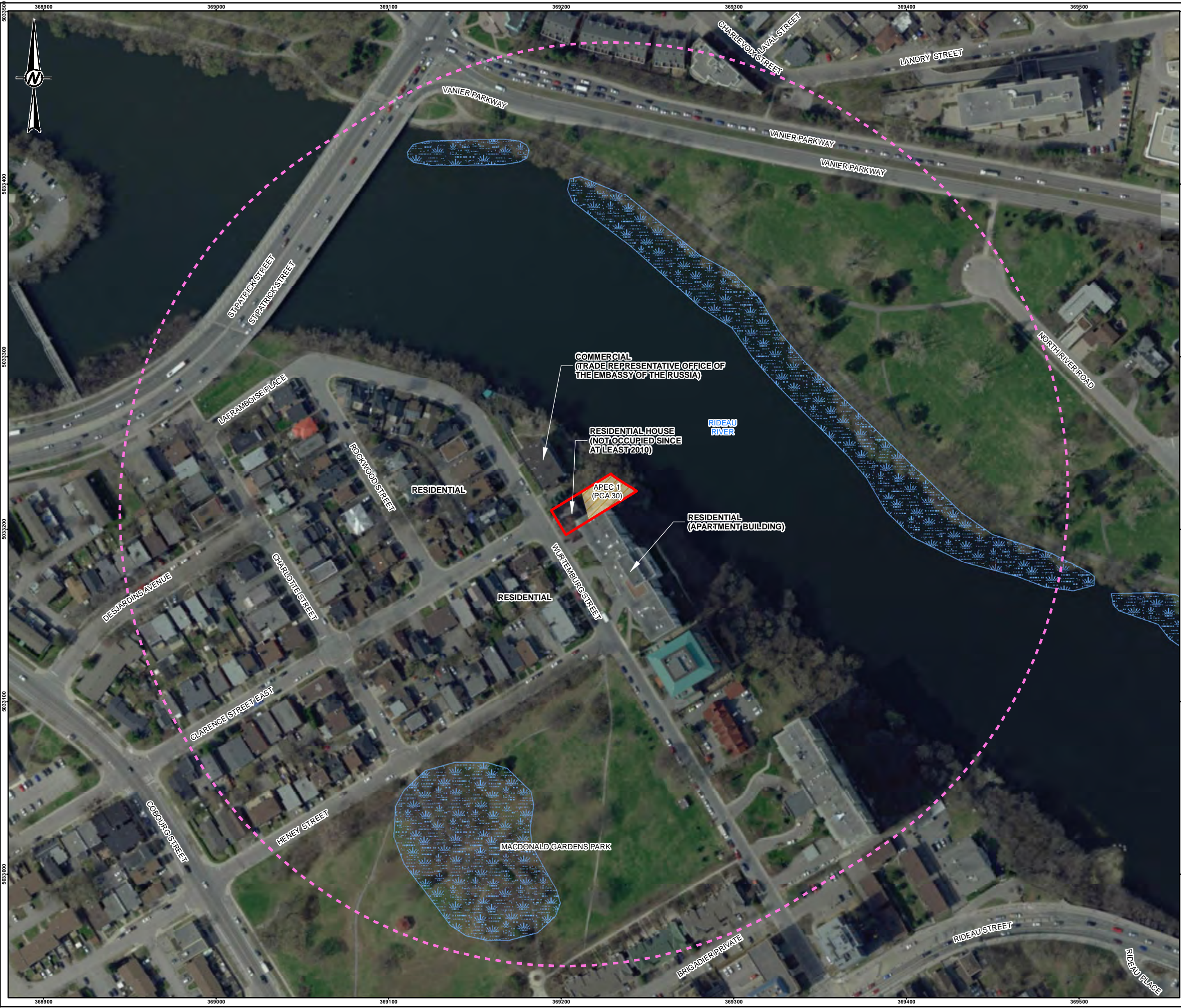
TITLE
KEY PLAN

CONSULTANT	YYYY-MM-DD	2016-03-09
DESIGNED	----	
PREPARED	BR	
REVIEWED	MS	
APPROVED	TDR	



PROJECT NO.	PHASE	REV.	FIGURE
1651694	1000	0	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM 25mm

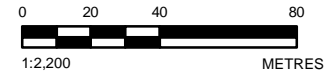


LEGEND

- PHASE ONE PROPERTY
- PHASE ONE STUDY AREA
- WETLAND
- AREAS OF POTENTIAL ENVIRONMENTAL CONCERNS

POTENTIALLY CONTAMINATING ACTIVITY (PCA):
 PCA #30- IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY - FILL MATERIAL OF UNKNOWN QUALITY IS PRESENT AT THE EAST END OF THE SITE WITH A RANGE IN THICKNESS BETWEEN 0-3 M (BASED ON THE INFORMATION OBTAINED FROM THE 2010 SLOPE STABILITY ASSESSMENT). IN ADDITION, IN-GROUND SWIMMING POOL EXISTED ON SITE BETWEEN 1988 AND 2002 THAT WAS FILLED IN WITH FILL MATERIAL OF UNKNOWN QUALITY.

AREAS OF POTENTIAL ENVIRONMENTAL CONCERNS:
 APEC 1- ASSOCIATED WITH THE PCA#30 (IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY).



NOTE(S)
 1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)
 1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2014
 2. SERVICE LAYER CREDIT: CITY OF OTTAWA
 SOURCES: ESRI, HERE, DELORME, USGS, INTERMAP, INCREMENT P CORP., NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI (THAILAND), MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
 3. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
 COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
 CLARIDGE HOMES CORPORATION

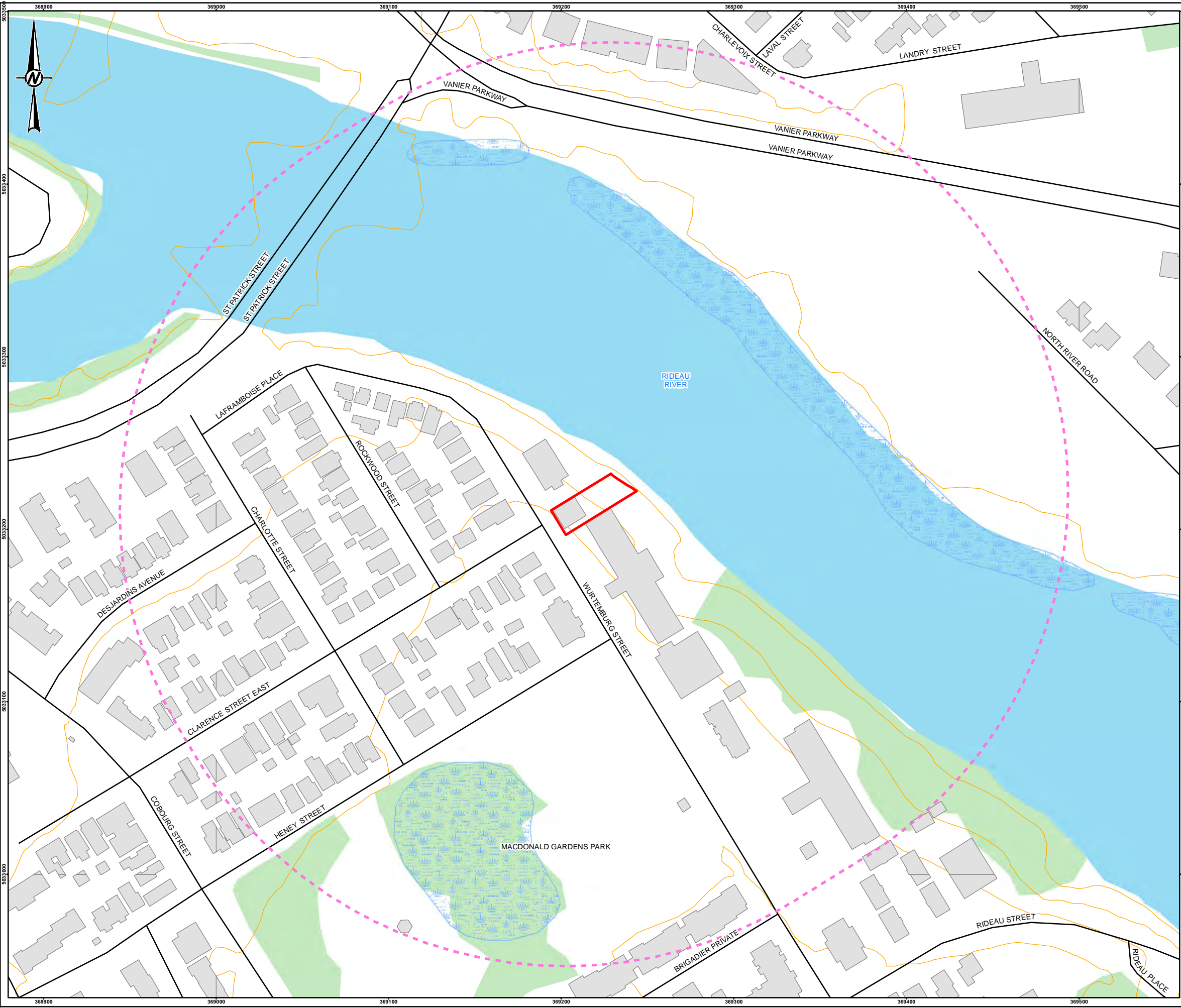
PROJECT
 REG. 153/04 PHASE I ESA,
 101 WURTEMBURG STREET, OTTAWA, ONTARIO

TITLE
 PHASE ONE PROPERTY AND PHASE ONE STUDY AREA

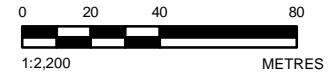
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	YYYY-MM-DD	2016-03-09
	DESIGNED	---
	PREPARED	BR
	REVIEWED	MS
	APPROVED	TDR

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM 28mm



- LEGEND**
- PHASE ONE PROPERTY
 - PHASE ONE STUDY AREA
 - ROADWAY
 - TOPOGRAPHIC CONTOUR, metres
 - WATERCOURSE
 - WETLAND
 - WATERBODY
 - BUILDING FOOTPRINT
 - WOODED AREA



NOTE(S)
 1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)
 1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES. © QUEEN'S PRINTER 2014
 2. SERVICE LAYER CREDIT'S SOURCES: ESRI, HERE, DELORME, USGS, INTERMAP, INCREMENT P CORP., NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI (THAILAND), MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
 3. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
 COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
CLARIDGE HOMES CORPORATION

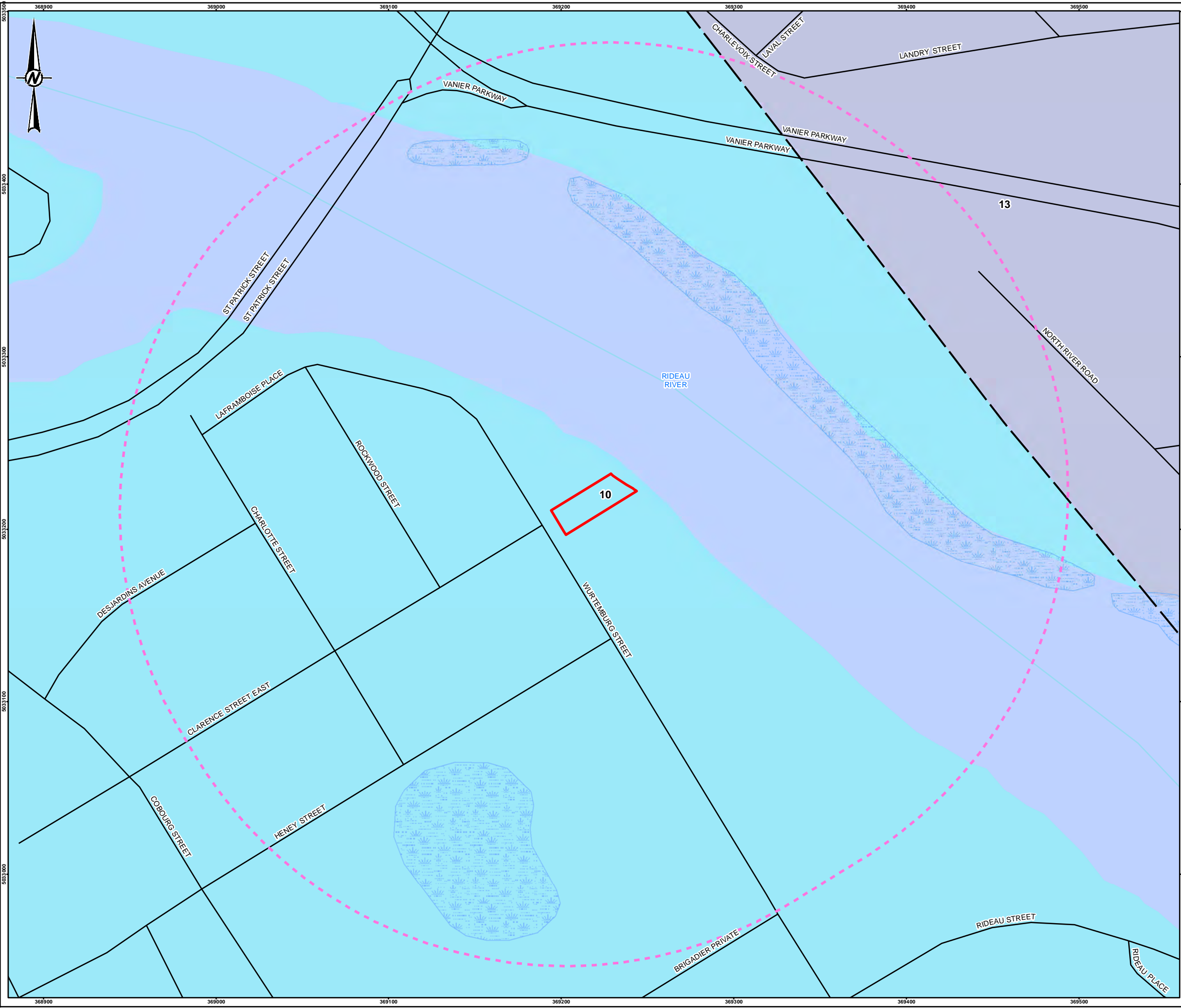
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**REG. 153/04 PHASE I ESA,
 101 WURTEMBERG STREET, OTTAWA, ONTARIO**

TITLE
TOPOGRAPHIC MAP

CONSULTANT	DATE
	YYYY-MM-DD 2016-03-09
	DESIGNED ---
	PREPARED BR
	REVIEWED MS
	APPROVED TDR

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM 28mm



LEGEND

- PHASE ONE PROPERTY
- PHASE ONE STUDY AREA
- ROADWAY
- WATERCOURSE
- WETLAND
- WATERBODY
- FAULT

OGS BEDROCK GEOLOGY

- 13: BILLINGS FORMATION - SHALE, MINOR LIMESTONE
- 10: VERULAM FORMATION - LIMESTONE AND SHALE



NOTE(S)
 1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)

1. **OGS BEDROCK GEOLOGY**
 ARMSTRONG, D.K. AND DODGE, J.E.P. 2007. PALEOZOIC GEOLOGY OF SOUTHERN ONTARIO; ONTARIO GEOLOGICAL SURVEY, MISCELLANEOUS RELEASE--DATA 219
2. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2014
3. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, DELORME, USGS, INTERMAP, INCREMENT P CORP., NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI (THAILAND), MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
4. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
CLARIDGE HOMES CORPORATION

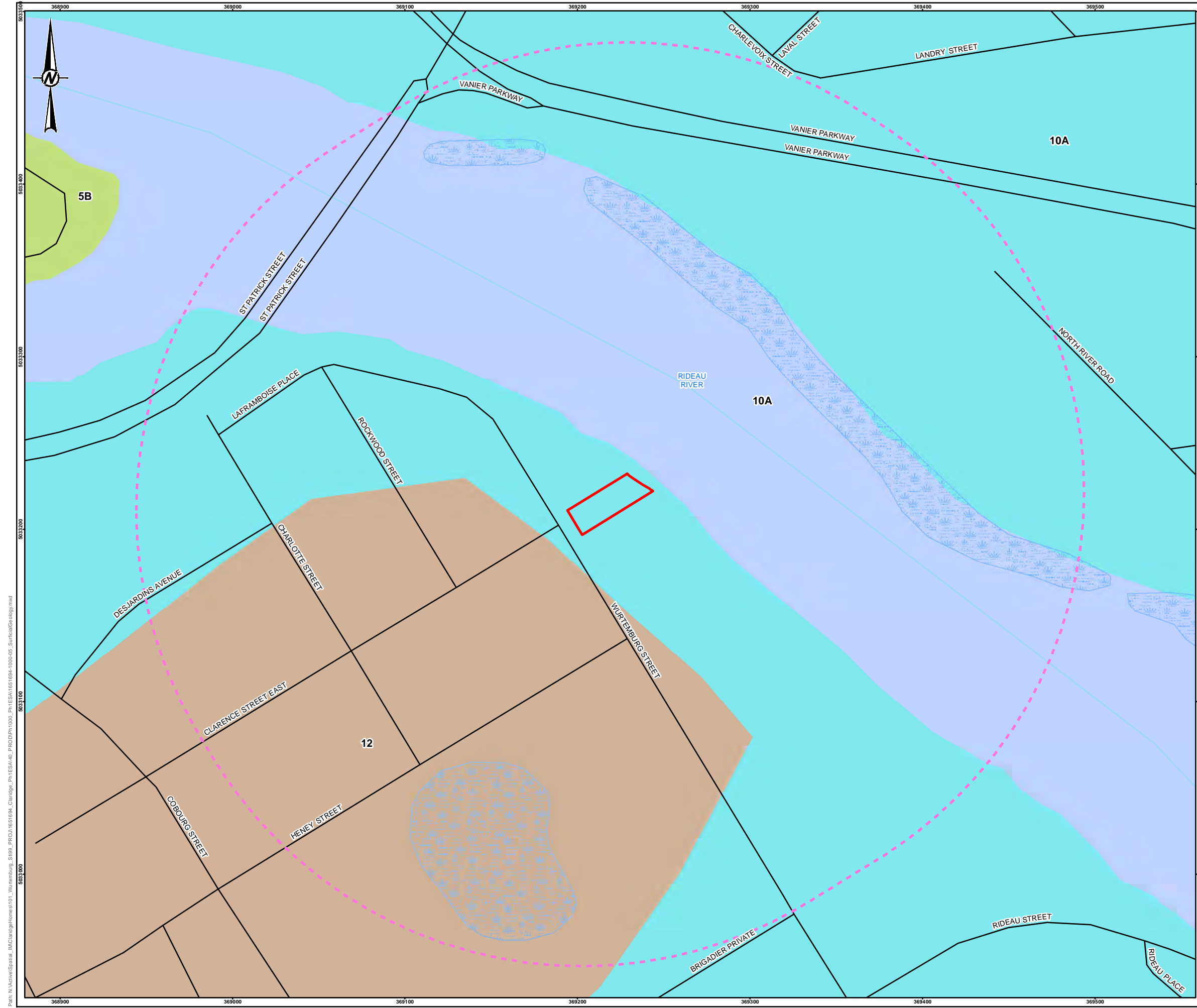
PROJECT
**REG. 153/04 PHASE I ESA,
 101 WURTEMBERG STREET, OTTAWA, ONTARIO**

TITLE
OGS BEDROCK GEOLOGY

CONSULTANT	YYYY-MM-DD	2016-03-09
Golder Associates	DESIGNED	---
	PREPARED	BR
	REVIEWED	MS
	APPROVED	TDR

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM 28mm



LEGEND

- PHASE ONE PROPERTY
 - PHASE ONE STUDY AREA
 - ROADWAY
 - WATERCOURSE
 - WETLAND
 - WATERBODY
- OGS SURFICIAL GEOLOGY**
- 5B: STONE-POOR, CARBONATE-DERIVED SILTY TO SANDY TILL
 - 10A: MASSIVE-WELL LAMINATED
 - 12: OLDER ALLUVIAL DEPOSITS



NOTE(S)

- 1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDR ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)

- 1. OGS SURFICIAL GEOLOGY: ONTARIO GEOLOGICAL SURVEY 2010. SURFICIAL GEOLOGY OF SOUTHERN ONTARIO; ONTARIO GEOLOGICAL SURVEY, MISCELLANEOUS RELEASE--DATA 128-REV
- 2. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDR ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2014
- 3. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, DELORME, USGS, INTERMAP, INCREMENT P CORP., NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI (THAILAND), MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
- 4. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT

CLARIDGE HOMES CORPORATION

PROJECT

REG. 153/04 PHASE I ESA,
101 WURTEMBURG STREET, OTTAWA, ONTARIO

TITLE

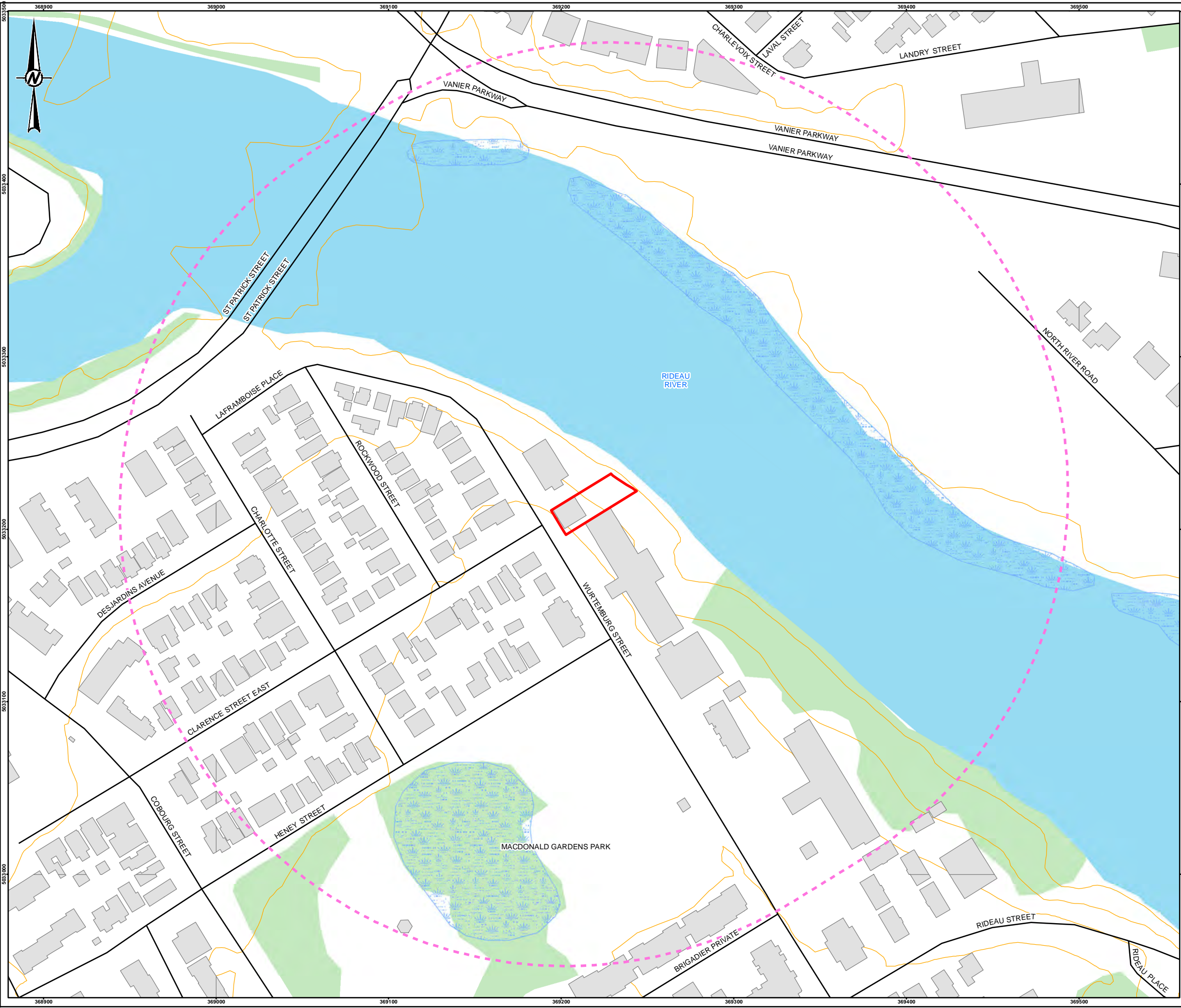
OGS SURFICIAL GEOLOGY

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	PREPARED	BR
	REVIEWED	MS
	APPROVED	TDR

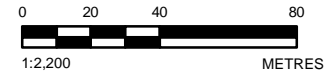
PROJECT NO. 1651694	PHASE 1000	REV. 0	FIGURE 5
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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM 28mm



- LEGEND**
- PHASE ONE PROPERTY
 - PHASE ONE STUDY AREA
 - ROADWAY
 - TOPOGRAPHIC CONTOUR, metres
 - WATERCOURSE
 - WETLAND
 - WATERBODY
 - BUILDING FOOTPRINT
 - WOODED AREA



NOTE(S)
 1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDBER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)
 1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDBER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2014
 2. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, DELORME, USGS, INTERMAP, INCREMENT P CORP., NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI (THAILAND), MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
 3. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
 COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
CLARIDGE HOMES CORPORATION

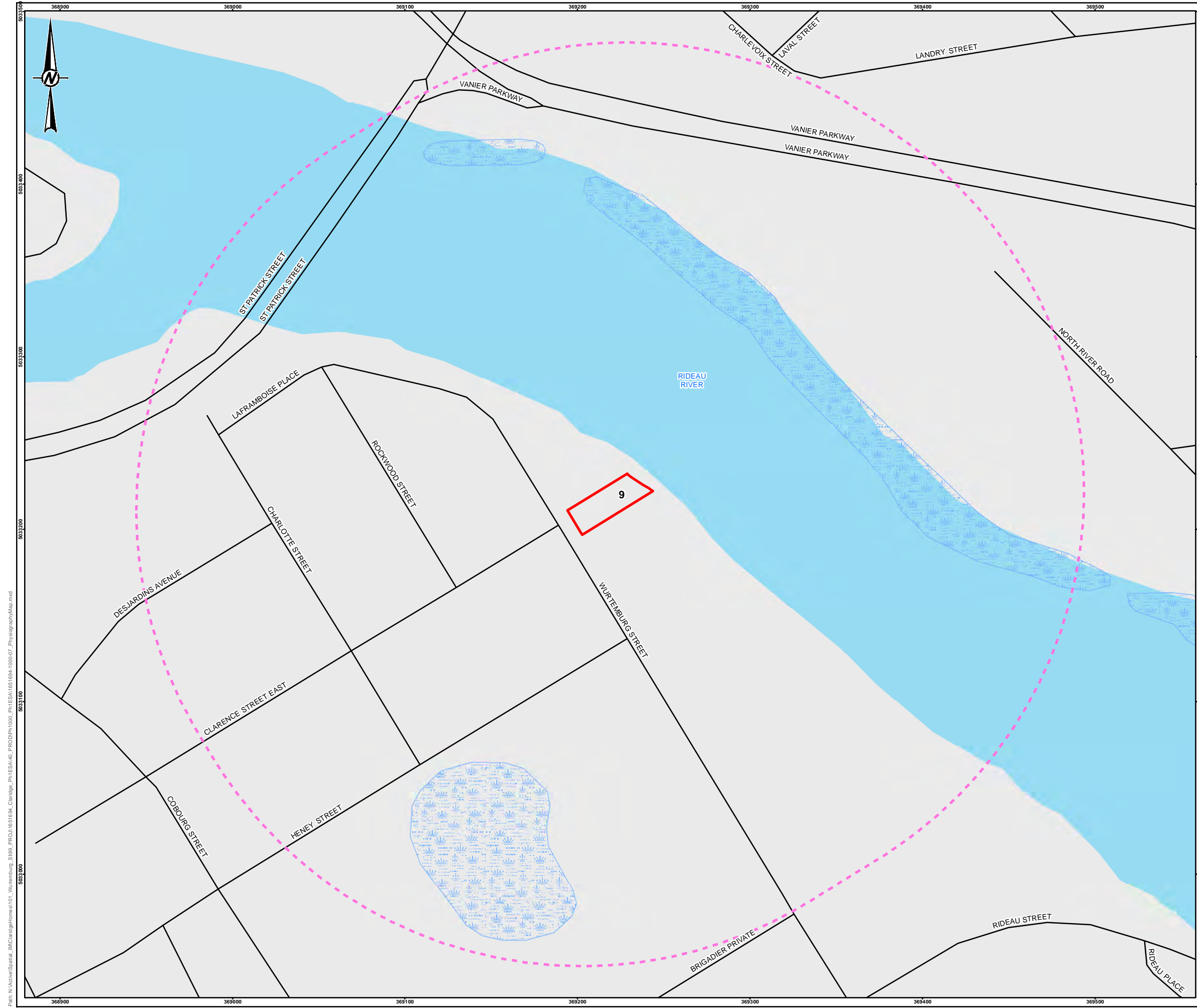
PROJECT
**REG. 153/04 PHASE I ESA,
 101 WURTEMBERG STREET, OTTAWA, ONTARIO**

TITLE
AREAS OF NATURAL SIGNIFICANCE

CONSULTANT	DATE	REVISION
	YYYY-MM-DD	2016-03-09
	DESIGNED	---
	PREPARED	BR
	REVIEWED	MS
	APPROVED	TDR

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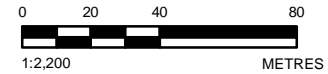


LEGEND

- PHASE ONE PROPERTY
- PHASE ONE STUDY AREA
- ROADWAY
- WATERCOURSE
- WETLAND
- WATERBODY

PHYSIOGRAPHY DESCRIPTION

- 9: LIMESTONE PLAINS



NOTE(S)
 1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDBER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)
 1. **PHYSIOGRAPHY MAP**
 CHAPMAN, L.J. AND PUTNAM, D.F. 2007. PHYSIOGRAPHY OF SOUTHERN ONTARIO; ONTARIO GEOLOGICAL SURVEY, MISCELLANEOUS RELEASE-DATA 228
 2. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDBER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEEN'S PRINTER 2014
 3. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, DELORME, USGS, INTERMAP, INCREMENT P CORP., NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI (THAILAND), MAPMYINDIA, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
 4. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
 CLARIDGE HOMES CORPORATION

PROJECT
 REG. 153/04 PHASE I ESA,
 101 WURTEMBERG STREET, OTTAWA, ONTARIO

TITLE
 PHYSIOGRAPHY MAP

CONSULTANT	DATE	
	YYYY-MM-DD	2016-03-09
	DESIGNED	---
	PREPARED	BR
	REVIEWED	MS
	APPROVED	TDR

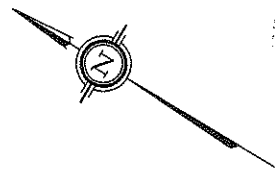
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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM 28mm



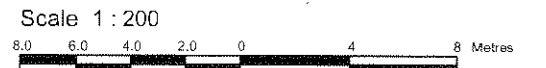
APPENDIX A

Plan of Survey



RIDEAU RIVER

SURVEYOR'S REAL PROPERTY REPORT
PART 1 Plan of
PART OF LOT 6
 (EAST WURTEMBERG STREET) AND
PART OF CLARENCE STREET
 FORMERLY FRANKLIN STREET
 (As Closed by By-Law 149-55, Inst. CR335396)
REGISTERED PLAN 43586
CITY OF OTTAWA
 Surveyed by Annis, O'Sullivan, Vollebek Ltd.



Metric
 DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND
 CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

Surveyor's Certificate
 I CERTIFY THAT:
 1. This survey and plan are correct and in accordance with the Surveys Act, the
 Surveyors Act, the Land Titles Act and the regulations made under them.
 2. The survey was completed on the 24th day of March, 2008.

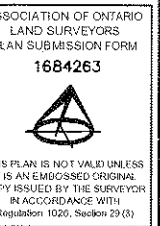
Date _____ Edward M. Lancaster
 Ontario Land Surveyor

PART 2
 THIS PLAN MUST BE READ IN CONJUNCTION WITH
 SURVEY REPORT DATED: MARCH 27, 2008

ANNIS, O'SULLIVAN, VOLLEBEK LTD. grants to
 Claridge Residential Inc. ("The Client"), their solicitors,
 mortgagees, and other related parties, permission to use original, signed, sealed
 copies of the Surveyor's Real Property Report in transactions involving The Client.

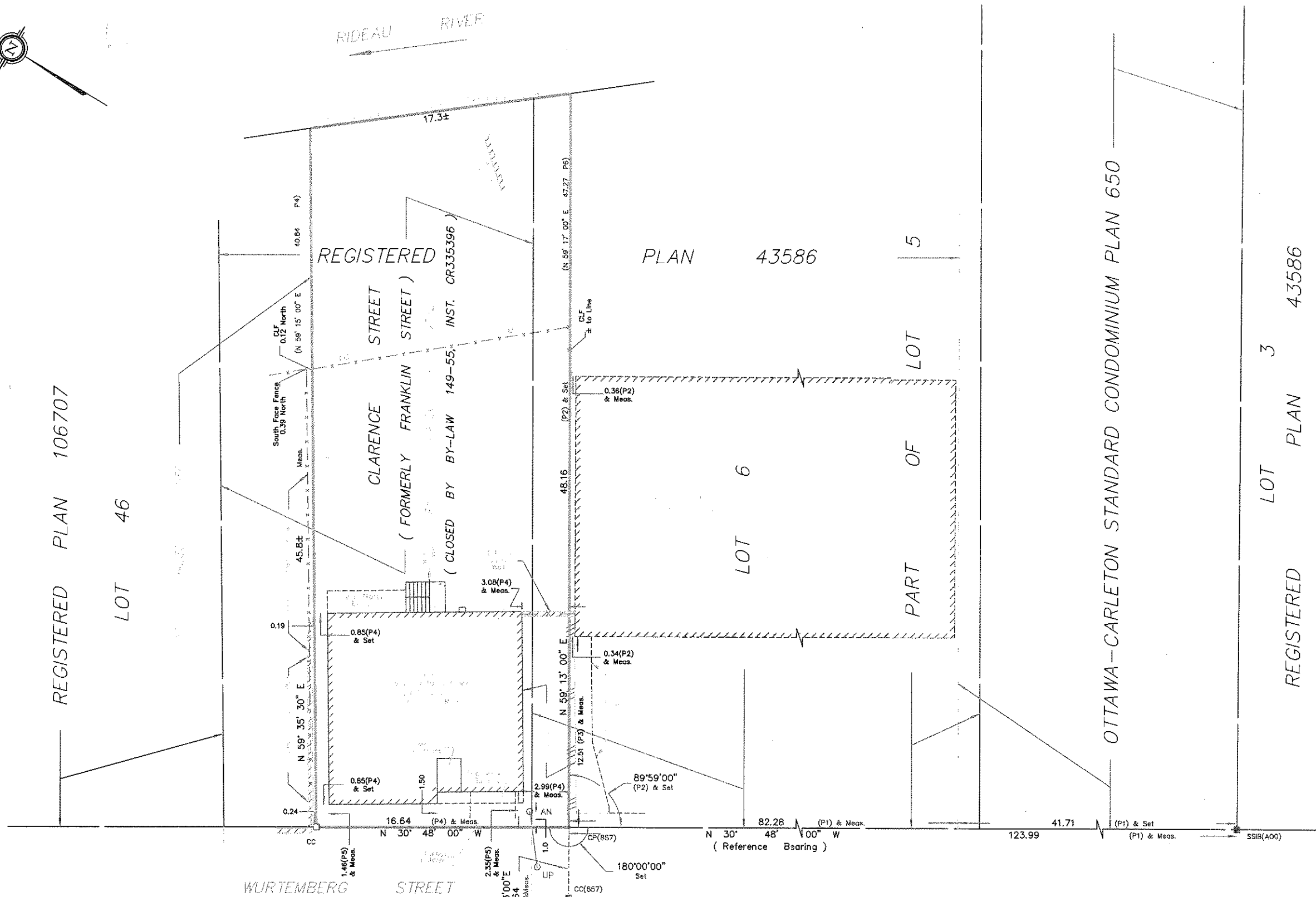
Notes & Legend

- Denotes Survey Monument Planted
- SSIB Survey Monument Found
- Standard Iron Bar
- SSIB Short Standard Iron Bar
- IB Iron Bar
- CC Cut Cross
- CP Concrete Pin
- Meas. Measured
- (WIT) Witness
- CLF Chain Link Fence
- CL Centreline
- o AN Anchor
- o UP Utility Pole
- (AOG) Annis, O'Sullivan, Vollebek Ltd.
- (P1) Plan 4R-16415
- (P2) Plan by (857), dated August 10, 1982
- (P3) Plan by (725), dated October 17, 1963
- (P4) Plan by (647), dated June 9, 1975
- (P5) Field Notes by (725), dated June 28, 1962
- (P6) Registered Plan 43586



Bearings are astronomic, derived from part of the easterly limit
 of Wurtemberg Street, shown to be N 30°48'00" W on
 Registered Plan 43586.

© Annis, O'Sullivan, Vollebek Ltd, 2008. "THIS PLAN IS PROTECTED BY COPYRIGHT"
ANNIS, O'SULLIVAN, VOLLEBEK LTD.
 14 Concourse Gate, Suite 500
 Nepean, Ont. K2E 7S6
 Phone: (613) 727-0950 / Fax: (613) 727-1079
 Email: nepean@nosvl.com
 Ontario
 Land Surveyors Job No. 9095-08 Claridge Pt L6 Pt Clarence St RP43586 D.F.N.



REGISTERED PLAN 106707
 LOT 46

REGISTERED PLAN 43586

LOT 6

PART OF LOT 5

OTTAWA-CARLETON STANDARD CONDOMINIUM PLAN 650

REGISTERED LOT 3 PLAN 43586



APPENDIX B

Regulatory Requests and Responses



FACSIMILE

DATE February 24, 2016

PROJECT No. 1651694

TO Ministry of the Environment

FAX No. 613-521-5437

CC

TOTAL PAGES 2 (Including cover sheet)

FROM Maria Staneva

EMAIL mstaneva@golder.com

REQUEST FOR ENVIRONMENTAL INFORMATION FOR A PHASE I ENVIRONMENTAL SITE ASSESSMENT, 101 WURTEMBERG STREET, OTTAWA, ONTARIO

We are in the process of preparing a Phase I Environmental Site Assessment for the site noted above. For your reference we have included a key plan showing the location of the study area.

It is requested that the Ministry provide an Index Review Report with respect to the following:

- Active Orders under the Environmental Protection Act (EPA), the Ontario Water Resources Act (OWRA), and the Pesticides Act (PA); and,
- Approvals under Sections 9 and 39 of the EPA as well as Sections 52 and 53 of the OWRA.

Your usual prompt attention to this matter is appreciated. Should you have any questions please contact our office.

Golder Associates Ltd.

MS

Hard copy to follow by mail: Yes No

Please advise immediately if any pages are not received. The document(s) included in this transmission are intended only for the recipient(s) names above and contain privileged and confidential information. Any unauthorized disclosure, dissemination or copying of this transmission is strictly prohibited. If you have received this transmission in error, please immediately notify our receptionist by telephone and destroy this transmission. Thank you.

N:\Active\2016\3 Proj\1651694 Claridge Phase I ESA 101 Wurtemberg\04_Reporting\2016 Reg 153_04 Ph. I ESA\Appendix B Reg Requests\Fax-001 MOE Request.docx



File Number: C10-01-11-0015

February 14, 2011

Hayley Roach
Golder Associates Ltd.
32 Steacie Drive
Kanata, ON K2K 2A9

Dear Ms. Roach,

**Re: Information Request
101 Wurtemberg Street, Ottawa, Ontario (“Subject Property”)**

Internal Department Circulation

The Infrastructure Services and Community Sustainability Department has the following information in response to your request for information regarding the Subject Property:

- The Disposals and Environmental Remediation Unit notes the subject property is within 300 meters of several former landfill sites located in the geographical area of Vanier, which is also a known Risk Management Area for known soil contamination, specifically lead and mercury. However, the Risk Management area and the former landfill sites are separated from the subject property to the east by the Rideau River.

Search of Historical Land Use Inventory

This acknowledges receipt of the signed Disclaimer regarding your request for information from the City’s Historical Land Use Inventory (HLUI 2005) database for the Subject Property.

A search of the HLUI database revealed the following information:

- There are no activities associated with the Subject Property.

*Shaping our future together
Ensemble, formons notre avenir*

City of Ottawa
Infrastructure Services and Community
Sustainability Department
Planning and Growth Management Branch

110 Laurier Avenue West, 4th Floor
Ottawa, ON K1P 1J1
Tel: (613) 580-2424 ext. 14743
Fax: (613) 560-6006
www.ottawa.ca

Ville d'Ottawa
Services d'infrastructure et Viabilité des
collectivités
Direction de l'approbation des demandes
d'aménagement et d'infrastructure

110, avenue Laurier Ouest, 4e étage
Ottawa (Ontario) K1P 1J1
Tél.: (613) 580-2424 ext. 14743
Télééc: (613) 560-6006
www.ottawa.ca

The HLUI database was also searched for activity associated with properties located within 50m of the Subject Property. The following information was revealed:

- There are no activities associated with the properties located within 50m of the Subject Property.

A site map has been included to show the location of the Subject Property.

Please note, as per the HLUI Disclaimer, that the information contained in the HLUI database has been compiled from publicly available records and other sources of information. The HLUI may contain erroneous information given that the records used as sources of information may be flawed. For instance, changes in municipal addresses over time may introduce error. Accordingly, all information from the HLUI database is provided on an “as is” basis with no representation or warranty by the City with respect to the information’s accuracy or exhaustiveness in responding to the request.

Furthermore, the HLUI database and the results of this search in no way confirm the presence or absence of contamination or pollution of any kind. This information is provided on the assumption that it will not be relied upon by any person for any purpose whatsoever. The City of Ottawa denies all liability to any persons attempting to rely on any information provided from the HLUI database.

Please note that in responding to your request, the City of Ottawa does not guarantee or comment on the environmental condition of the Subject Property. You may wish to contact the Ontario Ministry of Environment for additional information.

If you have any further questions or comments, please contact Kevin Tran at 613-580-2424 ext. 14743 or HLUI@ottawa.ca.

Sincerely,

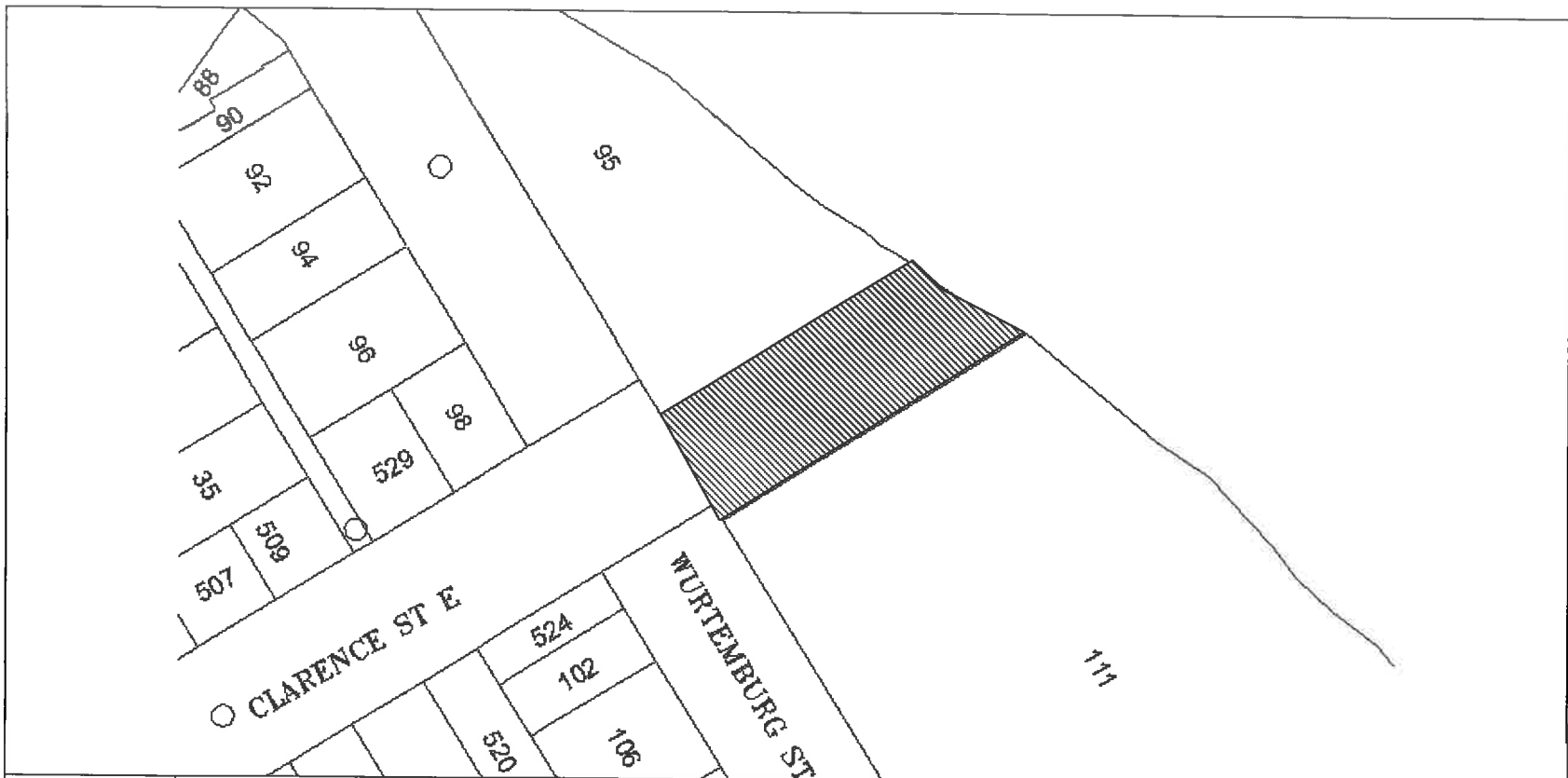


Michael J. Boughton, MCIP, RPP
Acting Program Manager
Development Review (Suburban Services) - West
Infrastructure Services and Community Sustainability

MB/KT

Attach: 1

cc: File no. C10-01-11-0015



Scale 1: n/a

101 Wurtemburg Street
 Ottawa, ON
 File # C10-01-11-0015
 Kevin Tran



ID# = Activity Identification Number

 = Subject Site

Overview



Natural Areas and Features Information Request Form

Contact Information

Name: _____

Address: _____

Phone Number: _____ Owner Consultant

E-mail Address: _____

***All red fields are mandatory**

This includes X & Y Coordinates.

Please see _____ for assistance.

Site Information

Project Name: _____

Township: _____ Lot: _____ Concession: _____

X: _____ Y: _____ Address: _____

***If more than 1 site, please provide all individual coordinates in an attached spreadsheet*

Type of Proposal

- Severance / Zoning
- Drains / Roads / Culverts
- Hydroline clearing
- Small Scale Projects (less than 5 hectares)
- RE Projects
- Large Scale Projects (5 hectares or greater)
- Aggregate Project
- Other: _____

Attachments

*****Please attach a Site Map showing the area of interest**

- Picture
- Map(s)
- Engineered Drawings
- Other: _____

Request

I would like to request the following information for the property identified above:

To better respond to your request please briefly outline the purpose for which this information is required (e.g. proposed development, lot severance, etc. or attach details):

Date of works proposed: ____ / ____ / ____

Personal information contained in this form is collected in order to fulfill your request, respond to your inquiries and for other administration purposes. With regard to the personal information it collects, the ministry is bound by privacy protection rules under the Freedom of Information and Protection of Privacy Act and takes all necessary steps to safeguard personal information collected.

Please Note: This request MUST be made by the property owner or by someone acting on their behalf. Depending on the nature of the request, it may take 6-8 weeks to respond to your inquiry. If the request does not include the mandatory information, it may delay response time.

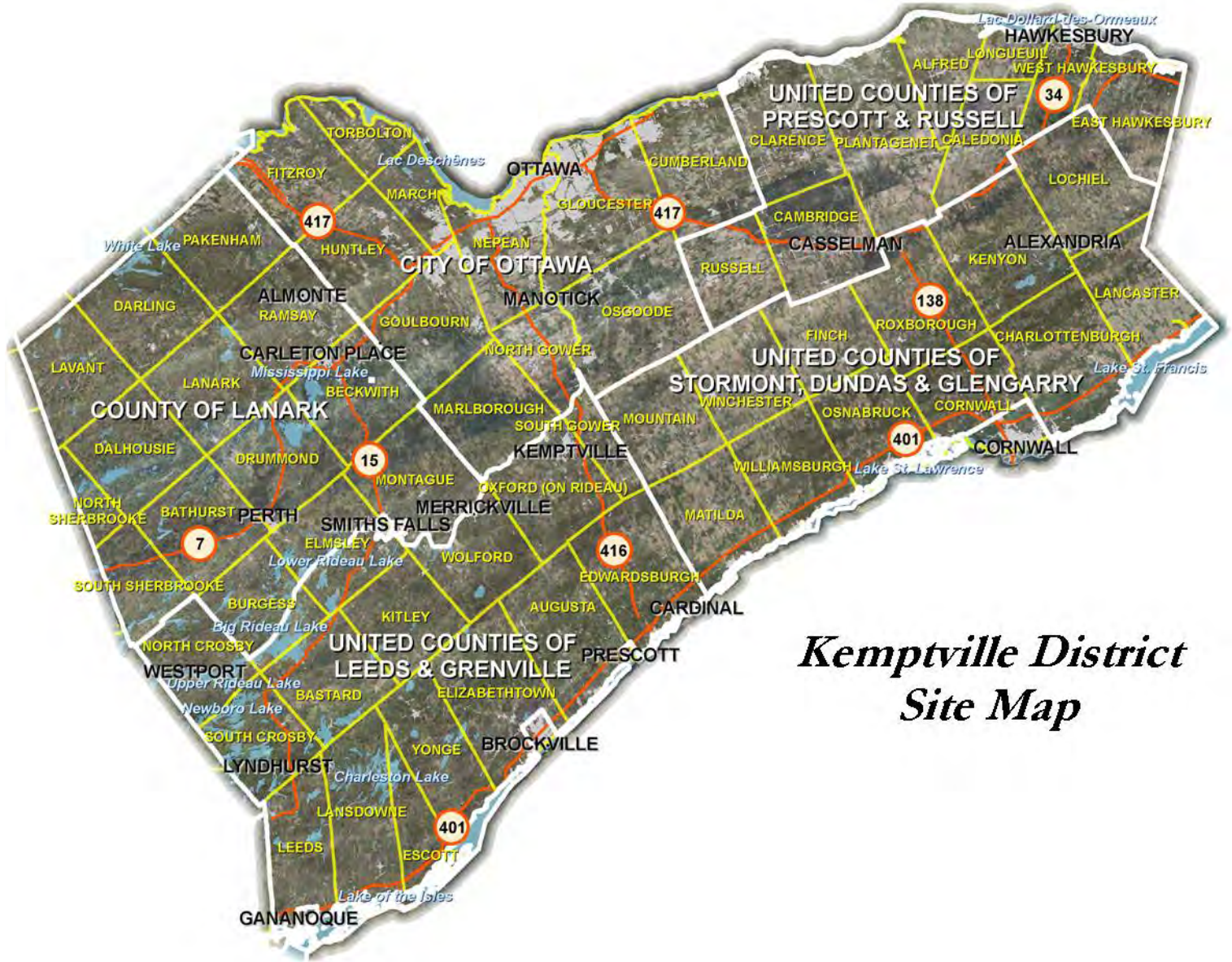
I have read the above and agree to all Terms and Conditions

Please forward the completed form to:

OR Fax: 613-258-3920

Attention: Information Requests
10 Campus Drive, Postal Bag 2002
Kempenville, ON K0G 1J0

MNR File Number: _____



Kemptville District Site Map


How to get X, Y coordinates from Google Maps (2 options):

- 1.) Right-click on the map, at the point of interest, and select 'What's here?'.
-The Latitude & Longitude of the mouse click, in decimal degrees, will automatically appear in the Search box.

OR

- 2.) Click on 'Maps Labs' in Google Maps.
-The following window will appear:

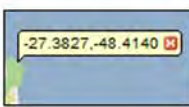
[Maps Labs](#) - [Help](#)
 Google Maps - ©2012 Google - [Terms of Use](#)



LatLng Tooltip
Marcelo C

Displays a tooltip next to the mouse cursor showing the latlng directly underneath it. Press SHIFT to activate tooltip.

Enable
 Disable



LatLng Marker
Marcelo C

Adds an option to the context menu that lets you drop a mini marker showing the latlng of the position that the cursor was pointing at when the context menu was evoked

Enable
 Disable

Important: To save your enabled Labs for next time, you must [sign in to your Google account.](#)

- Enable the LatLng Tooltip and then Save Changes.
- Now every time the **SHIFT** button is pressed in Google Maps, a Tool tip will appear with the Latitude and Longitude of the mouse location in decimal degrees.

Ministry of the Environment
and Climate Change
Ottawa District Office
2430 Don Reid Drive, Suite 103
Ottawa Ontario
K1H 1E1
613-521-3450 or 1-800-860-2195
Fax: 613-521-5437

Ministère de l'Environnement et de
l'Action en matière de changement climatique
Bureau du district d'Ottawa
2430, promenade Don Reid, Unité 103
Ottawa (Ontario)
K1H 1E1
613-521-3450 ou 1-800-860-2195
Télééc. : 613-521-5437



Ontario

OTT File No: 9

**INDEX REVIEW REPORT
COMMERCIAL/INDUSTRIAL/AGRICULTURAL**

Attention: Maria Staneva Golder Associates	Your File: 1651694 - OTTAWA Date Received: February 24, 2016
---	---

Thank you for your inquiry requesting a search of records from the Ministry of the Environment and Climate Change (ministry). The ministry encourages you to use the available on-line resources to access publically-available information which may assist with your inquiry.

PROPERTY OWNER AND LOCATION

Location: Municipality: **Ottawa**
Address: **101 Wurtemberg Street**
Lot Concession Township

INDEX OF NAMES FOR ORDERS

We have searched the *Ottawa* District Index Record of Active Orders under the Environmental Protection Act (EPA), Ontario Water Resources Act (OWRA) and the Pesticides Act (PA) issued to: and the following information has been found:

No Active Orders are outstanding

Please Note: *For information related to any ministry Orders issued to the property in question, please request this information from the property owner. If you would like further information regarding a specific Order issued, please contact the Ottawa District Office.*

Date of Search: February 24, 2016

RECORD OF SITE CONDITION

For information on **Records of Site Condition** filed on the Environmental Site Registry since October 1, 2004, please use the following link:

http://www.ene.gov.on.ca/environment/en/subject/brownfields/STDPROD_075742.html

**INDEX REVIEW REPORT
COMMERCIAL/INDUSTRIAL/AGRICULTURAL**

INDEX OF NAMES FOR APPROVALS ISSUED SINCE 1999

A search of the Index Record of names of all persons to whom approvals have been issued, maintained by the Director, Approvals Branch and the Regional Director, *Eastern Region*, and the District Manager, *Ottawa District*, under Section 19 EPA and Section 13 OWRA and the following information has been provided :

<u>Type</u>	<u>Number</u>	<u>Issued To</u>	<u>Issue Date</u>
Section 9 EPA (Air)			
Section 39 EPA (Waste Management)			
Section 52 OWRA (Water)			
Section 53 OWRA (Municipal/Private/ Industrial Sewage)			
Other			

The **ministry's Access Environment** is an on-line, map-based search tool designed to allow the public, quick and easy access to the ministry approvals and registration information from December 1999 onward. Access Environment currently displays Environmental Compliance Approvals (ECA), Renewable Energy Approvals (REA) and registrations on the Environmental Activity and Sector Registry (EASR). ECAs include all Certificates of Approval (CofAs) previously issued under the Environmental Protection Act (EPA) and approvals previously issued under s.53 of the Ontario Water Resources Act (OWRA). You can access this information from the ministry website or at the following link:

www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action?search=basic&lang=en

Copies of ECAs prior to 1999 can be obtained through a request to the ministry's Information Unit at the Environmental Approvals, Access and Service Integration Branch – the form is available at: <http://www.ontario.ca/environment-and-energy/request-copy-environmental-compliance-approval>

Please Note:

- 1) The information provided above is based solely on the address(es) and name(s) of the present and past owners provided by you.
- 2) The Index Record of Names to whom approvals have been issued, maintained by the Regional Director and District Manager, has been searched back to 1999.
- 3) A search of our records does **NOT** indicate whether there are:
 - other uses for which an approval may have been required, nor
 - other uses on the property or in the vicinity that may affect the suitability of the property, for the use proposed to be made of it.If a comprehensive knowledge of the property and the nearby lands and their environmental condition is required, you must examine them and other relevant records yourself, with the aid of a qualified person, if needed.

No Approvals have been issued.

Date of Search: February 24, 2016

**INDEX REVIEW REPORT
COMMERCIAL/INDUSTRIAL/AGRICULTURAL**

Additional site information related to the **location of landfill sites** in the province can be found at the following link:

<http://www.ontario.ca/environment-and-energy/small-landfill-sites>

<http://www.ontario.ca/environment-and-energy/map-large-landfill-sites>

The **ministry's Hazardous Waste Information Network (HWIN)** can also be accessed to search for information on generators, carriers, and receivers of subject waste in the province at the following link: www.hwin.ca

The **ministry's Environmental Compliance Reports** provide information about contaminant discharges to water and emissions to air that exceed limits found in legislation, environmental approvals, orders and/or policies/guidelines and can be accessed at the following link: <http://www.ontario.ca/environment-and-energy/environmental-compliance-reports>

Information on **environmental penalties**, which are monetary penalties that can be imposed by the ministry for some industrial spills, can be assessed at the following link:

<http://www.ontario.ca/government/search-results?query=Environmental+penalties&op=Search>

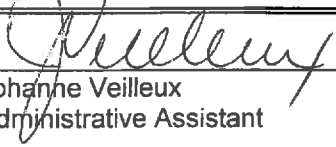
Additional ministry information can be accessed through the **Government of Ontario's Open Data Catalogue**: <http://www.ontario.ca/government/open-data-ontario>

The ministry also encourages you to consider best practices and standards of care used within the legal community and through your associations as a guide to obtaining information related to specific property for any legal purpose.

We trust this information will help meet your requirements quickly and effectively.

Please advise your colleagues that responses to requests for searches always take some time. As a result the Ministry of the Environment and Climate Change may not be able to meet deadlines imposed by other parties on real estate and other transactions.

Thank you for your inquiry.

Signature:	
Contact Name:	Johanne Veilleux
Title:	Administrative Assistant
Address:	Ministry of the Environment and Climate Change 2430 Don Reid Drive, Unit 103 Ottawa, ON K1H 1E1
Phone:	(613) 521-3450 Ext 221
Date:	February 24, 2016
	E&OE

Please Note: If you would like to receive an email with all the environmental links above, please contact me at johanne.veilleux@ontario.ca and I will be pleased to send them to you.

From: Sarah Quibell <squibell@tssa.org> on behalf of Public Information Services <publicinformationservices@tssa.org>
Sent: February-19-16 9:57 AM
To: Staneva, Maria
Subject: RE: TSSA Request for information, 101 Wurtemberg

Good morning Maria,

Thank you for your inquiry.

We have no record in our database of any fuel storage tanks at the subject address (addresses).

For a further search in our archives please submit your request in writing to Public Information Services via e-mail (publicinformationservices@tssa.org) or through mail along with a fee of \$56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Thank you and have a great day!

Regards,

Sarah



Public Information Services

Facilities & Business Services
3300 Bloor Street West
Center Tower, 16th Floor
Toronto, Ontario, M8X-2X4
Tel: 1-877-682-8772 Fax: (416) 734-3568 E-mail: publicinformationservices@tssa.org
www.tssa.org



From: Staneva, Maria [mailto:Maria_Staneva@golder.com]
Sent: Friday, February 19, 2016 9:49 AM
To: Public Information Services
Subject: TSSA Request for information, 101 Wurtemberg

Hi Sarah,


Could you please review your records to determine if any bulk fuel underground storage tanks (USTs) were registered on or near the 101 Wurtemberg Street in Ottawa, ON. Also could you check if there are records of fuel spills, accidents or incidents on these addresses.

95, 96, 98, 101, 111, 102, 106, 114 Wurtemberg Street
524, 529 Clarence Street

Thank you!

Maria

Maria Staneva (M.Eng., P.Eng.) | Environmental Engineer | **Golder Associates Ltd.**

1931 Robertson Road, Ottawa, Ontario, Canada, K2H 5B7 

T: +1 (613) 592 9600 | **D:** +1 (613) 592-9600 x4237 | **F:** +1 (613) 592 9601 | **C:** +1 (613) 868-2595 | **E:**

Maria_Staneva@golder.com | www.golder.com

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From: Staneva, Maria
Sent: February-18-16 4:50 PM
To: Kemptville.Inforequest@ontario.ca
Subject: Phase I ESA, MNR info request, 101 Wurtemberg Street, Ottawa, ON
Attachments: MNR InfoRequest Febr 2016.pdf

Hello,

Please find attached our information request for the site located on 101 Wurtemberg Street in Ottawa, ON.


If you have any questions, please don't hesitate to contact me.

Thank you!

Maria

Maria Staneva (M.Eng., P.Eng.) | Environmental Engineer | **Golder Associates Ltd.**

1931 Robertson Road, Ottawa, Ontario, Canada, K2H 5B7

 We Have Moved!

T: +1 (613) 592 9600 | **D:** +1 (613) 592-9600 x4237 | **F:** +1 (613) 592 9601 | **C:** +1 (613) 868-2595 | **E:**

Maria_Staneva@golder.com | www.golder.com

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APPENDIX C

Site Photographs



APPENDIX C
Site Photographs, 101 Wurtemberg Street, Ottawa, ON



Photograph 1: View of the Site looking east.



Photograph 2: View of the adjacent properties looking south.



APPENDIX C
Site Photographs, 101 Wurtemberg Street, Ottawa, ON



Photograph 3: View of the adjacent lands looking west.



Photograph 4: View of the adjacent lands looking north.



APPENDIX C
Site Photographs, 101 Wurtemberg Street, Ottawa, ON



Photograph 5: View of the fill and vent pipes noted on the adjacent apartment building complex to the south.



Photograph 6: View of the Site building and the wall damage on the façade.



Photograph 7: View of the backyard on the Site looking east towards the Rideau River.



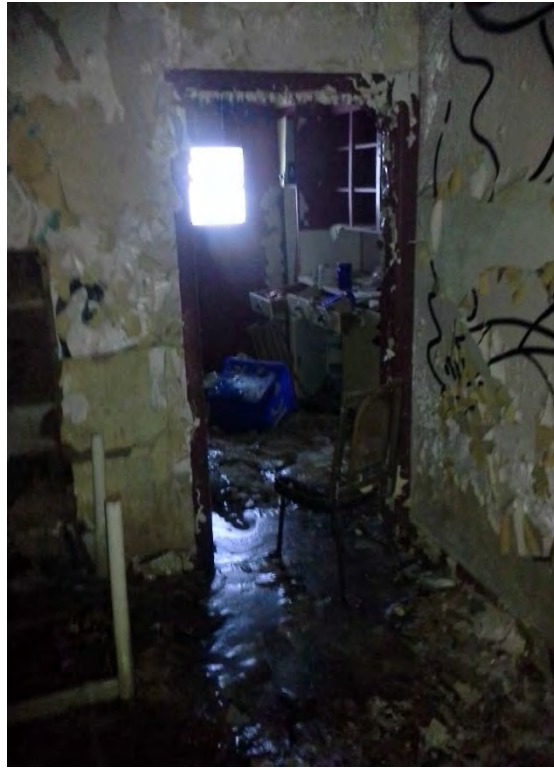
Photograph 8: View of the disconnected natural gas piping previously supplying gas to the house.



Photograph 9: View of the ice covered stairs in the house.



Photograph 10: View of the interior of the house.



Photograph 11: View of the interior and the ice covered floors in the house.



Photograph 12: View of the interior of the house.



APPENDIX C
Site Photographs, 101 Wurtemberg Street, Ottawa, ON



Photograph 13: View of the house.



Photograph 14: View of the house.

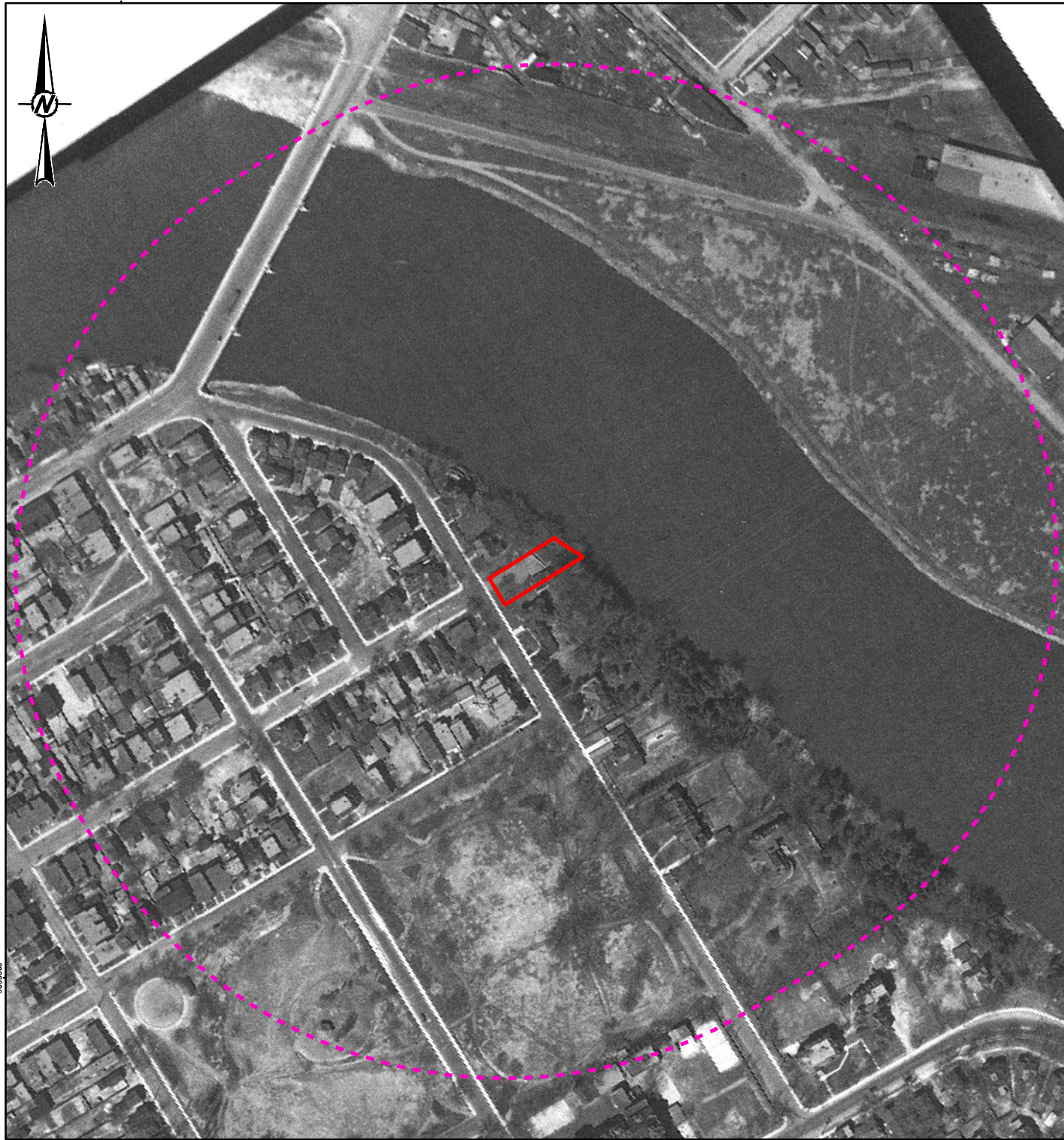
\\golder.gds\galottawa\active\2016\3 proj\1651694 claridge phase i esa 101 wurtemberg\04_reporting\2016 reg 153_04 ph. i esa\report\appendix c- site photographs 101 wurtemberg .docx



APPENDIX D

Aerial Photographs

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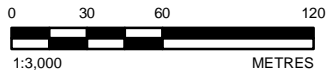
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LEGEND

-  PHASE ONE PROPERTY
-  PHASE ONE STUDY AREA



NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)

1. 1933 AERIAL PHOTO - NAPL - A4571-66.
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
CLARIDGE HOMES CORPORATION

PROJECT
**REG. 153/04 PHASE I ESA,
101 WURTEMBERG STREET, OTTAWA, ONTARIO**

TITLE
1933 AERIAL PHOTO

CONSULTANT



YYYY-MM-DD	2016-03-09
DESIGNED	----
PREPARED	BR
REVIEWED	MS
APPROVED	TDR

PROJECT NO.
1651694

PHASE
1000

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APPENDIX
D-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

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LEGEND

-  PHASE ONE PROPERTY
-  PHASE ONE STUDY AREA



NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)

1. 1947 AERIAL PHOTO - NAPL - A10903-96.
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
CLARIDGE HOMES CORPORATION

PROJECT
**REG. 153/04 PHASE I ESA,
101 WURTEMBERG STREET, OTTAWA, ONTARIO**

TITLE
1947 AERIAL PHOTO

CONSULTANT



YYYY-MM-DD 2016-03-09

DESIGNED ----

PREPARED BR

REVIEWED MS

APPROVED TDR

PROJECT NO.
1651694

PHASE
1000

REV.
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APPENDIX
D-2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm



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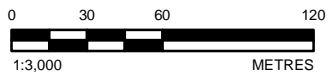
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LEGEND

-  PHASE ONE PROPERTY
-  PHASE ONE STUDY AREA



NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)

1. 1951 AERIAL PHOTO - NAPL - A13111-385.
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
CLARIDGE HOMES CORPORATION

PROJECT
**REG. 153/04 PHASE I ESA,
101 WURTEMBERG STREET, OTTAWA, ONTARIO**

TITLE
1951 AERIAL PHOTO

CONSULTANT



YYYY-MM-DD	2016-03-09
DESIGNED	----
PREPARED	BR
REVIEWED	MS
APPROVED	TDR

PROJECT NO.
1651694

PHASE
1000

REV.
0

APPENDIX
D-3

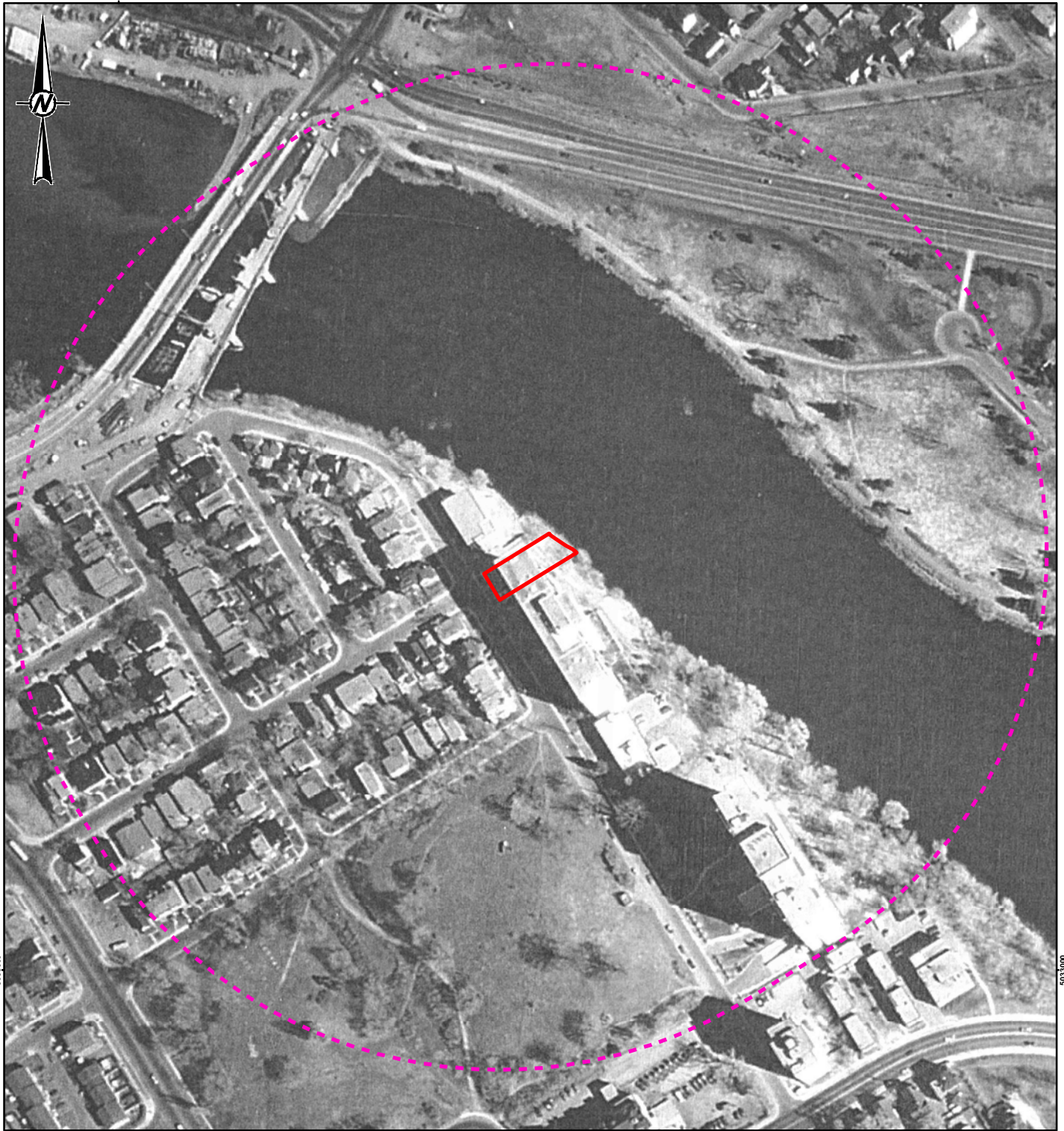
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LEGEND

-  PHASE ONE PROPERTY
-  PHASE ONE STUDY AREA



NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)

1. 1978 AERIAL PHOTO - NAPL - A24855-144.
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
CLARIDGE HOMES CORPORATION

PROJECT
**REG. 153/04 PHASE I ESA,
101 WURTEMBERG STREET, OTTAWA, ONTARIO**

TITLE
1978 AERIAL PHOTO

CONSULTANT



YYYY-MM-DD 2016-03-09

DESIGNED ----

PREPARED BR

REVIEWED MS

APPROVED TDR

PROJECT NO.
1651694

PHASE
1000

REV.
0

APPENDIX
D-4

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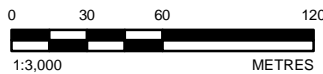
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LEGEND

-  PHASE ONE PROPERTY
-  PHASE ONE STUDY AREA



NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)

1. 1988 AERIAL PHOTO - NAPL - A27275-167.
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT

CLARIDGE HOMES CORPORATION

PROJECT

REG. 153/04 PHASE I ESA,
101 WURTEMBERG STREET, OTTAWA, ONTARIO

TITLE

1988 AERIAL PHOTO

CONSULTANT



YYYY-MM-DD 2016-03-09

DESIGNED	----
PREPARED	BR
REVIEWED	MS
APPROVED	TDR

PROJECT NO.
1651694

PHASE
1000

REV.
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APPENDIX
D-5

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LEGEND

-  PHASE ONE PROPERTY
-  PHASE ONE STUDY AREA



NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1651694/1000.

REFERENCE(S)

1. 1990 AERIAL PHOTO - NAPL - A27610-228.
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
CLARIDGE HOMES CORPORATION

PROJECT
**REG. 153/04 PHASE I ESA,
101 WURTEMBERG STREET, OTTAWA, ONTARIO**

TITLE
1990 AERIAL PHOTO

CONSULTANT



YYYY-MM-DD 2016-03-09

DESIGNED ----

PREPARED BR

REVIEWED MS

APPROVED TDR

PROJECT NO.
1651694

PHASE
1000

REV.
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APPENDIX
D-6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

As a global, employee-owned organisation with over 50 years of experience, Golder Associates is driven by our purpose to engineer earth's development while preserving earth's integrity. We deliver solutions that help our clients achieve their sustainable development goals by providing a wide range of independent consulting, design and construction services in our specialist areas of earth, environment and energy.

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