

**Ontario Land Tribunal**

**IN THE MATTER OF an appeal pursuant to Subsection 34 (11) and Subsection 51(34) of the *Planning Act*, RSO 1990, c. P. 13, as amended.**

<b>Applicant and Appellant:</b>	<b>ClubLink Corporation ULC</b>
<b>Property Location:</b>	<b>7000 Campeau Drive</b>
<b>Municipality:</b>	<b>City of Ottawa</b>
<b>Municipality File No.:</b>	<b>D02-02-19-0123 (Zoning Amendment) D07-16-19-0026 (Plan of Subdivision)</b>
<b>OLT Case No.:</b>	<b>PL200195</b>
<b>OLT File No.:</b>	<b>PL200195, PL2001196</b>

**WITNESS STATEMENT – STEPHEN M. QUIGLEY P.Eng.**

**November 10, 2021**

Expert Witness Statement

Stephen M Quigley P.Eng.

**ClubLink Corporation ULC**

**Application to amend Zoning By-law No. 2008-250**

**Local Planning Appeal Tribunal Case No. PL200195**

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## Attachments

1. Curriculum Vitae of Stephen Quigley
2. Acknowledgement of Expert Duty

## 1. Introduction

1. ClubLink Corporation ULC (ClubLink) is the legally registered owner of the properties located at 7000 Campeau Dr. in Ottawa (herein referred to as the Subject Lands, Site, or Property).
2. The Site is approximately 71 hectares (ha), comprised of four irregularly shaped parcels separated by local roadways. The Site is occupied by the Kanata Golf and Country Club, which consists of an 18-hole golf course, a clubhouse, parking areas, support facilities, and installations typical of a golf course.
3. ClubLink has proposed to redevelop the Site into a residential development as part of its application number D07-16-19-0026 to the City of Ottawa. The application review process has resulted in an appeal and a hearing in January 2022 before the Local Planning Appeal Tribunal, case number PL200195.
4. The purpose of this witness statement is to provide an overview of the evidence that I will present at the hearing to support my opinions on the environmental issues related to the development of the subject lands. The evidence I will present and the subject of this report are focussed on the scope and adequacy of the Environmental Site Assessments completed for ClubLink.

## 2. Qualifications

5. I am a licensed professional engineer (P.Eng.) and a member of Professional Engineers Ontario (PEO). I am also licensed in Newfoundland and Labrador, Arizona, Delaware, Maryland and New Hampshire. I have a Bachelor of Technology in Chemical Engineering from Ryerson University (formerly Ryerson Polytechnical Institute), which I received in 1985. The technical aspects of my career have focussed on the investigation and remediation of contaminated properties and I have advised many clients on the sale and redevelopment of property. I am a Qualified Person (QP) for environmental site assessments in Ontario as defined in the applicable regulation, Ontario Regulation (O.Reg) 153/04 as amended.
6. My professional practice consists of management consulting and providing expert services in environmental matters. I am the President of Blue Cay Consultants Ltd. and its sole employee.
7. I have been qualified as an expert witness on matters related to environmental contamination, environmental impacts, remediation, hydrogeology, contaminant fate and transport, remediation cost, consistency with regulatory standards, and cost recovery in the US federal

court system and in several state courts<sup>1</sup>. I have provided expert testimony on civil litigation in Ontario. Detailed information regarding my qualifications and experience are contained in my Curriculum Vitae, which is presented in Attachment 1. In addition, my Acknowledgement of Expert Duty form is presented in Attachment 2.

### 3. Retainer

8. The Kanata Greenspace Protection Coalition (Coalition) retained Blue Cay Consulting in relation to this matter on October 2, 2020.
9. I have attended several online meetings with the Coalition and submitted a letter to the city on August 3, 2021. That letter presented limited comments on the January 18, 2021 Phase I ESA, prepared by the Patterson Group Inc. (Patterson) for ClubLink.
10. I have reviewed the witness statements prepared by Douglas Nuttall of HDR, Inc. and Dennis Jacobs of Momentum Planning and Communications.
11. I have reviewed various documents in the formulation of my opinions, which include, but are not limited to, the documents below:
  - Planning Act, R.S.O. 1990, c.P.12, as amended
  - The Ottawa Official Plan
  - The Provincial Policy Statement, 2020
  - The Phase I ESA prepared by Patterson, dated December 11, 2018 and updated January 18, 2021
  - The Phase II ESA prepared by Patterson, dated May 23, 2019 and updated April 1, 2021
12. I have reviewed other reports in ClubLink's filings to familiarize myself with the planned redevelopment but have focussed on the documents related to the environmental conditions on the Site.

### 4. Summary of My Opinions

13. It is my opinion that the environmental conditions on the Site are not known to any degree of reasonable certainty and therefore it is not possible to conclude whether or not the proposed zoning amendment and plan of subdivision are in general conformity with sections C2.4 through 2.45 in the official plan.
14. It is my opinion that the Phase I and Phase II ESAs have insufficient scope and testing and analyses to adequately review and consider the historical land use impacts on the subject lands, giving appropriate regard to the Planning Act.

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<sup>1</sup> Through expert reports, depositions, and as an expert witness at trial.

15. Similarly, it is my opinion that the Phase I and Phase II ESAs do not have sufficient scope in testing and analyses to determine whether or not the potential adverse impacts on the proposed use of the Site are consistent with the Provincial Policy Statement 2020, Section 3.2.2.
16. It is my opinion that it is not possible to determine the potential impediments to redevelopment that the environmental conditions on the property will pose, given the inadequate scope of testing and analyses. While it is true that soil contamination can be addressed in a remediation and/or soil management plan, the Phase II ESA has not provided adequate characterization of the soil impacts, including the interaction of that contamination with groundwater and surface water, to conclude whether or not the soil contamination present at the Site can be adequately managed as part of a redevelopment or if an alternative approach is required.
17. It is also my opinion that, as drafted, the Phase I and Phase II ESAs do not meet the requirements of O.Reg 153/04 as amended or CSA Standard Z768-01.
18. In the absence of understanding the full environmental conditions at the property and their historic impact, it is my opinion that no approval should be granted and the application is premature.

## 5. Description of Subject Lands

19. The Kanata Lakes Golf Course is legally described as part of lots 5 and 6, concession 3 in the city of Ottawa. It is on the north side of Campeau Drive, east of Kanata Avenue and the Site comprises approximately 71 ha in an irregular shape.
20. Patterson made a “first developed use determination” in accordance with O.Reg 153/04, that the Site was developed from agricultural lands into a nine-hole golf course between 1965 through 1968, when the nine-hole course opened.
21. Nine additional holes were added to the golf course between 1976 and 1990. The development of the clubhouse and ancillary facilities, including the golf cart charging station/storage building were added in the early 1990s, according to the Phase I ESA.
22. The golf course property has been divided into four distinct parcels in the Patterson documents, and I have adopted their convention as necessary in my comments herein.
23. The golf course is supported by an irrigation system that includes groundwater extraction wells and on-Site storm water ponds, which are authorized in a Permit to Take Water, issued by the province of Ontario. The Permit to Take Water 8648-9J2JGB dated April 10, 2014 (See p. 63-71/332 of PDF of Phase I ESA, dated January 18, 2021) provides the following information about the supply wells used to support irrigation the Site:

Well Identifier	Maximum Daily Withdrawal Rate (litres)	Maximum Number of Days Taken per Year
1	414,686	180
2	1,067,037	180

24. There is evidence that the permits to operate the wells go back to the 1990s. The water well records indicate that the installation of the water supply wells dates back to the initial operation of the 9-hole golf course (1966, see p. 188/332 of PDF of Phase I ESA, dated January 18, 2021).
25. The historic Permits to Take Water also present information about the two ponds on the Site. The prior version of the Permit to Take Water, dated, for example, February 4, 2002 (See p. 51/332 PDF of Phase I ESA, dated January 18, 2021) presents the following summary of water withdrawal rates and storage capacities:

Description	Maximum Daily Withdrawal Rate (litres)	Maximum Total Storage Volume (litres)
Irrigation Pond	3,409,500	9,092,000
Pond on 8 <sup>th</sup> hole	--	4,546,000

26. The Site is embedded in a residential area, with neighbouring residential properties abutting the Property.

## 6. Environmental Site Assessments

27. Both the Phase I and Phase II ESA are designed to comply with the relevant regulatory standards and to permit a more sensitive land use on the Site. The relevant regulation governing the scope and content of the ESAs is O.Reg 153/04 as amended by O.Reg 269/11. Patterson also states that the ESAs comply with the requirements of the CSA Standard Z768-01.
28. Patterson completed the Phase I ESA following an inspection of the Property and interviews with personnel familiar with the Site. Based on the limited descriptions presented in the Phase I ESA, the interviews focussed on current operations and recorded spills and releases.
29. There are significant gaps in information collected for the Phase I ESA. The gaps include the following:
- There is no information on the historic development of the original nine-hole golf course in the 1960s from its historic use as agricultural land. There is no information provided as to the source of fill material imported to the Site, if any, that was used to create this initial nine-hole golf course.
  - There is no information in the report about the source of material that may have been brought onto the property to be used in the construction of the second group of nine holes in the 1990s. This is an important information gap and it needs to be filled in order to understand what the environmental issues are on the Property.
  - There is nothing in the report to identify what pesticides were used on the golf course from its date of first development in the 1960s. Practices have changed dramatically over the years and pesticide use in the past was much more significant than it is today.
  - The historical maintenance, fuel handling, waste disposal and fuel storage practices are not described or appear to have been assessed.

30. Investigators must identify, to the extent possible, the chemical management and handling techniques on each site that is investigated. It is my opinion that it is not defensible to have a 30-year operation that includes the application of chemicals to the ground and have no information in the report about what was used, how much was used, and how residuals were managed.
31. In the absence of this information, it is not possible to conclude whether or not the Phase II ESA included testing for the right substances in the subsurface or quantified the actual environmental impacts that exist on the Site.
32. Information about chemical use, storage and disposal should have been obtained for the entire life of the Property from all operations conducted on the Property, since its first developed use in 1966.
33. Ontario Regulation 153/04 includes a listing of potentially contaminating activities (PCAs). In order to comply with the regulation, a Phase I ESA must include an examination of each relevant PCA to determine if an area of potential environmental contamination (APEC) exists on, and must be investigated at, the Site. Patterson used this listing of PCAs, in accordance with the regulation, to determine whether or not there were activities that could have resulted in a potential environmental impact at the Site. Patterson grouped these areas into four APECs.
34. It is the responsibility of the assessor to evaluate the list of PCAs in the regulation<sup>2</sup> and determine whether or not those activities were conducted on the site. Patterson appears to have excluded one PCA from its consideration.
35. In the environmental database search, there is evidence that the Site disposed of acidic waste containing metals, potentially from battery recharging operations (see PDF page 186/332 of January 18, 2021 Phase I ESA)<sup>3</sup>.
36. The Phase I ESA reports that a charging station for golf carts was built in the 1990s and is in use today. It appears, based on the information in the Phase I ESA, that a golf cart battery recharging is consistent with the intent of PCA 6 in Table 2 of Part VI of O.Reg 153/04, which is “battery manufacturing, recycling and bulk storage”. It is my opinion that the long term (20+ years) of operation of a battery charging operation for the golf course fits under this PCA and thus it should have resulted in an APEC for consideration in the Phase I ESA and possibly for investigation in the Phase II ESA.

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<sup>2</sup> The QP(ESA) is responsible for establishing the adequacy of the investigation but the Ministry of the Environment, Conservation and Parks will oversee the scope of the environmental studies and remediation done on the Site through the submission of the application for a Record of Site Condition (RSC) for the Property. A RSC is required for a property to be redeveloped to a more sensitive use, as is the case in this instance.

<sup>3</sup> The government of Ontario describes the waste disposed of as follows (<https://www.ontario.ca/page/ontario-waste-classes>): 113 - Acid solutions, sludges and residues containing other metals and non-metals; Solutions of sulphuric, hydrochloric, hydrofluoric and nitric acids containing sodium, potassium, calcium, magnesium or aluminum; equipment cleaning acids; cation regenerant; reactor acid washes; catalyst acid and acid washes.

37. The Phase I ESA should have included an inspection of this area, examination of integrity of concrete floors in the storage barn, and consideration of the environmental impacts that may have occurred from releases during the maintenance of and the handling of the batteries that are used in the golf carts.
38. The Phase I ESA contains no description of what was done with golf carts on the property prior to the 1990 golf storage barn construction. It is also possible that there are other locations on the property that were used to charge batteries in golf court carts or to fuel and service older golf carts. These items should be documented in the Phase I ESA and investigated as appropriate in the Phase II ESA.
39. The Phase I ESA also does not present any information about the practices at the Site to maintain vehicles, equipment and golf carts (in addition to charging). O. Reg 153/04 s. 24 states that one of the general objectives of the Phase one environmental site assessment is to, in the first instance:
- 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 one property.*
40. The database search information (See, for example, page 179/332 of the Phase I ESA PDF, dated January 18, 2021) includes references to the disposal of waste petroleum distillates and waste oil and lubricants that were generated at the Site. The Phase I ESA should document what maintenance activities occurred over the entire life of the Property, what wastes were generated, how those wastes were handled, and where they were disposed of or released.
41. These maintenance activities and the wastes that are generated as part of them are the very items that the Phase I ESA should uncover and assess. Item 52 in Table 2 of the regulation, which describes Potentially Contaminating Activities, includes *"Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems"*. Schedule D to O. Reg 153/04, s. 13(3) is an important point of reference for determining the appropriate scope of investigation of a property such as this.
42. The lack of information on these historical activities is also not consistent with the requirements of CSA Standard Z768-01, which Patterson says the study is designed to comply (see, for example, Section 3.5 Due Care (*In the execution of a Phase I ESA, an assessor shall use the care, diligence, and judgement expected of any assessor under similar circumstances.*) , and Section 7.3.2 Interviews – Content *"The questions to be asked in interviews pertain to current and past activities and events that may affect environmental conditions at the subject property"*).
43. It is my opinion that the Phase I ESA is not complete and does not comply with the requirements of O.Reg 153/04 because, in addition to the other items raised in this report, it does not include an assessment of these activities, which occurred over the more than 50 years of operation on this Site.
44. The Phase I ESA includes a chronology for the changes in storage tanks that were used on the Property. The Phase I ESA appropriately includes an APEC related to these ASTs and it leads to a subsequent investigation on the Phase II ESA.

45. One of the processes described in the Phase I ESA (page 18/332 of the Phase I ESA PDF, dated January 18, 2021, for example) is a tank that is apparently still used to store wash water from the wash pad at the turf building. The Phase I ESA states that the sediment from an above-ground settling chamber is manually removed. There is no information on how this sediment is managed or its ultimate fate and characterization. Depending on how this wash pad has been used in the past, the settling chamber and the receiving tank may be a receptacle for metallic deposits and could have received petroleum products, degreasing fluids, and other wastes. The Phase I ESA should consider whether or not these may have happened and the Phase II ESA should have investigated the potential impact, if any, from discharges to and/or releases from this tank.
46. The scope of the Phase II ESA is impacted by the lack of information in the Phase I ESA about chemical use on the property, including the information about pesticide use and management during the first 25 years of the golf course's operation.
47. The Phase II ESA included in its chemical analyses an organic pesticides scan (referred to as the "OCP pesticide scan") and a metals scan that are generally used to screen for a wide spectrum of pesticides and metals. The list of constituents in the OCP pesticide scan consists of substances commonly found in the environment where these pesticides have been used. This standard list is not inclusive of all of the pesticides that may have been used at this Site or others. The actual history of pesticide use must be understood in order for the analyses completed by the laboratory to be considered reflective of the actual conditions in the soil and groundwater at the Site.
48. One of the specific pesticide uses that is mentioned in the Phase I ESA, without identifying quantities of material used, is the application of mercury-based fungicides to the golf course. The interaction between the application of these fungicides and the more than 50-year life of the golf course with the runoff and accumulation of sediment in the on-Site storm water ponds is an issue that should be assessed in both the Phase I and Phase II ESA.
49. The Phase II ESA identifies the presence of delta BHC in soil and groundwater samples. Delta BHC is one of the constituents of the technical grade pesticide, Lindane. Lindane is an environmentally insecticide that was historically used on "*fruit, vegetables, and forest crops, and animals and animal premises*"<sup>4</sup>. In the absence of a complete history of pesticide and herbicide use at the Site, it is not clear how this chemical could have been used on the golf course or if it may have been used on the agricultural activities conducted there prior to its first developed use.
50. There is no information in the Phase I ESA that would connect Lindane use to the Site and the Phase II ESA does not contain an interpretation of what the source of this chemical might be. Lindane is a formulation composed principally of gamma BHC but technical grade formulations could contain several percent of delta BHC<sup>5</sup>. The significance of the detections of this compound needs to be explained through an inventory of pesticide application at the Site and an analysis of potential sources. The fate of these BHC compounds may be the aquatic environment, where they have the greatest potential impact on receptors. There is a potential that is unexplored in

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<sup>4</sup> <https://www.atsdr.cdc.gov/toxprofiles/tp43.pdf> page 2

<sup>5</sup> IBID, page 2

the Phase I and II ESAs for delta BHC and other BHC isomers to be present now or in the past in storm water runoff from the Site and in the groundwater system under and near the Site. The water in the ponds is in communication with the underlying groundwater through what would be observable as a “mound” on the groundwater surface, extending for some distance away from the footprint of each pond. These mounds would be evidence of a discharge from the ponds and create saturated conditions in the underlying soil. Whatever has been carried in the storm water runoff from the Site over the long history of use and deposited in the pond would be transported both downstream and downward into the groundwater system. The many years of groundwater extraction by the golf course operation for irrigation would have aided in the movement of those constituents and contaminants away from the ponds.

51. The Phase I and Phase II ESAs do not contain any information about storm water and sediment quality impacts. The potential historic and current-day impacts from the Site on sediment and water quality are of particular concern when the opinion of Doug Nuttall is taken into consideration. Mr. Nuttall concludes that the proponent has failed to demonstrate that the development will not negatively impact the existing storm water management system.
52. The Conceptual Site Model<sup>6</sup> for the Site has an important omission. It does not consider the interaction of the Site with the water quality in the on-Site ponds and the receiving water body. It also does not consider the potential impacts to surface water and sediment. The lack of this information and the significant concerns that Mr. Nuttall has about the basis for the assessment and management of storm water impacts from Site redevelopment are relevant to the consideration of whether or not the Application is premature. It is my opinion that the Application is premature.
53. With respect to these deficiencies in the scope of the Phase I ESA, the following should have been done as part of the assessment:
  - i. Based on interviews with people familiar about the entire span of operations, review of local records, and completion of a Site inspection, develop an inventory of pesticide and chemical use, waste generation and disposal.
  - ii. Identify locations on the Property where application, use or disposal is/was of concern.
  - iii. Design a Phase II ESA to include those areas of concern and to be sure that the right chemicals are included in the analyses.
54. In every instance where the Phase II ESA identifies the presence of a contaminant in the subsurface, it must be linked to a use on the property. The document entitled, “Guide for Completing Phase Two Environmental Site Assessments under Ontario Regulation 153/04”, presents a summary of what is required in a “Conceptual Site Model”, which is used to permit the user of the report to interpret the detections of chemicals in the subsurface and their distribution and movement in the environment. Section 6 of this document states, for example, on page 49:

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<sup>6</sup>CSM– see paragraph 54

*For each area where a contaminant is present on the property at a concentration greater than the applicable site condition standards for the contaminant, the phase two CSM must include a diagram identifying, with narrative explanatory notes:*

- *the release mechanisms;*
- *contaminant transport pathway;*
- *the human and ecological receptors located on the phase two property;*
- *receptor exposure points; and,*
- *routes of exposure.*

55. Thus, a detection in the subsurface at a concentration greater than the applicable standard must be connected to the history of chemical use and/or waste management on the Site. It is my opinion that this requirement extends to any detection and to substances for which there is no generic standard to refer to (this report presents some commentary on the standards used in the Phase II ESA, see below). The failure to make this connection to actual Site uses creates great uncertainty on any conclusion about the adequacy and completeness of the necessary horizontal and vertical delineation requirements described fully in O. Reg 153/04 Schedule E, s. 7.

56. If the Phase II ESA identifies a previously undocumented chemical in the subsurface, then the investigators should attempt to determine where the material came from, either from operations on the Site, or from releases adjacent to the property, or possibly from fill brought on to the Site at sometime in the past.

57. The standards in the regulation are based upon a set of generic calculations that examine different routes of chemical fate and transport. The generic calculations assume exposure mechanisms and transport mechanisms that are typical for sites in the province. These typical standards are not based upon a site that is heavily irrigated on a consistent basis. The actual site conditions need to be considered in looking at whether or not the generic standards and the regulations are relevant to particular site setting.

58. The rationale presented in the Phase II ESA for the selection of MECP Tables 3 and 7 as the relevant soil standards for the Site is reasonable. However, the actual values used for this Site may be significantly different than what is listed in the tables. These soil standards are developed using a set of generic calculations that likely do not match the conditions at this Site, which is heavily irrigated on a regular basis. Any standard that is designed to protect groundwater is based on a typical rainfall/infiltration rate that is not relevant to this Site. The Phase II ESA should examine the impact of site practices on the selection of the numeric soil value. A Site-specific analysis of this issue is required.

## 7. Soil

59. The Phase II ESA concludes that mercury is present in subsurface soil samples in “pockets”, as follows:

*Based on the findings of the Phase II ESA, mercury concentrations exceeding the selected MECP standards selected were identified in the shallow soil (approximately 0.05 to 0.30 m below ground surface) across the Phase II Property, as shown in red on Drawing PE4321-4R – Analytical Testing Plan. No other soil exceedances were identified. Groundwater is in compliance with the selected MECP standards as presented in blue on Drawing PE4321-4R. (page 32/278 of the Phase II ESA PDF, dated April 1, 2021)*

*The mercury concentrations are considered to be present in pockets across the course and are considered to be confined to the upper 0.3 to 0.6m of soil. (page 37/278 of the Phase II ESA PDF, dated April 1, 2021)*

60. The difference in these descriptions about the depths of contamination must be resolved (0.05 to 0.30 m below ground surface versus 0.3 to 0.6 m below ground surface). The Phase II ESA makes no connection between the detections and the chemical use history on the Site. There is no rationale presented as to why this distribution or occurrence is consistent with the application of mercury-based fungicides or other pesticides to the ground surface. The conclusion appears to be based solely on inferring the distribution of mercury in soil based solely on the analytical database for the Site. As is stated above, drawing conclusions about chemical distribution in the subsurface without referring to and documenting the usage/release mechanisms does not comply with O.Reg 153/04 and the requirements for the content of a CSM as presented in the "Guide for Completing Phase Two Environmental Site Assessments under Ontario Regulation 153/04 June 2011".

## 8. Groundwater System

61. The Phase I and II ESAs include an investigation of groundwater quality and groundwater flow direction. Patterson used a combination of shallow groundwater monitoring wells and bedrock wells to characterize the flow of groundwater in and around the Site.
62. This characterization is important to understand the potential pathways that might exist for contaminant migration in groundwater. The Phase II ESA includes an inventory of groundwater extraction in the area (from the database search), which is dominated by the wells operated by the golf course, but is also impacted by other wells in the area. It is critically important to understand something more about those wells than is represented in the report.
63. Part of the routine process used by investigators to determine that water quality in a monitoring well is stable and represents the water quality in the surrounding formation is to measure "field parameters" during purging of the well prior to sample collection. Consecutive stable measurements of field parameters are an indication that it is appropriate for samples to be collected and submitted to the laboratory for chemical analyses. Monitoring well development (completed after well installation) and purging (completed prior to sample collection) are designed to ensure that disturbances caused during well installation or while the well has been unattended have been removed from the well formation and the sample that is collected is representative of the local groundwater conditions. The field parameters typically measured include temperature, pH and electrical conductivity. It is normal to expect that

groundwater samples collected from within a water bearing unit from within the same property would generally have similar results for these three parameters. If a sample of groundwater from a monitoring well has an elevated electrical conductivity relative to other locations in the same formation, that can sometimes be an indication that there is contamination in the water sample that is being collected.

64. There are two results on Parcel 3 that raise questions about what is occurring in the subsurface. The “stabilized” (as reported in the Phase II ESA) groundwater in the samples collected from boreholes 3 and 17 are from the same parcel (Parcel 3) and based on the water level contours, are interpreted by Patterson to be in the same water bearing unit. However, the temperature and the electrical conductivity of the groundwater are all significantly different.

65. This is an image of Table 3 from the Phase II ESA.

Parameter	BH2	BH3	BH8	BH11	BH13	BH17	BH20
Temperature (°C)	6.9	5.7	12.5	10.7	10.9	15.8	14.3
pH	6.73	7.56	8.14	7.58	6.65	7.01	7.60
Electrical Conductivity (µS/cm)	520	1,576	592	401	873	528	621

*(page 53/278 of the Phase II ESA PDF, dated April 1, 2021)*

66. The temperature differences may be associated with groundwater injection from a heat pump system or it may be that this is an indication of separate and distinct groundwater flow systems. The Phase II ESA offers no analysis to explain these data.

67. In order to understand whether or not the Site is impacting groundwater underneath the property the flow of groundwater in these bedrock and shallow water bearing units, if they are in fact the same or distinct, needs to be understood. The Phase II ESA fails to properly characterize the groundwater system under the Site.

68. The interaction of the groundwater under the Site with the surface water in the ponds and with the groundwater extraction by the golf course and others also needs to be understood to determine whether or not proper investigations have been done.

## 9. Surface Water and Sediment

69. One other important feature of the property is the two ponds that are part of the irrigation system. They receive runoff from the Site and are used to store water for irrigation. There is no information presented about the historical maintenance of these ponds. It is possible that sediment accumulation in the base of the ponds has concentrated chemical residues (including mercury), representing a potential threat to groundwater quality and downstream aquatic species. Historic runoff from the Site also presents an historic threat to downstream receivers.

70. The lack of an inspection of the ponds, the potential accumulation of sediment in them and the assessment of the potential interaction of the sediment with downstream receivers and the groundwater system under the Site is a significant omission in the scope of the Phase I and Phase II ESAs.

## 10. Conclusions

71. The scope of this report is directed at the assessment of four issues of importance in the Hearing. The issues along with my conclusions about each are presented in the table below.
72. It is my opinion that, as drafted, the Phase I and Phase II ESAs do not meet the requirements of O.Reg 153/04 as amended or CSA Standard Z768-01.
73. In the absence of understanding the full environmental conditions at the property and their historic impact, it is my opinion that no approval should be granted and the application is premature.

**Conclusions - Expert Witness Statement****Stephen M. Quigley P. Eng.**

<b><u>Issue</u></b>	<b><u>Issue Description</u></b>	<b><u>Conclusion</u></b>
34.c)	Is the proposed zoning amendment and plan of subdivision in general conformity with the Official Plan with particular reference to the following sections: c) 2.4 / 2.4.5 – Maintaining Environmental Integrity / Greenspaces	The Official Plan requires the City to manage and protect groundwater through its policies and practices, particularly where there has been a degradation of the resource. There has been a long-term use of this resource by the golf course operations and the Phase II ESA has not defined the nature and the extent of the impact to the resource. In the absence of this definition of the nature and extent, the application cannot meet these requirements of the Official Plan.
39	Do the Phase 1 and 2 Environmental Site Assessments have sufficient scope in testing and analysis to adequately review and consider the historical land use impacts on the subject lands to have had appropriate regard to Planning Act with particular reference to Section 2 (a), (h) and (o)?	The Planning Act defines these items of Provincial interest: (a) the protection of ecological systems, including natural areas, features and functions; (h) the orderly development of safe and healthy communities; (o) the protection of public health and safety. There have been historic practices on this Site that have not been documented. The available data has not been connected in any fashion to these historic practices, including pesticide use. The scope of testing in the Phase I and II ESAs has been inadequate.
40	Do the Phase 1 and 2 Environmental Site Assessments have sufficient scope in testing and analysis to adequately review and consider the potential adverse impacts on the proposed use of the subject lands and on adjacent land uses to be consistent with the Provincial Policy Statement 2020 with particular reference to Section 3.2.2?	Provincial Policy Statement Section 3.2.2. states, "Sites with contaminants in land or water shall be assessed and remediated as necessary prior to any activity on the site associated with the proposed use such that there will be no adverse effects." The environmental impacts present at this Site have not been determined. In order to meet the objectives of the Provincial Policy Statement, 2020, the scope of historical practises and their impact on the natural environment need to be documented. Further, Sections 2.1 and 2.2 of the Provincial Policy Statement, 2020 mandate the minimizing of potential negative impacts on the watershed. In order to ensure that this policy is met, a complete historical chemical use and Site development history (as fully described in the report text) must be established; the impacts of those activities investigated and the potential impacts on the watershed understood.

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|---|--|
| <p>41 Is it appropriate to develop land that has been identified in the Phase 2 ESA as containing levels (<i>concentrations</i>) of mercury that exceed MECP Table 7 and Table 3 levels in shallow pockets in various locations when said development will require significant disturbance of this potentially harmful material through regrading and preparation of the subject lands for development?</p> | <p>It is reasonable to remediate discrete soil impacts to meet MECP Table 7 and Table 3 standards on sites that have characteristics that are consistent with the generic modeling parameters used to develop the MECP Standards. Such remediation needs to be based on a proper characterization of the soil and groundwater impacts from historical practices on a site. The Phase I and Phase II ESAs have failed to adequately characterize the historic practices and therefore to delineate those impacts. It is not possible to conclude whether or not adverse effects might result from soil movement and disturbance from development.</p> |
|---|--|

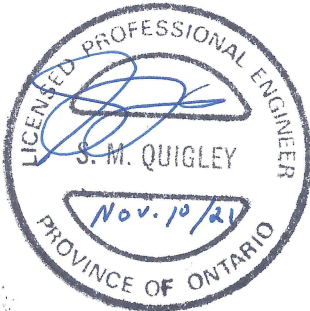
## 11. Documents to be Relied Upon

In addition to the documents produced in the City's document repository (<https://devapps.ottawa.ca/en/applications/D07-16-19-0026/details>), I have relied upon the following documents in the preparation of this report:

1. Planning Act, R.S.O. 1990, c.P.12, as amended
2. The Ottawa Official Plan
3. The Provincial Policy Statement, 2020
4. The Phase I ESA prepared by Patterson, dated December 11, 2018 and updated January 18, 2021
5. The Phase II ESA prepared by Patterson, dated May 23, 2019 and updated April 1, 2021
6. O. Reg. 153/04: RECORDS OF SITE CONDITION - PART XV.1 OF THE ACT under *Environmental Protection Act*, R.S.O. 1990, c. E.19 (<https://www.ontario.ca/laws/regulation/040153>)
7. O. Reg. 269/11: Records of Site Condition - Part XV.1 of the Act (<https://www.ontario.ca/laws/regulation/r11269>)
8. Guide for Completing Phase One Environmental Site Assessments under Ontario Regulation 153/04 June 2011, as updated (<https://www.ontario.ca/page/guide-completing-phase-one-environmental-site-assessments-under-ontario-regulation-15304>)
9. Guide for Completing Phase Two Environmental Site Assessments under Ontario Regulation 153/04 June 2011, as updated (<https://www.ontario.ca/page/guide-completing-phase-two-environmental-site-assessments-under-ontario-regulation-15304>)
10. CSA Z768-01 (R2012) - Phase I Environmental Site Assessment
11. Rationale For the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario, April 15, 2011 Standards Development Branch Ontario Ministry of the Environment
12. Reality of Pesticide Use on Golf Courses  
Clint Waltz, Ph.D.  
Turfgrass Specialist  
The University of Georgia, 2010 ([www.Georgiaturf.com](http://www.Georgiaturf.com))
13. Historical Perspectives, Emergence of Turfgrass Science, And Environmental Issues  
Dr. James B Beard Volume IV, No.4 TURFAX™ July-August 1996

14. Committee Report No. 1 - ENVI (36-2) - House of Commons of Canada – History of Pesticide Use <https://www.ourcommons.ca/DocumentViewer/en/36-2/ENVI/report-1>
15. <https://www.nfpa.org/...s-landing-page/nfpa-today/blog-posts/2020/02/07/fore-improper-charging-of-golf-carts-can-lead-to-fumes-and-fire>
16. Best Management Practices and Guidelines for the Development and Review of Golf Course Proposals  
*Prepared For: Muskoka Golf Course Research Advisory Committee  
Gartner Lee Limited GLL 20-649 September, 2001*
17. Pesticides Background Paper  
*Prepared by The Policy & Research Committee, Muskoka Watershed Council September 2003*
18. Proportionate Mortality Study of Golf Course Superintendents  
Burton C. Kross, PhD, PE, Leon F. Burrmeister, PhD, Linda K. Ogilvie, MS,  
Laurence J. Fuortes, MD, and Chun Mei Fu, MS (AMERICAN JOURNAL OF INDUSTRIAL MEDICINE 29~501-506(1996)
19. Toxicological Profile for Alpha-, Beta-, Gamma-, And Delta-Hexachlorocyclohexane  
(<https://www.atsdr.cdc.gov/toxprofiles/tp43.pdf>)

All of Which is Respectfully Submitted,



Stephen M. Quigley P.Eng.

November 10, 2021

**ATTACHMENT 1**

Curriculum Vitae of Stephen Quigley

# Stephen M Quigley, P.Eng, P.E.

89-12 Woolwich Street Waterloo ON N2K 1S5  
(519) 498-7997      squiggs651@icloud.com

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## PROFESSIONAL PROFILE

As one of two Executive General Managers (or Presidents), I led a North American engineering business, comprising around 4,000 talented individuals. I spent the bulk of my career delivering complicated technical solutions to clients with environmental problems. Those projects could last decades—until recently, I was providing high-level oversight to the clean up of a chemical plant in Elmira, a project I started on in 1989. It is in those difficult, long-running jobs that I learned two things critical to my role.

The first is the importance of developing a trusted-advisor relationship with clients, by always connecting clients to the right people to answer their problems. If we could not find the right person inside the organization, then would find the person outside the firm because it is the answer that matters, not the source. Secondly, I learned that business grows when clients know they can pick up the phone and count on you to deliver. Exceptional client service is something an employee-ownership model almost guarantees— when you talk to senior employees, you will be talking to an owner, which means a greater focus on performance and service.

The North American business that I set the strategic direction for, structured and managed allows the company's Principals to manage their own practices under the guidance of nine Regional Managing Principals. That approach amplified an already entrepreneurial and service-orientated mindset and connected employees to each other and to their local communities, which is an important pillar of a connected, successful business.

## CORE COMPETENCIES

- Collaborative leader and team builder
- Talent developer
- Agile and flexible
- Practical financial analyst
- Distiller of complex problems
- Strategic mindset with a practical approach
- Proven client relationship skills
- Cultural integrator
- Technical expert

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## PROFESSIONAL EXPERIENCE

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### Management Consultant

Blue Cay Consulting

Sept. 2019 - Present

#### PRIMARY FUNCTIONS:

Advising Private Equity investors in business investments; advising owners and CEOs on strategy, business development, risk management and investor relations; Management consulting - value creation and realization in outsourcing; engineering/technical consulting.

#### ACHIEVEMENTS:

- ▶ Conducted business analyses and supported the acquisition of a radionuclide nuclear waste water treatment technology firm in South Carolina for a private equity investor
- ▶ Acts as a technical expert on environmental matters – See Attachment 1 for a listing of technical work experience
- ▶ Consulted to a consulting engineering firm on business growth strategy and direction in several markets in Canada and the United States
- ▶ Completed a market analysis and alternatives analysis for entry into targeted services in a US region for a Canadian engineering firm
- ▶ Provided compliance oversight services related to engineering laws and regulations in the United States
- ▶ Consulted to private equity firms on an as needed basis to review confidential information memoranda on businesses for sale
- ▶ Speaker at an employee ownership conference on matters related to transition in ownership

### GHD – a multidisciplined, global professional service and construction firm

July 2014 – Sept. 2019

GHD is one of the world's largest employee-owner professional services companies consulting in the global markets of water, energy and resources, environment, property and buildings, and transportation. The firm provides management consulting, engineering, architecture, environmental and construction services to private and public sector clients.

GHD and Conestoga-Rovers & Associates (CRA) merged in 2014. I was a negotiator of the merger and the manager of the integration of the 3,000 CRA employees into the 5,500-person GHD organization, then appointed as GHD's North American President.

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## President/North American Executive General Manager, Canada

October 2017 – Sept. 2019

## President/North American Executive General Manager

May 2015 – October 2017

### PRIMARY FUNCTIONS:

As part of GHD's Global Executive Management Group, responsible for the profitability and growth of operations in North America. In October 2017, began shared responsibility for execution of the business plan and overall management of the business with a General Manager based in the US.

Overall management responsibilities included:

- Strategic Development
- Financial Performance
- Risk Management
- People/HR, including culture, diversity, and ways of working
- Business Development, CRM, marketing, and communications

### ACHIEVEMENTS:

- Integrated member of the global management team, delivering an on-budget performance, coupled with significant organic growth and geographic expansion
- As part of integration, developed the strategic direction for the North American Business under the umbrella of the overall global strategy. The strategy was founded on a diversification and growth vision, both in terms of markets and geographies, with a focus on diversity in talent and significant changes in the ways of working in our industry
- Once the strategy was set, developed an effective North American Leadership Team after developing and introducing the structure in 2016, including the development of a leadership succession plan and leadership development program
- Board member and Officer for all GHD Operating Entities in North America, Member of the GHD Risk Committee, CRA Board Member and Officer
- Executed the strategic plan and diversification strategy for the North American Business. Performance improved following a difficult economic period and aggressive investment in the business

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- Delivered ~10% EBITA margin while investing and diversifying the business
- Most recent significant notable results
  - Completed investment in new talent while managing workforce in lower performing businesses
  - Gross revenue ahead approximately 20% ahead of the prior year
  - Net revenue 15% ahead of the prior year
  - Backlog increased 20% year over year with nearly a year's backlog on the books
- Developed a comprehensive CRM program, including the deployment of North American Client Service Awards as part of the GHD global program
- Completed two "tuck-in" acquisitions
- Developed the vision for and deployed the GHD flagship facility in Waterloo, Ontario, housing 600 staff and regarded as one of the most advanced and agile engineering spaces in Canada

## **Conestoga-Rovers & Associates – a North American Environmental Consulting Powerhouse**

February 1989 – May 2015

Conestoga-Rovers & Associates (CRA) was a predominant consultant in the environmental and hazardous waste markets with its roots as the prime consultant completing the clean up of the Love Canal in Niagara Falls NY. CRA ultimately serviced the engineering, environmental consulting, construction and Information Technology sectors.

GHD and CRA merged in 2014. I began my consulting career as a project engineer, became the 12<sup>th</sup> partner in that business and, as part of the management team, grew CRA to 3000 people. I was the driver in CRA's capital restructuring that facilitated the eventual industry-unique true merger of these two large professional service firms.

## **Principal, Co-Chair North American Executive Committee (NAEC)**

July 2014 – May 2015

Following the merger between GHD and CRA, co-chaired the NAEC. The NAEC oversaw the integration of the two businesses and prepared for the July 2015 amalgamation of the businesses into one operating entity. The integration program covered all facets of the business and was handled such that the North

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American business delivered record profits in the year ending June 30, 2015. Began to develop the vision and strategy for the growth and diversification of the business.

Continued to actively manage a small number of large engineering projects.

## **Principal and Corporate Secretary**

January 2008 – July 2014

Part of the management team that set the overall merger intent, then developed, proposed, and executed on the merger with GHD. EFCG has referred to the CRA/GHD merger as the “most unusual merger ever completed in our industry.” Responsible for the negotiation and completion of the merger agreement, integration of the legal operations, consolidation of the insurance coverage, and communication/socialization of the merger concept and agreement with CRA Principals, Associates, and employees.

In the year prior to the merger, developed and executed a plan to reconstruct and revise the formula used to value CRA shares. The plan received approval of 100% of the CRA shareholders and resulted in a platform that facilitated the merger with GHD, which was not in the pipeline when the restructuring took place.

As Corporate Secretary, in addition to normal secretarial duties, responsible for Legal and Risk Management, Insurance, Business Development, Marketing, and Communications. Managed large portions of the CRA practice and geography. Over time, management responsibilities included the NE United States, the Southern United States, the Air Quality Resources group, the Risk Assessment Services Group, and large, integrated project teams.

## **Shareholder/Partner/Principal, Exec. Committee Member**

Jan. 2001 – Dec. 2007

Appointed as a member of the CRA Executive Committee that was charged with the task of transitioning management and control of the CRA business from its founder, Frank Rovers, to the next generation of management. Responsibilities in this time frame were consistent with those described above.

Significant business developer.

## **Shareholder/Partner**

January 1996 – December 2000

Appointed as a CRA Partner effective January 1996. As the 12<sup>th</sup> partner in the business, was an active participant in the growth and diversification that occurred in the late 1990s and 2000s.

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Developed and implemented a strategy to ensure CRA's compliance with US professional engineering licensing requirements. The strategy was based upon driving junior Canadian engineering staff to become licensed in the US. This resulted in more than 250 Canadian engineers with dual licensure (Canada/US).

Continued to drive technical project performance, client relationships, and business volume.

## **Associate and Project Manager**

January 1994 – Dec. 1995

Appointed as a CRA Associate effective January 1994.

Opened CRA's office in Phoenix Arizona and managed a significant developing practice in that state while maintaining a significant project and client relationship in Ontario, Canada.

## **Project Manager**

July 1990 – December 1993

## **Project Engineer**

February 1989 – July 1990

## **Canada Packers Chemicals Division**

February 1989 – May 2015

Canada Packers (successor Maple Leaf Foods) Chemicals Division was my first employer after graduation from Ryerson.

## **Quality Assurance Analyst, Division Manager – HSE, Production Supervisor and Project Engineer – Fatty Acids**

July 1984 – Jan. 1989

Canada Packers was in the specialty chemicals business and my role started out in the laboratory, followed by management of the Health, Safety, and Environment function for 9 facilities. This was followed by a voluntary move to a production facility to gain experience in production scheduling, control, and labor relations.

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## PROFESSIONAL DESIGNATIONS

- P.Eng in Ontario and Newfoundland & Labrador, QPesa in Ontario
- P.E. in Arizona, Delaware, Maryland, and New Hampshire

## EDUCATION AND TRAINING

- 2017 – GHD Global Executive Development Program
- 2016 – Leading Professional Service Firms, Residential Program, Harvard Business School
- 1985 – Bachelor of Technology, Chemical Engineering, Ryerson – Gold Medal Recipient

# Stephen M Quigley, P.Eng, P.E.

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## Attachment 1

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### Stephen Quigley Representative Projects

#### **Project Director/Manager**

**Chemtura | Elmira, ON |**

**1989 - 2019**

Steve was involved in the investigation and remediation of this significant site in Ontario since its inception on behalf of the owner, Chemtura and its predecessors. The work has involved all matrices, a wide range of contaminants, novel approaches to remediation of sediment, soil, and groundwater, dioxins/furans, dense non-aqueous phase liquids (DNAPL) and an adaptive, risk-based management approach.

#### **Project Director/Manager**

**South Dayton Dump and Landfill Site |**

**Dayton, OH | 2008 - 2019**

Steve directed the development of an assessment and closure strategy at the South Dayton site for a group of potentially responsible parties. The site is in a rigid regulatory setting and navigating the regulatory oversight process has been a major challenge. Significant technical issues at this site include vapor intrusion, and source characterization/isolation.

#### **Project Director/Manager**

**Jadco-Hughes Site | Gaston County, NC | 1989 - 2019**

Steve was part of the project team completing the initial characterization of this site and has managed the project since the early 1990s. Steve has guided this project through its remediation and continues to oversee its operations and strategic pathway to completion. Significant technical challenges include negotiation of appropriate treated water discharge management, remediation strategy and ultimate closure strategy.

#### **Project Director/Manager**

**Confidential Aircraft Manufacturer |**

**Mississauga, ON | 2000 - 2012**

On Boeing's behalf, Steve directed investigation, remediation, and closure of the former McDonnell Douglas facility adjacent to Toronto's Pearson Airport. Steve was responsible for the negotiation of the technical approach to confirm that risk-based remediation objectives were met and developing a cost-effective and novel in-situ remediation approach.

#### **Project Manager**

**Confidential Transit Commission | ON |**

**2013 - 2019**

Steve directed the response to a Ministry of Environment and Climate Change (MOECC)-identified groundwater and potential indoor air impairment, primarily by trichloroethene (TCE). GHD, the client, and the MOECC have cooperatively completed off-site investigation (groundwater and soil vapor), source identification/investigation, risk evaluation, and remedial alternatives analysis.

#### **Project Director/Manager**

**Motorola 52nd Street Superfund Site, Operable Unit 2 | Phoenix, AZ | 1994 - 2008**

Motorola (subsequently Freescale) retained GHD to investigate, design, test, commission, operate, and maintain a large-scale groundwater remediation system in downtown Phoenix. In addition to navigating regulatory and public interactions, Steve managed the development of novel discharge arrangements and risk-based contingent technologies for trace organic chemical treatment.

#### **Project Director/Expert Witness**

**Window Manufacturer | Waterloo, ON | 2014 - Present**

The property owner retained GHD to investigate the extent of impacts in the subsurface following the removal of gasoline underground storage tanks at its site. Steve provided overall project direction and is a designated expert witness in the civil suit brought by the property owner against the consultant who oversaw the tank removal.

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## **Project Director/Manager and Environmental Engineer Multiple Sites and Locations**

Provided the overall strategic direction on projects, execution of the work, reporting to the clients and regulators, and delivering cost-effective and implementable remediation and/or compliance programs on a wide array of sites. Examples are listed below.

- Project Director for investigation, remediation, and litigation support for two PCB contaminated properties in Ontario.
- Principal-in-charge of RD/RA for Tucson International Airport Superfund Site, Tucson, AZ.
- Expert witness, property damage suit, Bristol, CT.
- Litigation consultant and expert witness, Roosevelt Irrigation District Matter, Phoenix, AZ.
- Project Director for fleetwide radionuclide hydrogeologic investigation at 11 nuclear generating stations in Illinois, Pennsylvania, and New Jersey, including the development of risk of release analyses, work plans, management of the field work, and preparation of hydrogeologic investigation reports.
- Cost allocation and cost recovery expert witness, Vertac Superfund Site (on site incineration, off site incineration, groundwater recovery and treatment, and capping of a dioxin contaminated site), Jacksonville AR.
- Project Manager and auditor for Environmental Site Assessments and Baseline Environmental Assessments at facilities in the United States and Canada, including vacant properties, out of service facilities, and active industrial operations.
- Litigation Consultant for Superfund Site in Ohio.
- Project Director, insurance recovery project for confidential multi-site claim - aerospace.
- Expert Witness, citizens' suit, Downers Grove, IL.
- Project Director, PCB self-implementing clean up, Waterbury CT.
- Principal-in-charge for Site decommissioning and demolition project, City of Industry, CA.
- Principal-in-charge for solid waste transfer station approval and permitting, Vaughan, ON.
- Project Director for site decommissioning and redevelopment, Waterloo North Hydro, Waterloo, ON.
- Principal-in-charge of operation and maintenance of a chemical plant's wastewater treatment system, Hightstown, NJ.
- Litigation consultant for a confidential air emissions and dispersion project, PA.
- Principal-in-charge for two brownfield sites' redevelopment into condominiums, Toronto, ON.
- Expert Witness, Freshwater Pond Liner Suit, Phoenix, AZ.
- Expert Witness, Insurance Recovery Suit, Confidential, Phoenix, AZ.
- Expert witness and project manager in contamination assessment, confidential client, Toronto, ON.
- Principal in charge of RI/FS at the Scovill Industrial Landfill, Waterbury, CT.
- Expert Witness for cost recovery action, WM Landfill Site, Thomson, GA.
- Principal-in-charge of the operation and enhancement of an air sparge system at an ISRA site, Paterson, NJ.
- Litigation Consultant for land disposal sites in PA.
- In-house acting Remediation Manager for confidential specialty chemical manufacturer.
- Expert Witness in defense of citizens' suit against a railway tie treating company, North Little Rock, AR.
- Principal-in-charge of a RCRA Voluntary Corrective Action and Transfer Act Site Assessment, confidential location, CT.
- Principal-in-Charge of Environmental Compliance Audit at 84-acre specialty chemical manufacturer.
- Project Manager for due diligence investigations for new automotive tire production plant construction on a 500-acre parcel of land.
- Project Manager for evaluation and design of reservoir lining system and litigation support, Sedona, AZ.

# Stephen M Quigley, P.Eng, P.E.

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- Project Manager for site assessment and remediation of pesticide contamination, AirPro Property, including groundwater investigation, soil removal and construction of a geomembrane cap, Montgomery, AL.
  - Project Manager for wastewater pretreatment system improvements, including a waste audit, evaluation of existing pretreatment system and design of process modifications, Meat Processor, GA.
  - Project Manager-- FS, vadose zone treatability study, preparation of technical impracticability waiver application, and RD/RA for Tucson International Airport RI/FS (Superfund) Site, Tucson, AZ.
  - Project Manager for cleanup and demolition of a 2.3 million square foot former automotive manufacturing facility, Old Mack Site, Detroit, MI.
  - Project Manager for surface and subsurface removal actions (approximately 9,000 containers and soil disposal) including development of Work Plan, Contract Documents and Specifications and provision of construction supervision, Jackson Drop Forge Site, Jackson, MI.
  - Corporate sustainability program development and greenhouse gas emissions inventory for large waste management and processing company.
  - Baseline greenhouse gas emissions inventory and web-based carbon footprint calculation tool development, key performance indicator assessment, aggregate sector client.
  - Senior technical advisor for energy auditing and energy management systems for institutional (government and academic institutions) and industrial clients.
  - Senior technical advisor and peer reviewer for multiple applications for funding by various clients to Sustainable Technology development Canada.

**ATTACHMENT 2**

Acknowledgement of Expert Duty



Ontario  
Ontario Land Tribunal  
Tribunal de l'aménagement du territoire Ontario

**Acknowledgment Of Expert's Duty**

OLT Case Number	Municipality
PL200195	Regional Municipality of Ottawa

1. My name is Stephen Michael Quigley  
I live at the City of Waterloo  
in the Regional Municipality of Waterloo  
in the Province of Ontario
2. I have been engaged by or on behalf of the Kanata Greenspace  
Protection Coalition to provide evidence in relation to the above-noted Ontario  
Land Tribunal ('Tribunal') proceeding.
3. I acknowledge that it is my duty to provide evidence in relation to this proceeding  
as follows:
  - a. to provide opinion evidence that is fair, objective and non-partisan;
  - b. to provide opinion evidence that is related only to matters that are within my  
area of expertise;
  - c. to provide such additional assistance as the Tribunal may reasonably  
require, to determine a matter in issue; and
  - d. not to seek or receive assistance or communication, except technical  
support, while under cross examination, through any means including any  
electronic means, from any third party, including but not limited to legal  
counsel or client.
4. I acknowledge that the duty referred to above prevails over any obligation which I  
may owe to any party by whom or on whose behalf I am engaged.

Date: November 10, 2021

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Signature