



871 Equestrian Court, Unit 1, Oakville, ON L6L 6L7
Tel: 647-795-8153 | www.pecg.ca

Phase One Environmental Site Assessment (ESA)

65 Northey's Bay Road, Woodview, ON

Project #

2204601

Prepared For

Eric Challenger

March 21, 2023



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Eric Challenger
65 Northey's Bay Road, Woodview, ON K0L 3E0
c/o Derek Pokora
EcoVue Consulting Services Inc.
311 George Street North, #200, Peterborough, ON K9J 3H3

Dear Eric Challenger:

Re: Phase One Environmental Site Assessment, 65 Northey's Bay Road, Woodview, ON
Project #: 2204601

We are pleased to present our Phase One Environmental Site Assessment (ESA) report for the above-noted property. The scope of this Phase One ESA conforms to the requirements outlined in Ontario Regulation 153/04 and 407/19. This Phase One ESA does not include sampling or testing and is based solely on visual observations and a review of available or supplied factual data. The purpose of this Phase One ESA is to support a zoning approval application with the Township of North Kawartha and is required to support filing of a Record of Site Condition (RSC) with the Ministry of the Environment, Conservation and Parks (MECP).

The report provides information from Palmer's site reconnaissance, historical record review, interviews with knowledgeable individuals, and our conclusions for your consideration.

We trust that this report will be satisfactory for your current needs. If you have any questions or require further information, please contact our office at your convenience.

Yours truly,

PalmerTM

Sarah Vlantis, B.Sc., P.Geo (limited), QP_{ESA}
Principal, Environment & Construction Team Lead

Executive Summary

Palmer is pleased to provide this Phase One Environmental Site Assessment (ESA) report to Eric Challenger. The Phase One ESA was prepared for the parcel of land located at 65 Northey's Bay Road in Woodview, Ontario (hereafter collectively referred to as the "Phase One Property").

It is Palmer's understanding that the purpose of this Phase One ESA is to support a zoning approval application with the Township of North Kawartha and is required to support filing of a Record of Site Condition (RSC) with the Ministry of the Environment, Conservation and Parks (MECP). A portion of the Phase One Property (also referred to as the "Subject Property" or "Site") that encompasses the golf course is contemplated for redevelopment with a subdivision consisting of fifty-six (56) residential lots and one (1) commercial lot. The Phase One ESA Report has been prepared in accordance with Schedule D of Ontario Regulation 407/19 (amending Ontario Regulation 153/04) under the Environmental Protection Act (EPA). The Phase One ESA includes an assessment of adjacent and neighbouring lands within a 250-metre (m) radius of the Phase One Property (hereafter referred to as the "Phase One Study Area").

The Phase One Property is a 122.34-hectare, irregular shaped, parcel of land located on the east side of Northey's Bay Road, south of the intersection with Highway 28 in Woodview, Ontario. Building structures on the Site include a 182.71 m², two storey residential building (with a basement), a 386.78 m² barn, a 138.55 m² barn, a 34.05 m² detached garage, 48.98 m² cabin, 78.73 m² Club House, two (2) portable storage trailers and two (2) storage sheds. The remaining parts of the Site comprise gravel surfaced areas, landscaped areas, a 9-hole golf course, as well as a woodlot.

The Phase One Study Area ("surrounding area") covers land uses within a 250 metre (m) radius of the Phase One Property. The Phase One Study Area is partly developed with residential, commercial, and community land uses, including a Fire Emergency Station and Community Centre located at 66 Northey's Bay Road.

There are water bodies on the Phase One Property including an open water pond, and associated tributaries that drain in a southeasterly direction towards Upper Stony Lake along the western and central portions of the Phase One Property. Julian Lake is located approximately 585 m west of the Phase One Property. A man-made artificial irrigation pond is located in the centre of the Phase One Property. There are no areas of natural significance on the Phase One Property or surrounding Phase One Study Area.

Historically, the Site was first developed in the early 1900s with the existing residential structure and two (2) barn structures. The Golf Course Club House was built in 2013 in conjunction with the development of the Golf Course on the western half of the Phase One Property.

Based on the findings of the historical records review, Site reconnaissance, and personal interviews, it was concluded that four (4) potentially contaminating activities (PCAs) were identified either on the Phase One Property or within the Phase One Study Area. These PCAs were deemed to be contributing to four (4) areas of potential environmental concern (APECs) on the Phase One Property. The identified PCAs and APECs are as follows:

Table A. Summary of APECs and PCAs

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground water, Soil and/or Sediment)
APEC #1: Existing Vehicle Maintenance and Repair Activities	Northwestern Corner of Phase One Property	#52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site – Maintenance and repair of golf course equipment currently occurring in the trailer structure located at the northwest portion of the Site.	Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Volatile Organic Compounds (VOCs), Metals, Arsenic (As), Antimony (Sb), Selenium (Se)	Soil and Ground Water
APEC #2: Historical Vehicle Maintenance and Repair Activities	Northwestern Corner of Phase One Property	#52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site – Maintenance and repair of golf course equipment formerly occurring in the barn located at the northwest portion of the Site.	PHCs, BTEX, VOCs, Metals, As, Sb, Se	Soil and Ground Water
APEC #3: Existing Diesel and Gasoline Aboveground Storage Tanks (ASTs)	Northwestern Corner of Phase One Property	#28: Gasoline and Associated Products Storage in Fixed Tanks	On-Site – Two (2) 1,200-L diesel fuel and gasoline ASTs located along southeast portion of northernmost barn structure.	PHCs, BTEX	Soil and Ground Water
APEC #4: Existing Diesel ASTs	Western Portion of the Phase One Property	#28: Gasoline and Associated Products Storage in Fixed Tanks	Off-Site: Exterior fuel ASTs located approximately 50 m west at 66 Northey's Bay Road Municipal Fire Service Station.	PHCs, BTEX	Ground Water

APECs #1, #2 and #3 at the northwestern portion of the Phase One Property are located on Lot 57, which will be severed and not included within the footprint of the proposed 56 lot subdivision. APEC#4 at the western portion of the Phase One Property is located on lot 58 of the proposed development, which is planned for commercial redevelopment.

A Phase Two ESA is recommended to assess subsurface impacts as a result of the aforementioned PCAs and APECs. The scope of the Phase Two ESA should entail the analysis of representative soil and ground water samples from the Phase One Property for the contaminants of potential concern identified; including PHCs, BTEX, VOCs, Metals, As, Sb, and Se.

The statements made in this Executive Summary are subject to the same limitations as contained in the report and should be read in conjunction with the entire report.

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1. Introduction

Palmer was retained by Eric Challenger (the 'Client') to conduct a Phase One Environmental Site Assessment (ESA) for the parcel of land located at 65 Northey's Bay Road in Woodview, Ontario (hereinafter referred to as the 'Phase One Property').

It is Palmer's understanding that the purpose of this Phase One ESA is to support a zoning approval application with the Township of North Kawartha and is required to support filing of a Record of Site Condition (RSC) with the Ministry of the Environment, Conservation and Parks (MECP). The Phase One Property (also referred to as "Subject Property" or "Site") is contemplated for redevelopment with a subdivision consisting of fifty-six (56) residential lots and one (1) commercial lot. The Phase One ESA Report has been prepared in accordance with Schedule D of Ontario Regulation 407/19 (amending Ontario Regulation 153/04) under the Environmental Protection Act (EPA). The Phase One ESA includes an assessment of adjacent and neighbouring lands within a 250-metre (m) radius of the Phase One Property (hereafter referred to as the "Phase One Study Area").

At the time of the investigation, the Phase One Property was owned and occupied by Eric Challenger, with a portion of the Phase One Property operating as Woodview Golf Course. The authorization for Palmer to proceed with the Phase One ESA was given by Mr. Eric Challenger (the Phase One Property Owner). The contact information for the proponent is provided below:

<u>Company Address:</u>	65 Northey's Bay Road, Woodview, ON. K0L 3E0
<u>Contact Name:</u>	Eric Challenger
<u>Contact email:</u>	ebchallen@gmail.com

1.1 Phase One Property Information

The Phase One Property is a 122.34-hectare, irregular shaped, parcel of land located on the east side of Northey's Bay Road, south of the intersection with Highway 28 in Woodview, Ontario. Building structures on the Site include a 182.71 m², two storey residential building (with a basement), a 386.78 m² barn, a 138.55 m² barn, a 34.05 m² detached garage, 48.98 m² cabin, 78.73 m² Club House, two (2) portable storage trailers and two (2) storage sheds. The remaining parts of the Site comprise gravel surfaced areas, landscaped areas, a 9-hole golf course, as well as a woodlot.

The subject property is located east of Northey's Bay Road and south of Highway 28, as shown in **Figure 1** and the photographs in **Appendix A** and **Appendix B**. The municipal address is 65 Northey's Bay Road, Woodview with Property Identification Number (PIN) 28303-0207 (LT).

The legal description of the Phase One Property is Part of Lot 6-7, Concession 6, Burleigh (Southern Division) as in R715834; North Kawartha, Province of Ontario.

A map outlining parcel boundaries and the conceptual site plan is presented in **Appendix C**.

The center of the combined area of the Phase One Property is located in UTM Zone 17, with approximate coordinates of Easting 728350 m and Northing 4941424 m.

1.2 Scope of Investigation

The Phase One ESA was completed in accordance with Schedule D of Ontario Regulation 407/19 (amending Ontario Regulation 153/04) under the EPA. The purpose of the Phase One ESA is to establish if potential environmental impacts are likely to be present on the Phase One Property as a result of previous or current land use on or in the vicinity of the Phase One Property. The following key components were completed as part of the assessment:

- Review of historical information (i.e. previous reports, site operating records, fire insurance plans, aerial photographs, occupancy search, etc.);
- Request and review of applicable documents (i.e. maps, provincial and federal archives, etc.);
- Review of applicable federal and provincial databases;
- Site reconnaissance and interviews with knowledgeable site representatives;
- Collections of photographs showing the current and past uses of the Site and surrounding area, as well as potentially contaminating activities (PCAs) and areas of potential environmental contamination (APECs);
- Tables and maps summarizing and providing the location of each PCA and APEC;
- Evaluation of information from records review, interviews and site reconnaissance; and
- Completion of a conceptual site model (CSM).

The Phase One ESA report was prepared for use by Eric Challenger based on information collected by qualified Palmer staff members in November 2022. The Phase One ESA was prepared by Sasha Grabovskyy, B.ES., and Kalina Naydenova, M.Sc., under direct supervision by Sarah Vlantis, B.Sc., P.Geo. (limited), a “Qualified Person” (QP_{ESA}) as defined by Ontario Regulation 153/04. The qualifications of these Palmer members are summarized in Section 8.0.

2. Records Review

2.1 General Records

2.1.1 Phase One ESA Study Area Determination

The qualified person (QP), Sarah Vlantis, B.Sc., P.Geo. (limited), overseeing this Phase One ESA determined that the conventional distance of 250 m from the Site boundaries was adequate for defining the Phase One Study Area for all records reviewed. The limits of the Phase One Study Area are depicted on **Figure 1**.

2.1.2 First Developed Use Determination

The first developed use of the Phase One Property was determined through the records review as detailed throughout **Section 2** of the Phase One ESA report and summarized below.

An illustrated atlas from 1881 revealed that the Phase One Property was a vacant portion of a much larger block of vacant land with no structures depicted.

An aerial photograph taken in 1951 showed the Phase One Property to comprise a residential building and two (2) barn structures located on the northwestern portion of the Phase One Property. The remaining areas consisted of agricultural land, vacant and wooded areas.

Aerial photographs taken between 1965 and 2008 showed the Phase One Property to be further developed with various small storage structures/sheds along the northwestern portion of the Phase One Property with no significant changes to the remaining portion of the Phase One Property.

Aerial photographs taken between 2008 and 2022 showed the Phase One Property to be further developed with a Golf Course and an irrigation pond in the western half of the Phase One Property. Aerial photographs are shown in **Appendix B**.

2.1.3 Fire Insurance Plans

Fire insurance plans (FIPs) were produced between the late 1880's until the 1970s for urban communities throughout Canada. FIPs provided an illustrated resource that detailed the materials, occupancies, and potential fire hazards of existing buildings. The locations of above and below ground fuel storage tanks (ASTs/USTs) were also depicted on these plans.

Environmental Risk Information Services (ERIS) was retained to conduct a search for available FIPs or inspection report related documents pertaining to the Phase One Property or Study Area in order to provide additional information regarding historic usage and development at the site. The results of this search indicated that no FIPs exist for the Phase One Property or Phase One Study Area.

2.1.4 City Directory Search

Palmer retained ERIS to conduct a search of available directories for the Phase One Property and all adjacent properties located within the Study Area. No relevant information was obtained from the directories search due to the properties uses being primarily residential, vacant land and agricultural.

2.1.5 Chain of Title

There is one (1) Chain of Title for the Phase One Property. Palmer obtained the Chain of Title/Parcel Register records from ERIS, and pertinent information is summarized as follows:

65 Northey's Bay Road has the PIN number 28303-0207 (LT) and was created in 2007.

Year	Name of Owner
Prior to 1865	Crown (Part of Phase One Property Occupying Lot 6)
Prior to 1876	Crown (Part of Phase One Property Occupying Lot 7)
19/09/1865 to 2/12/1865	Laurence Tallan (Part of Phase One Property Occupying Lot 6)
1865 to 1870	James Fitzgerald (Part of Phase One Property Occupying Lot 6)
1870 to 1884	Lafayette Reid (Both Lots Combined into Entire Phase One Property in 1876)
19/04/1876 to 10/08/1876	David Drain (Part of Phase One Property Occupying Lot 7)
1876 to 1884	Lafayette Reid (Both Lots Combined into Entire Phase One Property in 1876)
1884 to 1913	John Hull
1913 to 1916	Lafayette Reid
1916 to 1935	Bruce and Howard Reid
1935 to 1944	William J. Northey
1944 to 1988	Wilfred Ottis Northey
1988 to 1989	Frederick Edward Bolton and Rosemaire Frances Bolton
1989 to 2004	Alexander Edward Button and Elmera Tan Button
2004 to 2005	Mei Yu Su
2005 to present	Eric Bradley Challenger and Diane Elizabeth Challenger

A copy of this record is provided in **Appendix D**.

2.1.6 Previous Environmental Reports

No reports relating to the environmental conditions at the Phase One Property were provided.

2.2 Environmental Source Information

The EcoLog ERIS (ERIS) system provides information from federal, provincial and private source databases and was searched for information relating to the Phase One Property. The EcoLog report is presented in **Appendix E**.

Each database is divided into records that present information such as company name, addresses, descriptions, status and other pertinent information. Records that fell within 250 m from the Phase One Property (Phase One Study Area) were extracted from the database for review.

2.2.1 *Municipal Records Database*

A written request was filed on November 16, 2022 for information concerning control orders, violation notices, and other environmental concerns for the Phase One Property with the County of Peterborough Records and Freedom of Information Department. A response dated December 16, 2022 indicated that no records were identified for the Phase One Property. A copy of this correspondence is presented in **Appendix F**.

2.2.2 *Provincial Records Database*

A Freedom of Information request was filed on November 17, 2022 for information relating to any control orders, violation notices, or other environmental concerns with the MECP. No information has been received to date. Any forthcoming documentation from the aforementioned regulatory agency will be reviewed, and if the response specifies any environmental concerns, it will be addressed and forwarded to the Client. A copy of the MECP response is presented in **Appendix G**.

A total of seven (7) provincial records were available for the Phase One Property and thirteen (13) records for the 250 m search radius from ERIS. The records are summarized as follows, with identification of existence of a PCA:

- i. **Mineral Occurrences** – One (1) record exists for the 250 m search radius. This record relates to the presence of limestone and is not considered to pose an environmental concern to the Phase One Property.
- ii. **Permit to Take Water** – Two (2) records exist for the Phase One Property. The records for the Phase One Property relates to an issued permit to take water from three (3) wells and one irrigation pond for golf course irrigation and water supply purposes, issued in 2014 with a decision instrument from April 2021 which replaces the previous permit and expires in 2031. This record is not considered to pose an environmental concern to the Phase One Property.
- iii. **Water Well Information System** – Five (5) records exist for the Phase One Property and twelve (12) records exist for the 250 m search radius. The records for the Phase One Property indicates the installation of a water supply well to a maximum depth of 31 m below the ground surface in 2007 for irrigation purposes; the installation of a water supply well to a maximum depth of 19.81 m in 2007 for commercial use; the installation of a water supply well to a maximum depth of 13.10 m in 2007 for irrigation use the installation of a water supply well to a maximum depth of 88 m in 2007 for commercial use; and the installation of a domestic well to a maximum depth of 91 m in 2004 for domestic use. Due to clerical error one of the well records for the Phase One Property is listed with an address of 87 Northey's Bay Road, however the review of the well record copy revealed the record is for the Phase One Property. The records for Phase One Study Area relate to domestic and public wells advanced to a maximum depth of 91.44 m below the ground surface in the vicinity of the Phase One Property. These records are not considered to pose an environmental concern to the Phase One Property.

2.2.3 Federal Records Database

No Federal Records were found for the Phase One Property or within a 250 m search radius.

2.2.4 Private Records Database

A written request was made with a Customer Service Advisor with the Technical Standards and Safety Authority (TSSA) on October 26, 2022 for additional information regarding any storage tanks associated with the Phase One Property and/or Phase One Study Area. A response dated October 27, 2022 revealed that no fuel storage tank records were located for the Phase One Property and the adjoining properties within the Phase One Study Area. A copy of the TSSA correspondence and records are presented in **Appendix H**.

A total of one (1) private record was available for the 250 m search radius from EcoLog. The records are summarized as follows, with identification of existence of an area of potential environmental concern:

- i. **Scott's Manufacturing Directory** – One (1) record exist for the 250 m search radius. This record relates to residential building construction, prefabricated wood building manufacturing, architectural services and drafting services at 34 Library Road, 263 m west of the Phase One Property. This record is related to home-based business at 34 Library Road and is not considered to pose an environmental concern to the Phase One Property.

2.3 Physical Setting Sources

2.3.1 Aerial Photographs

Aerial photographs for select years between 1951 and 2018 were reviewed to assist in the determination of historic land uses and development of the Phase One Property and Study Area. Aerial photographs were obtained from ERIS, National Air Photo Library and Google Earth.

Copies of reviewed aerial photographs are provided in **Appendix B**, and are summarized in **Table 1**, below.

Table 1. Aerial Photograph Review Summary

Date	Phase One Property	Adjacent Properties within Study Area
1951	<ul style="list-style-type: none"> The Property appears as developed with a residence and barn structures along the northwest boundary. Agricultural fields are depicted on the western portion of the Phase One Property with the eastern being woodlot and wetlands. 	<ul style="list-style-type: none"> Agricultural and vacant lots are present surrounding the property.
1965	<ul style="list-style-type: none"> No significant changes evident. Small storage structures/sheds are depicted in the area of the residential building. 	<ul style="list-style-type: none"> No significant changes evident. Some residential properties are depicted within the western portion of the Phase One Study Area.
1976	<ul style="list-style-type: none"> No significant changes evident. 	<ul style="list-style-type: none"> No significant changes evident.

Date	Phase One Property	Adjacent Properties within Study Area
1981	<ul style="list-style-type: none"> No significant changes evident. 	<ul style="list-style-type: none"> Construction of parkland across Northey's Bay Road evident.
1995	<ul style="list-style-type: none"> No significant changes evident. 	<ul style="list-style-type: none"> Completion of parkland construction across Northey's Bay Road.
2002	<ul style="list-style-type: none"> No significant changes evident. 	<ul style="list-style-type: none"> Completion of Fire Emergency Station across Northey's Bay Road. Residential properties are developed at the northwest corner of the Phase One Study Area.
2013	<ul style="list-style-type: none"> Topsoil appears stripped at northern-most field on Phase One Property. The irrigation pond is developed on the western portion of the Phase One Property. Golf Course under development with Club House built. 	<ul style="list-style-type: none"> No significant changes evident. The northwest portion of the Study Area is further developed with residential buildings. An addition was constructed to the Fire Emergency Station.
2018	<ul style="list-style-type: none"> No significant changes evident. 	<ul style="list-style-type: none"> No significant changes evident.
2022	<ul style="list-style-type: none"> No significant changes evident. 	<ul style="list-style-type: none"> No significant changes evident.

Summary:

The Phase One Property was used for agricultural purposes from 1951 to at least 2002. The developed portion of the Phase One Property underwent earthworks operations since circa 2010 to 2013 transitioning to a commercial Golf Course. Development of infrastructure across Northey's Bay Road occurred between 1981 to 2002 with addition of parkland and Fire Emergency Station.

2.3.2 Topography, Hydrology, Geology

The Phase One Property is located at a topographic elevation of approximately 250 to 280 m above mean sea level. Topography at and in the general vicinity of the Site is sloped with undulations and a drop in elevation to the southeast towards Upper Stony Lake., as shown in **Figure 2**.

The Phase One Property is located within the broad physiographic regions known as the Dummer Moraines and Georgian Bay Fringe (Chapman and Putnam, 1984). The Dummer Moraines region consists of rough stony land characterized by angular fragments and blocks of limestone with many Precambrian rocks. This region extends from Burnt River to Tamworth. This region overlays the southwest portion of the Phase One Property. The Georgian Bay Fringe is characterized by very shallow soil and bare rock knobs and ridges. The Georgian Bay Fringe extends from Gravenhurst to Bon Echo. The Georgian Bay Fringe overlays the remainder of the Phase One Property.

Local surficial geologic mapping (The Ontario Geological Survey, 2003) of the Woodview area indicates that peat, muck, marl, and stony, carbonate-derived sandy silt to silty sand-textured till on Paleozoic terrain and Precambrian bedrock, underlie the Phase One Property.

Bedrock geologic mapping of Ontario (The Ontario Geological Survey, 1990) indicates that the glacially derived overburden soil at the Phase One Property is underlain by limestone, dolostone, shale, arkose and sandstone of the Ottawa Group; Simcoe Group; and Shadow Lake Formation on the west portion of the Phase One Property and Carbonate metasedimentary rocks, marble, calc-silicate rocks, skarn and tectonic breccias of the Grenville Supergroup and Flinton Group on the eastern portion of the Phase One Property.

A Radon Potential Map of Ontario revealed that the subject property is located within Zone 1 (Radon Potential Map Ontario, 2013). This Zone is designated as a high relative radon hazard. Therefore, emissions of radon in the vicinity of the Site are of a high potential environmental concern.

There are water bodies on the Phase One Property including an open water pond, and associated tributaries that drain in a southeasterly direction towards Upper Stony Lake along the western and central portions of the Phase One Property. Julian Lake is located approximately 585 m west of the Phase One Property. A man-made artificial irrigation pond is located in the centre of the Phase One Property. There are no areas of natural significance on the Phase One Property or surrounding Phase One Study Area.

Regional ground water flow is expected to be southeastward towards Upper Stony Lake and the associated tributaries. The static ground water level in the vicinity of the Phase One Property is noted to be between 0.8 and 10 m below existing grade based on well records in the vicinity of the Phase One Property.

2.3.3 *Fill Materials*

Shallow fill ditches consisting of crushed granular aggregate were observed on the western portion of the Phase One Property which were imported by the current owner for the development of the golf course. The current owner confirmed that these materials have originated from quarries within Peterborough County operated by Drain Bros Excavating Limited (Drain Bros). Based on the information provided by the owner and Drain Bros related to the source of the granular aggregate, and the processes used to produce it, the fill material is not considered to pose an environmental concern for the Phase One Property at this time.

2.3.4 *Water Bodies, Areas of Natural Significance & Ground Water Information*

There are water bodies on the Phase One Property including an open water pond, and associated tributaries that drain in a southeasterly direction towards Upper Stony Lake along the western and central portions of the Phase One Property. Julian Lake is located approximately 585 m west of the Phase One Property. A man-made artificial irrigation pond is located in the centre of the Phase One Property. There are no areas of natural significance on the Phase One Property or surrounding Phase One Study Area.

Local source water protection mapping (Source Protection Information Atlas, 2020) of the Woodview area indicates there are no well-head protection areas or significant ground water recharge areas in the vicinity of the Phase One Property. In addition, a highly vulnerable aquifer was noted to be present within the entire Phase One Property and Phase One Study Area. Intake Protection Zone 3 is depicted on the eastern and southeastern portion of the Phase One Property.

The Phase One Property is serviced by a private domestic drinking water system. There are a total of seventeen (17) well records within a 250 m search radius. These records relate to domestic, irrigation, commercial, and public wells in the Phase One Study Area.

2.3.5 Well Records

As previously discussed in Section 2.2.2, there are five (5) well records for the Phase One Property and twelve (12) well records within a 250 m search radius. These records relate to commercial, domestic, irrigation and public wells on the Phase One Property and in the Phase One Study Area.

A review of these records does not provide detailed information; however, available data is summarized as follows:

Table 2. Well Water Records Review

Well ID	Location	Depth (m)	Water Level (m)	Installation Date	Well Use	Status
7101360	37 Northey's Bay Road	31.08	30.5	December 3, 2007	Irrigation	Water Supply
7047985	37 Northey's Bay Road	19.81	17.7	August 23, 2007	Commercial	Water Supply
7101361	37 Northey's Bay Road	13.10	10.97	December 9, 2007	Irrigation	Water Supply
5120141	37 Northey's Bay Road	91	91	December 15, 2004	Domestic	Water Supply
7045863	87 Northey's Bay Road	88.39	8.22	May 14, 2007	Commercial	Water Supply
7352477	Library Road	85.34	83.82	May 27, 2019	Domestic	Water Supply
5120788	Library Road	48.76	5.45	April 3, 2006	Domestic	Water Supply
5118187	Lot 7 Con 6, 257 m NNW	91.44	6.10	July 12, 1999	Domestic	Water Supply
5112348	Lot 7 Con 6, 61 m NNW	19.81	12.49	May 20, 1987	Domestic	Water Supply
7225245	15 Library Road	60.96	14.32	July 7, 2014	Domestic	Water Supply
5119939	Lot 6 Con 6, 84m SW	30.5	4.12	June 4, 2004	Domestic	Water Supply
5107643	Lot 7 Con 5, 100 m W	44.19	12.10	September 30, 1975	Domestic	Water Supply
5110164	Lot 7 Con 5, 119 m W	22.86	12.10	October 28, 1980	Domestic	Water Supply
5120069	34 Library Road, 124 m W	67	9.8	November 19, 2004	Domestic	Water Supply
5100489	Lot 6 Con 5, 139 m W	14.02	9.44	April 28, 1964	Domestic	Water Supply
5100493	Lot 7 Con 5, 177 m W	18.28	8.83	October 20, 1955	Public	Water Supply
5108546	Lot 8 Con 6, 183 m NW	10.05	4.26	April 23, 1976	Domestic	Water Supply

2.4 Site Operating Records

The Phase One Property is considered an enhanced investigation property due to the existing and historic vehicle maintenance and repair operations occurring on the Phase One Property (PCA #1 and #2). As a part of the enhanced investigation, additional site operating records were requested during the Site reconnaissance on October 28, 2022.

Mr. Challenger, the owner and operator of Woodview Golf Course provided Palmer with the following documents noted in **Table 3**:

Table 3. Enhanced Investigation Property Records

Requested Documentation	Document Findings	Potential Concerns
Regulatory permits and records	Requested. Two (2) records exist for the Phase One Property. The records for the Phase One Property relates to an issued permit to take water from three (3) wells and one irrigation pond for golf course irrigation and water supply purposes, issued in 2014 with a decision instrument from April 2021 which replaces the previous permit and expires in 2031. This record is not considered to pose an environmental concern to the Phase One Property.	None
Material Safety Data Sheets (MSDS)	Requested. Mr. Challenger indicated that only 28-4-8 60% bagged fertilizer and no pesticides are utilized in maintenance operations for Golf Course; however are identified as environmentally friendly products that are not considered to pose a PCA that would contribute to an APEC on the Phase One Property. MSDS sheets for the fertilizer provided by Mr. Challenger indicate that the 28-4-8 60% bagged fertilizer consists of five ingredients which do not contain OC Pesticides. No additional MSDS sheets were available for the Phase One Property.	None
Underground utility drawings	Requested. No records available. However, Mr. Challenger indicated that underground irrigation pipes from the irrigation pond are connected to each hole of the Golf Course and no municipal utility connects to the Phase One Property with the exception of Hydro. Private underground utilities for the Phase One Property include private wells and septic systems, as well as any underground piping related to the propane aboveground storage tank used for heating purposes.	None
Inventories of chemicals, chemical usage and chemical storage areas	Requested. Inventories not available however, the purchase of fertilizer from Sunderland Co-Op Peterborough is on as needed basis. Maintenance fluids for the vehicle maintenance and repair includes small retail size containers purchased on as needed basis from local retailers which are stored in the maintenance trailer at the northwest portion of the Phase One Property.	PCA 1
Inventory of aboveground storage tanks and underground storage tanks	Requested. Two (2) gasoline and diesel fuel above ground storage tanks are located at the southeast corner of the barn. Mr. Challenger indicated that they are approximately two (2) years old, are inspected on a weekly basis by him and the tanks show no signs of leakage.	PCA 3
Environmental monitoring data	Requested. No records available.	None
Waste management records	Requested. Records for waste fluids generated during vehicle maintenance and repair are not available. Mr. Challenger indicated that all waste fluids are disposed of at the Pido Road Household Hazardous Waste Depot in Peterborough on as needed basis.	PCA 1 and 2
Process, production and maintenance documents	Requested. No records available.	None

Requested Documentation	Document Findings	Potential Concerns
Records of spills and records of discharges of contaminants	Requested. No records available.	None
Emergency response and contingency plans	Requested. No records available.	None
Environmental audit reports	Requested. No records available.	None
Site plan	Concept Plan provided by Land Owner.	None

3. Interviews

An interview was conducted by Palmer with Eric Challenger, the current owner, on October 28, 2022. Pertinent information provided by Mr. Challenger for 65 Northey's Bay Road is summarized as follows:

- Mr. Challenger has owned the Phase One Property since 2005.
- Mr. Challenger mentioned that the primary residence and barn structures were built some time between 1900 – 1920.
- The 9-Hole Golf Course was developed with reworked Phase One Property topsoil and imported granular aggregate.
- Crushed granular aggregate was used for the Golf Course bunkers brought from quarry sites operated by Drain Bros Excavating Limited (sourced within Peterborough County). Based on the information provided by the owner and Drain Bros related to the source of the granular aggregate, and the processes used to produce it, this material is not considered to pose an environmental concern for the Phase One Property at this time.
- Four (4) Golf Course maintenance machines are repaired by Mr. Challenger on an annual basis and all waste fluids are disposed of at the Pido Road Household Hazardous Waste Depot in Peterborough.
- Only 28-4-8 60% bagged fertilizer and no pesticides are utilized in maintenance operations for Golf Course; however are identified as environmentally friendly products that are not considered to pose a PCA that would contribute to an APEC on the Phase One Property. MSDS sheets for the fertilizer provided by Mr. Challenger indicate that the 28-4-8 60% bagged fertilizer consists of five ingredients which do not contain OC Pesticides. Details extracted from the MSDS sheets on the ingredients are as follows:
 - Domolitic Limestone provided by Carmeuse Lime & Stone;
 - Urea, Dry, provided by PCS Sales is biodegradable and has no known stability in soil;
 - Potash, provided by PCS Sales;
 - Monoammonium Phosphate (MAP) provided by The Mosaic Company is utilized as crop nutrient and has no known impact on soil;
 - Fertilizer provided by KOCH Agronomic Services is not considered as environmentally hazardous.
- Underground irrigation pipes from the irrigation pond are connected to each hole of the Golf Course.
- Hunters are active in eastern portion of Phase One Property during hunting season. Huts can be found spread across the eastern portion of the Phase One Property.
- Fuel for the portable Diesel and Gasoline ASTs is provided by Sunderland Co-op on a contractual basis. These tanks are approximately two (2) years old and are inspected on a weekly basis by the owner who indicated that the tanks show no signs of leakage.
- No municipal utility connects to the Phase One Property with the exception of Hydro.
- Mr. Challenger provided a Letter from the North Kawartha Township stating there are no records found related to fuel leaks at the Wilson Park Fire Hall, 66 Northey's Bay Road.
- The property that encompasses the golf course only is proposed for redevelopment with a subdivision consisting of fifty-six (56) residential lots and one (1) commercial lot. A copy of the proposed subdivision plan is presented in **Appendix C**.

4. Phase One Property Reconnaissance

4.1 Written Description of Investigation

The purpose of the Site reconnaissance was to determine if APECs exist, through observations about current and past uses and PCAs on, in or under the Phase One Property and within the Phase One Study Area, as well as to identify potential contaminant pathways. Exterior observations of the Phase One Property and surrounding properties were conducted. The exterior observations were recorded by walking over the grounds. Adjoining properties and properties within the Phase One Study Area were observed from within the grounds of the Phase One Property and public roadways.

An investigation of the Phase One Property was completed by Sasha Grabovskyy, B.ES. of Palmer on October 28, 2022. Weather conditions during the inspection were partly cloudy with an ambient temperature at approximately -1 degrees Celsius, and slight winds. The inspection involved visual observations of the Phase One Property to confirm current conditions, as well as observations of adjacent properties from the Phase One Property limits and publicly accessible locations (i.e. municipal roads). Palmer was accompanied by Eric Challenger during a portion of their inspection of 65 Northey's Bay Road. Photographs taken during the Phase One Property inspection are provided in **Appendix A**.

Photographs in **Appendix A** depict the following aspects of the Phase One Property and are noted in **Table 4**:

Table 4. Photograph Summary

Photograph 1	Photo depicts south view of Northey's Bay Road
Photograph 2	Photo depicts north view of Fire Route 35
Photograph 3	Photo depicts north view of residence on Phase One Property
Photograph 4	Photo depicts south view of residence on Phase One Property
Photograph 5	Photo depicts private well to west of residence on Phase One Property
Photograph 6	Photo depicts Septic Tank to north of residence on Phase One Property
Photograph 7	Photo depicts Propane Tank to north of residence on Phase One Property
Photograph 8	Photo depicts Furnace in basement of residence on Phase One Property
Photograph 9	Photo depicts Cabin to south of residence on Phase One Property
Photograph 10	Photo depicts Shed to south of residence on Phase One Property
Photograph 11	Photo depicts barn to east of residence on Phase One Property
Photograph 12	Photo depicts intact barn to east of residence on Phase One Property
Photograph 13	Photo depicts interior of intact barn to east of residence on Phase One Property
Photograph 14	Photo depicts Diesel and Gasoline ASTs to east of intact barn on Phase One Property
Photograph 15	Photo depicts storage trailer to east of residence on Phase One Property
Photograph 16	Photo depicts interior of storage trailer to east of residence on Phase One Property
Photograph 17	Photo depicts Golf Course Pro Shop on Phase One Property
Photograph 18	Photo depicts location of Pro Shop Domestic Well on Phase One Property

Photograph 19	Photo depicts Transformer to north of Pro Shop on Phase One Property
Photograph 20	Photo depicts general view of artificial irrigation pond on Phase One Property
Photograph 21	Photo depicts wetland in eastern portion of Phase One Property
Photograph 22	Photo depicts general view of Golf Course on Phase One Property
Photograph 23	Photo depicts general view of Golf Course on Phase One Property
Photograph 24	Photo depicts general view of bunker in Golf Course on Phase One Property
Photograph 25	Photo depicts Monitoring Well near wetland on Phase One Property
Photograph 26	Photo depicts general view of Fire Station to west of Phase One Property
Photograph 27	Photo depicts general view of neighboring property to south of Phase One Property

4.1 General Property Description

The Phase One Property is located approximately 190 m south of the Highway 28 and Northey's Bay Road intersection and comprises a total area of approximately 122.34 hectares. It is located in an area partly development with residential, commercial, and community land uses.

At the time of Palmer's investigation on October 28, 2022, the Phase One Property was owned and occupied by Eric Challenger. The Phase One Property supports a 182.71 m², two storey residential building (with a basement), a 386.78 m² barn, a 138.55 m² barn, a 34.05 m² detached garage, 48.98 m² cabin, 78.73 m² Pro Shop, two (2) portable storage trailers and two (2) storage sheds. The paved surfaces included asphalt and gravel-covered driveways and parking lot. Vegetation throughout this lot comprised a mix of manicured lawns and overgrown woodlands and wetland vegetation.

The Phase One Study Area, as depicted in **Figure 1**, was surveyed within a 250 m radius and all occupants of neighboring properties were noted. The Phase One Study Area is partly developed with residential, commercial, and community land uses including a Fire Station and Community Centre, as shown in **Figure 3**.

There are water bodies on the Phase One Property including an open water pond, and associated tributaries that drain in a southeasterly direction towards Upper Stony Lake along the western and central portions of the Phase One Property. Julian Lake is located approximately 585 m west of the Phase One Property. A man-made artificial irrigation pond is located in the centre of the Phase One Property. There are no areas of natural significance on the Phase One Property or surrounding Phase One Study Area.

4.2 Specific Property Observations

4.2.1 Structures and Other Improvements

The Phase One Property supports a 182.71 m², two storey residential building (with a basement), a 386.78 m² barn, a 138.55 m² barn, a 34.05 m² detached garage, 48.98 m² cabin, 78.73 m² Club House, two (2) portable storage trailers and two (2) storage sheds, as shown in **Figure 4**.

Development of the Phase One Property began in the early 1900s with the construction of the 182.71 m² residential structure and 386.78 m² barn structure. The 138.55 m² barn structure located to the east of the residential structure was added in the 1920s. The detached garage and one (1) of the storage sheds were incorporated between the 1940s. The Golf Course Pro Shop and storage shed were developed on the property in 2013. The 48.98 m² cabin was added in the 2000s. In addition, there was no evidence of any underground storage tanks (USTs) at the Phase One property. However, during the personal interviews, it was reported that Sunderland Co-op contractually refills portable Diesel and Gasoline ASTs. The two (2) ASTs were observed to be located at the southeast exterior of the Maintenance and Storage Barn.

4.2.2 Underground Utilities and Service Corridors

Underground utilities at the Phase One Property include septic systems, domestic wells, Hydro and private propane AST with associated piping, communication cables and irrigation pipes.

4.2.3 Interiors of Structures and Buildings

The 182.71 m² residential structure has two (2) exit and entry points along the east and south walls of the structure. The structure has a stone exterior overlaid with laminate siding, sloped asphalt shingled roofing and the structure is built around boulders utilized as flooring in the basement. The structure is heated by a propane based forced air furnace, and is connected to a private well and septic system. The interior of the structure above basement level consists of hardwood flooring with painted drywall walls.

The 386.78 m² barn structure has seven exit and entry points along the north, south and east walls of the structure. The barn structure is comprised of a stone wall based extended with wood siding and a sloped sheet-metal roofing based on a partial foundation and mainly containing exposed soil surface. The barn is in fair condition and is utilized for Golf Course Maintenance Equipment Storage. A diesel and gasoline AST are located along the southeast corner of the barn.

The 138.55 m² barn structure located to the east of the residence is utilized for general storage. The barn structure is comprised of hardwood siding and a sloped sheet-metal roof. The barn is in fair condition.

The 48.98 m² cabin structure maintains a laminate siding exterior with a sloped asphalt-shingled roof. The cabin is built on a raised platform and is connected to the domestic water supply from the primary residence.

The 78.73 m² Golf Course Pro Shop maintains a laminate flooring and drywall wall interior with hardwood exterior siding and a sloped asphalt-shingled roof. The Pro Shop is built on a raised platform and is connected to Hydro and a domestic well and septic system. The Pro Shop is heated by electric baseboards. No drains or sump pits were observed in any of the structures with the exception of the bathrooms connections to the onsite septic systems.

4.2.4 Exterior Portions of the Phase One Property

The exterior portion of the Phase One Property has landscaped areas and a 9-Hole Golf Course on the western half of the Property and overgrown wooded wetlands on the eastern portion of the Property. Approximately 95 % of the Phase One Property exterior is landscaped, covered with asphalt, grass, gravel, or trees.

Surface water from the property drains overland in a southeastern direction or towards the tributary of Upper Stony Lake.

4.2.5 *Parts of the Phase One Property Not Covered by Structures*

There was no evidence of stressed vegetation or surficial staining identified on the Phase One Property during our Site reconnaissance on October 28, 2022.

4.2.6 *Enhanced Investigation of the Property*

As per O.Reg. 153/04, a Phase One ESA will require the completion of an “Enhanced Property Investigation” should records indicate that a site has historically had any of the following land uses associated with it:

- Any industrial use;
- Operation of dry-cleaning equipment;
- Garage works; or
- Dispensing of bulk liquid (including gasoline, i.e. gas station).

Due to the historical and existing vehicle maintenance and repair activities, an Advanced Property Investigation has been completed, as detailed in **Table 5** as follows.

Table 5. *Summary of Enhanced Property Investigation*

Identifiable Features	Observation Notes
Subject, Hazardous, Soil Waste and Recyclable Materials	<ul style="list-style-type: none"> • As reported in Section 2.4: <ul style="list-style-type: none"> ○ Records for waste fluids generated during vehicle maintenance and repair are not available. Mr. Challenger indicated that all waste fluids are disposed of at the Pido Road Household Hazardous Waste Depot in Peterborough on as needed basis. • It is expected that common “household” waste generation occurs on-site which is serviced by a local waste hauler on weekly or bi-weekly basis.
Chemical Storage and Handling	<ul style="list-style-type: none"> • Minor storage of retail size containers of maintenance chemicals was observed inside of the maintenance trailer. • Two (2) gasoline and diesel fuel storage tanks for on-site equipment use were noted at the southeast of the barn. • One propane tank was noted to be connected to the residential building.
Spills and Releases	<ul style="list-style-type: none"> • No evidence of current/recent spills were observed with the exception of minor staining observed in the maintenance trailer.
Air Emissions	<ul style="list-style-type: none"> • No evidence of air emission sources was observed.
Designated Substances/Hazardous Building Materials	<ul style="list-style-type: none"> • Based on the age of the residence, there is potential for designated substances to exist associated with building materials in areas not renovated.

4.3 Written Description of Investigation

The investigations conducted for this ESA are described in Sections 2 through 4.

5. Review and Evaluation of Information

5.1 Current and Past Uses

The current and past land uses on the Phase One Property, as determined through the Phase One ESA records review, are summarized in **Table 6**, below.

Table 6. Land Use Summary

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
Prior to 1865	Crown (Lot 6)	Vacant, undeveloped land with a wooded wetland on the eastern portion of the property.	Agricultural or Other Use	Chain of title revealed the aforementioned property owner.
Prior to 1876	Crown (Lot 7)	Vacant, undeveloped land with a wooded wetland on the eastern portion of the property.	Agricultural or Other Use	Chain of title revealed the aforementioned property owner.
19/09/1865 to 2/12/1865	Laurence Tallan (Lot 6)	Vacant, undeveloped land with a wooded wetland on the eastern portion of the property.	Agricultural or Other Use	Chain of title revealed the aforementioned property owner.
1865 to 1870	James Fitzgerald (Lot 6)	Vacant, undeveloped land with a wooded wetland on the eastern portion of the property.	Agricultural or Other Use	Chain of title revealed the aforementioned property owner.
1870 to 1884	Lafayette Reid (Lot 6)	Vacant, undeveloped land with a wooded wetland on the eastern portion of the property.	Agricultural or Other Use	Chain of title revealed the aforementioned property owner.
19/04/1876 to 10/08/1876	David Drain (Lot 7)	Vacant, undeveloped land with a wooded wetland on the eastern portion of the property.	Agricultural or Other Use	Chain of title revealed the aforementioned property owner.
1876 to 1884	Lafayette Reid (Lot 7)	Vacant, undeveloped land with a wooded wetland on the eastern portion of the property.	Agricultural or Other Use	Chain of title revealed the aforementioned property owner.
1884 to 1913	John Hull	A residential building and barn structures on the western portion of the property addressed as 65 Northey's Bay Road.	Residential Use	Chain of title revealed the aforementioned property owner. Personal interviews revealed the residential building and barns were constructed circa early 1900-1920s.
1913 to 1916	Lafayette Reid	A residential building and barn structures on the western portion of the property addressed as 65 Northey's Bay Road.	Residential Use	Chain of title revealed the aforementioned property owner.
1916 to 1935	Bruce and Howard Reid	A residential building and barn structures on the western portion of the property addressed as 65 Northey's Bay Road.	Residential Use	Chain of title revealed the aforementioned property owner.

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
1935 to 1944	William J. Northey	A residential building and barn structures on the western portion of the property addressed as 65 Northey's Bay Road.	Residential Use	Chain of title revealed the aforementioned property owner.
1944 to 1988	Wilfred Ottis Northey	A residential building and barn structures on the western portion of the property addressed as 65 Northey's Bay Road.	Residential Use	Chain of title revealed the aforementioned property owner. 1951-1981 aerial photographs revealed the presence of a farmstead at the northwest portion of the Phase One Property.
1988 to 1989	Frederich Edward Bolton and Rosemaire Frances Bolton	A residential building and barn structures on the western portion of the property addressed as 65 Northey's Bay Road.	Residential Use	Chain of title revealed the aforementioned property owner.
1989 to 2004	Alexander Edward Button and Elmera Tan Button	A residential building and barn structures on the western portion of the property addressed as 65 Northey's Bay Road.	Residential Use	Chain of title revealed the aforementioned property owner. 1995 aerial photographs revealed the presence of a farmstead at the northwest portion of the Phase One Property.
2004 to 2005	Mei Yu Su	A residential building and barn structures on the western portion of the property addressed as 65 Northey's Bay Road.	Residential Use	Chain of title revealed the aforementioned property owner.
2005 to present	Eric Bradley Challenger and Diane Elizabeth Challenger	A residential building and barn structures on the western portion of the property with a 9-hole golf course on the western portion of the property addressed as 65 Northey's Bay Road. The golf course operates as Woodview Golf Course.	Parkland Use	Chain of title revealed the aforementioned property owner. Owner Interview revealed that the golf course opened in 2013. The 2013, 2018 and 2022 aerial photographs depicted the golf course and the residential building with barns in their current configuration.

5.2 Potentially Contaminating Activities (PCAs)

Potentially Contaminating Activities (PCAs) under the Environmental Protection Act are defined in Schedule D (Table 2) of O.Reg. 153/04. A copy of this list is also provided in **Appendix I**. The PCAs identified within the Phase One ESA Study Area are illustrated on **Figure 5** and summarized in **Table 7** to **Table 10**, below.

5.2.1 Phase One Property

Based on the findings of the historical record review, site reconnaissance, and personal interviews; the following PCAs were identified in association with the Phase One Property:

Table 7. Summary of PCAs on the Phase One Property

Address	PCA	Location of APEC on Phase One Property
Phase One Property (65 Northey's Bay Road)	(1) #52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems. Maintenance and repair of golf course equipment currently occurring in the trailer structure located at the northwest portion of the Site.	Northwestern Portion of Phase One Property
	(2) #52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems. Maintenance and repair of golf course equipment formerly occurring in the barn located at the northwest portion of the Site.	Northwestern Portion of Phase One Property
	(3) #28: Gasoline and Associated Products Storage in Fixed Tanks. Two (2) 1200L Diesel fuel and Gasoline ASTs located along southeast portion of northernmost barn structure.	Northwestern Portion of Phase One Property

5.2.2 Phase One Study Area

Based on the findings of the historical record review, site reconnaissance, and personal interviews; the following PCAs were identified in association with the Phase One Study Area:

Table 8. Summary of PCAs in the Phase One Study Area

Address	Potentially Contaminating Activity	Location of PCA			Location of APEC on Phase One Property
		On-Site/ Off-Site	Up- gradient (Y/N)	Proximity to Phase One Property	
66 Northey's Bay Road	(1) Gasoline and Associated Products Storage in Fixed Tanks. Two (2) Diesel fuel ASTs located at Emergency Fire Station across Northey's Bay Road.	Off-Site	Y	50 m W	Western Portion of Phase One Property

5.3 Areas of Actual or Potential Environmental Concern

5.3.1 Evaluation of Information

The purpose of this Phase One ESA was to document and identify any actual or potential environmental contamination associated with the property. A Phase One ESA is a preliminary study in which it is sufficient only to assess those liabilities which can be documented from a visual inspection of the property or available sources of public information.

The Phase One ESA does not include sampling or testing of soil or ground water. These analyses would be conducted in a Phase Two ESA, if warranted.

5.3.2 Identified Areas of Potential Environmental Concern

The current and historical PCAs on the Phase One Property and within the Phase One Study Area have the potential to contaminate the Phase One Property. The APECs are as follows:

Table 9. Summary of Identified APECs

Address	Location of APEC on Phase One Property	Rationale	Source of Information
65 Northey's Bay Road	Northwestern Portion of Phase One Property	Maintenance and repair of golf course equipment currently occurring in the trailer structure located at the northwest portion of the Site.	<ul style="list-style-type: none"> Study Area Observations (4.5) Interview Questionnaire (3.0)
65 Northey's Bay Road	Northwestern Portion of Phase One Property	Maintenance and repair of golf course equipment formerly occurring in the barn located at the northwest portion of the Site.	<ul style="list-style-type: none"> Study Area Observations (4.5)
65 Northey's Bay Road	Northwestern Portion of Phase One Property	Two (2) 1200L Diesel fuel and Gasoline ASTs located along Southeast portion of northernmost barn structure.	<ul style="list-style-type: none"> Aerial Photographs (2.3.1) Study Area Observations (4.5) Interview Questionnaire (3.0)
66 Northey's Bay Road	Western Portion of Phase One Property	Existing Diesel fuel ASTs at Fire Service Station across Northey's Bay Road	<ul style="list-style-type: none"> Aerial Photographs (2.3.1) Study Area Observations (4.5)

5.3.3 Contaminants of Potential Concern

The contaminants of potential concern (COPC) identified with respect to each APEC identified in Section 5.3.2 are as follows:

Table 10. Summary of COPC

Address	Location of APEC on Phase One Property	COPC
65 Northey's Bay Road	Northwestern Portion of Phase One Property	Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), Volatile Organic Compounds (VOCs), Metals, Arsenic (As), Antimony (Sb), Selenium (Se)
65 Northey's Bay Road	Northwestern Portion of Phase One Property	PHCs, BTEX, VOCs, Metals, As, Sb, Se
65 Northey's Bay Road	Northwestern Portion of Phase One Property	PHCs, BTEX
66 Northey's Bay Road	Western Portion of Phase One Property	PHCs, BTEX

5.3.4 Information Gaps in Phase One Investigation

Full access to the Phase One Property was provided during the Site reconnaissance. All records were reviewed and no information gaps were encountered during the completion of the Phase One Investigation. Any outstanding responses that pose environmental concern will be forwarded to the Client upon receipt.

5.4 Phase One Conceptual Site Model

Site Description

The Phase One Property is a 122.34-hectare, irregular shaped, parcel of land located on the east side of Northey's Bay Road, south of the intersection with Highway 28 in Woodview, Ontario. Building structures on the Site include a 182.71 m², two storey residential building (with a basement), a 386.78 m² barn, a 138.55 m² barn, a 34.05 m² detached garage, 48.98 m² cabin, 78.73 m² Club House, two (2) portable storage trailers and two (2) storage sheds. The remaining parts of the Site comprise gravel surfaced areas, landscaped areas, a 9-hole golf course, as well as a woodlot.

Historically, the Site was first developed in the early 1900s with the existing residential structure and two (2) barn structures. The Golf Course Club House was built in 2013 in conjunction with the development of the Golf Course on the western half of the Phase One Property.

Water Bodies / Areas of Natural Significance

There are water bodies on the Phase One Property including an open water pond, and associated tributaries that drain in a southeasterly direction towards Upper Stony Lake along the western and central portions of the Phase One Property. Julian Lake is located approximately 585 m west of the Phase One Property. A man-made artificial irrigation pond is located in the centre of the Phase One Property. There are no areas of natural significance on the Phase One Property or surrounding Phase One Study Area.

Drinking Water Wells

As previously discussed in Section 2.2.2, there are five (5) well record for the Phase One Property and twelve (12) well records within a 250 m search radius. These records relate to commercial, domestic, irrigation and public wells on the Phase One Property and in the Phase One Study Area.

Neighboring Land Use

The Phase One Study Area is partly developed with residential, commercial, and community land uses, including a Fire Emergency Station and Community Centre located at 66 Northey's Bay Road, as presented in **Figure 3**.

Areas of Potential Environmental Concerns (APECs)

Based on the findings of the historical record review, Site reconnaissance, and interviews, any APECs located on the Phase One Property and within the Phase One Study Area are labeled and located, as shown in **Figure 4** and **Figure 5**.

The following Potentially Contaminating Activities (PCAs) were found to be associated with the current or historical land uses of the Phase One Property and/or Phase One Study Area:

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground water, Soil and/or Sediment)
APEC #1: Existing Vehicle Maintenance and Repair Activities	Northwestern Corner of Phase One Property	#52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site – Maintenance and repair of golf course equipment currently occurring in the trailer structure located at the northwest portion of the Site.	Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Volatile Organic Compounds (VOCs), Metals, Arsenic (As), Antimony (Sb), Selenium (Se)	Soil and Ground Water

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground water, Soil and/or Sediment)
APEC #2: Historical Vehicle Maintenance and Repair Activities	Northwestern Corner of Phase One Property	#52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site – Maintenance and repair of golf course equipment formerly occurring in the barn located at the northwest portion of the Site.	PHCs, BTEX, VOCs, Metals, As, Sb, Se	Soil and Ground Water
APEC #3: Existing Diesel and Gasoline Aboveground Storage Tanks (ASTs)	Northwestern Corner of Phase One Property	#28: Gasoline and Associated Products Storage in Fixed Tanks	On-Site – Two (2) 1,200-L diesel fuel and gasoline ASTs located along southeast portion of northernmost barn structure.	PHCs, BTEX	Soil and Ground Water
APEC #4: Existing Diesel ASTs	Western Portion of the Phase One Property	#28: Gasoline and Associated Products Storage in Fixed Tanks	Off-Site: Exterior fuel ASTs located approximately 50 m west at 66 Northey's Bay Road Municipal Fire Service Station.	PHCs, BTEX	Ground Water

Description of Assessment

PCAs with known or potential to affect the Phase One Property are as follows:

PCA Location	Location of APEC on the Phase One Property	Contaminants of Concern	Impact to Phase One Property (Known or Potential)
65 Northey's Bay Road	Northwestern Portion of Phase One Property	PHCs, BTEX, VOCs, Metals, As, Sb, Se	Potential
65 Northey's Bay Road	Northwestern Portion of Phase One Property	PHCs, BTEX, VOCs, Metals, As, Sb, Se	Potential
65 Northey's Bay Road	Northwestern Portion of Phase One Property	PHCs, BTEX	Potential
66 Northey's Bay Road	Western Portion of Phase One Property	PHCs, BTEX	Potential

Underground utilities are expected to be present on the subject property (septic tank systems, private wells, irrigation, gas associated piping for a private propane AST, telephone, electricity) and could potentially act as preferential pathways.

Local surficial geologic mapping (The Ontario Geological Survey, 2003) of the Woodview area indicates that peat, muck, marl, and stony, carbonate-derive silty to sandy till on Paleozoic terrain and Precambrian bedrock, underlie the Phase One Property.

The exemption set out in Section 49.1 of Ontario Regulation 153/04 (as amended) is being relied upon for the driveway and parking areas located at the Site, relating to the use of road salt for de-icing operations on the northern portion of the Phase One Property. Observations conducted during the Site reconnaissance suggested the use of road salt on the northern portion of the Phase One Property for vehicular and pedestrian safety purposes due to snow and/or ice. Therefore, the exemption applies to the Phase One Property and the application of road salt is not considered to be an environmental concern that requires further investigation.

It is not expected that any uncertainty or absence of information would affect the validity of the Conceptual Site Model (CSM).

6. Conclusions

6.1 Whether a Phase Two ESA is Required

The scope of this Phase One ESA conforms to the general requirements outlined in O.Reg. 153/04 and 407/19. The objectives of the Phase One ESA were to identify the likelihood of the presence or absence of PCAs and their associated APECs and COPC, in support of a zoning approval application with the Township of North Kawartha and filing of a Record of Site Condition (RSC) with the Ministry of the Environment, Conservation and Parks (MECP). The results of the Phase One ESA are documented in this report and reflect site conditions observed at the time of the site reconnaissance.

Based on the information obtained as part of the Phase One ESA, it is concluded that four (4) PCAs were identified either on the Phase One Property or within the Phase One Study Area. These PCAs were deemed to be contributing to four (4) APECs on the Phase One Property.

A Phase Two ESA is recommended to assess subsurface impacts as a result of the aforementioned PCAs and APECs. The scope of the Phase Two ESA should entail the analysis of representative soil and ground water samples from the Phase One Property for the contaminants of potential concern identified; including PHCs, BTEX, VOCs, Metals, As, Sb, and Se.

6.2 Phase One ESA Alone

It is concluded that four (4) PCAs were identified either on the Phase One Property or within the Phase One Study Area. Therefore, four (4) APECs were identified on the Phase One Property and a Phase Two ESA is required.

6.3 Signatures and Certification

This report was prepared by Sasha Grabovskyy, B.ES., who is currently an Environmental Scientist with Palmer in the Toronto Office. He has experience in conducting Phase One and Two ESAs at various land use types, in accordance with Ontario Regulation 153/04 and 511/09 and the CSA Z768-01 environmental protocols.

This report was reviewed by Kalina Naydenova, M.Sc. who is currently an Environmental Scientist with Palmer in the Toronto Office. She has over 13 years' experience conducting numerous Phase One and Two ESAs at various land use types, and conducting soil and ground water sampling procedures in accordance with ASTM 1527-13 and ASTM E1903-19, as well as Ontario Regulation 153/04 and 511/09 and the CSA Z768-01 and Z769-00 environmental protocols.

This report was reviewed by Sarah Vlantis, B.Sc., P.Geo. (limited), QP_{ESA}, an Environmental Geoscience Team Lead in the Toronto office of Palmer. She has over 12 years' experience conducting Phase One and Two ESAs, soil and ground water sampling, and site remediation in accordance with Ontario Regulation 153/04 and 511/09, the CSA Z768-01 and Z769-00 environmental protocols, the Consulting Engineers of Ontario's Generally Accepted Standards for Environmental Investigations, and the Canadian Mortgage and Housing Corporation (CMHC) environmental site investigation procedures for mortgage loan insurance. The aforementioned ESAs have covered all land use types across Canada. Sarah also has numerous

years of experience in preparing and filing Record of Site Conditions (RSCs) with the Ministry of the Environment, Conservation and Parks (MECP). Sarah also has experience conducting Excess Soil Reuse Planning assessments in accordance with Ontario Regulation 406/19.

**Prepared By:**

Sasha Grabovsky, B.E.S.
Environmental Scientist



Kalina Naydenova, M.Sc.
Environmental Scientist

**Reviewed By:**

Sarah Vlantis, B.Sc., P.Geo (limited), QP_{ESA}
Principal, Environment & Construction Team Lead

7. Limitations of Report

This report was prepared by Palmer for the account of Eric Challenger, in accordance with the professional services agreement. During the records review, Palmer relied on information obtained from municipal, provincial, and independent sources as referenced in this report. Although the information was assessed for consistency, verification of the accuracy or the completeness of this third-party information was not completed.

Palmer made all reasonable inquiries to obtain accessible information for this assessment as required by O.Reg. 153/04 Schedule D Table 1: Mandatory Requirements for Phase One ESA Reports. All responses to information requests were received prior to completion on this report. The evaluation provided in this report reflects our best judgement in light of the information available at the time of the report preparation.

Due to the limitations referred to above, different environmental conditions from those stated in our report may exist. Should such different conditions be encountered, Palmer must be notified in order that it may determine if modifications to the conclusions in the report are necessary.

The disclosure of any information contained in this report is the sole responsibility of the intended recipient. The material in it reflects Palmer's best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Palmer accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. This limitations statement is considered part of this report.

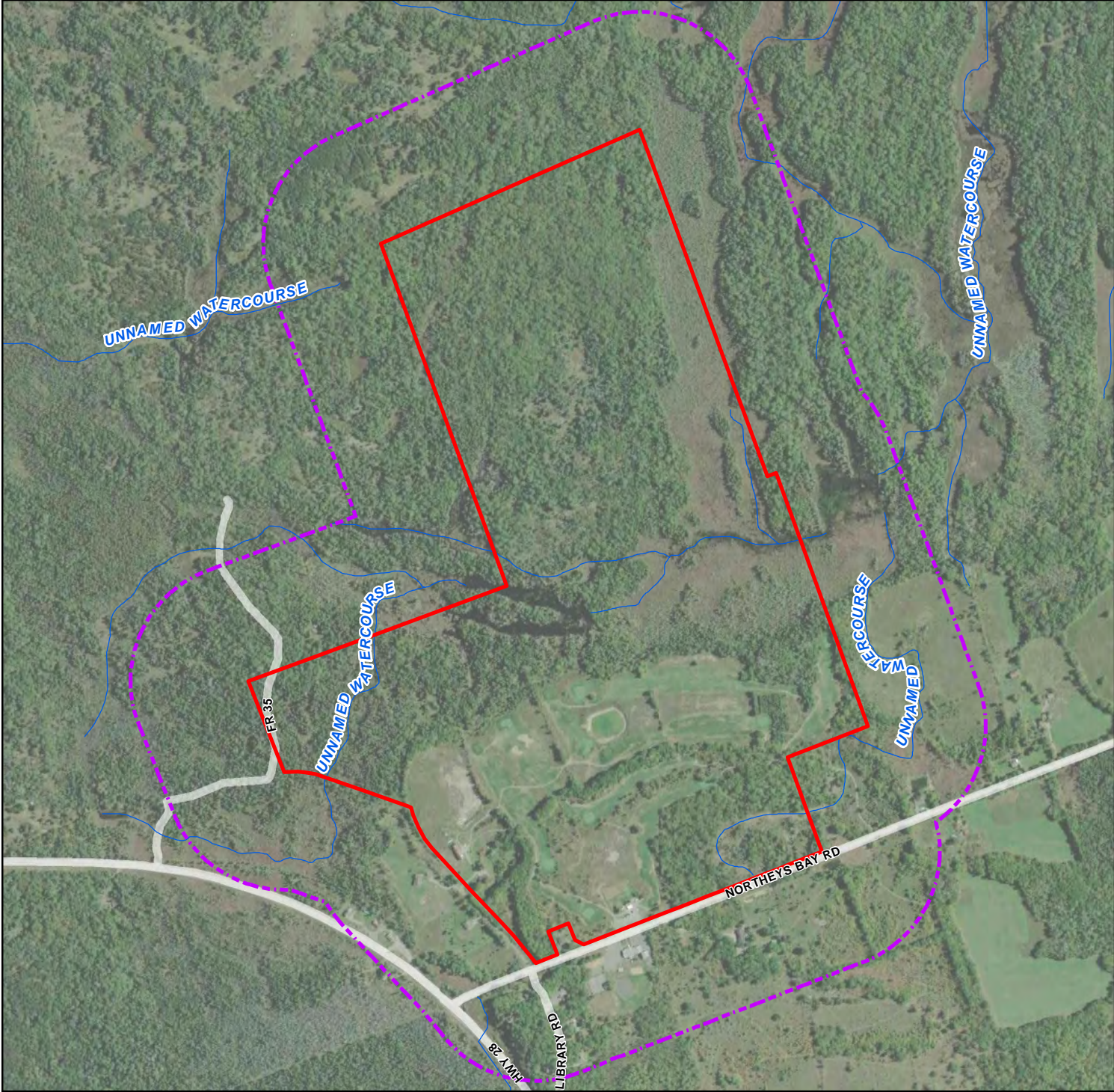
Unless stated otherwise in this report, provided that the report is still reliable, and less than 18 months old, Palmer may issue a third-party reliance letter to parties client identifies in writing, upon payment of the then current fee for such letters. All third parties relying on Palmer's report, by such reliance agree to be bound by our proposal and Palmer's standard reliance letter. Palmer's standard reliance letter indicates that in no event shall Palmer be liable for any damages, howsoever arising, relating to third-party reliance on Palmer's report. No reliance by any party is permitted without such agreement. This report is not to be given over to any third party for any purpose whatsoever without the written permission of Palmer.

The original of the technology-based document sent herewith has been authenticated and will be retained by Palmer for a minimum of five years. Since the file transmitted is now out of Palmer's control and its integrity can no longer be ensured, no guarantee may be given with regards to any modifications made to this document.

8. References

- Atlas of Canada, Topographic Maps;
 - <http://atlas.nrcan.gc.ca/Site/english/toporama/index.html>
- Chapman and Putnam, The Physiography of Southern Ontario, 1984;
- EcoLog ERIS Database Report, 65 Northeys Bay Rd, Woodview, Ontario, 2022;
- Google Earth, 2018-2022;
- Ministry of the Environment, Conservation and Parks (MOECP) Brownfields Environmental Site Registry;
- Ontario Ministry of the Environment, Conservation and Parks (MECP);
- Radon Potential Map Ontario, Radon Environmental, 2013;
- Source Protection Information Atlas, 2022;
- Technical Standards & Safety Authority;
- The Ontario Geological Survey, 1990; and,
- The Ontario Geological Survey, 2003.

Figures



LEGEND

Phase One Property

Phase One Study Area

Watercourse ¹

1. LID/MNRF

Key Map

Site Location

Peterborough

0 100 200 300 400 500

METRE SCALE

North American Datum 1983

Universal Transverse Mercator Projection Zone 17

Scale: 1:12,000

Page Size: Letter (8.5 x 11 inches)

Drawn: SM

Checked: SD

Date: Nov 22, 2022

Source Notes:
Imagery (2017) provided by ESRI basemap service.
Contains information licenced under the Open Government Licence - Ontario.

CLIENT

Eric Challenger

PROJECT

Woodview Golf Course Subdivision

TITLE

Site Location

REF. NO. 2204601-MR-301-1

Palmer™

Figure 1

Document Path: G:\Shared drives\Projects 2022\22046 - Eric Challenger\2204601 - Woodview Golf Course Subdivision\GIS\1_Workspace\Task 3 - EDD Figures\2204601-MR_301-1 (Fig 1 - Site Location Map).mxd

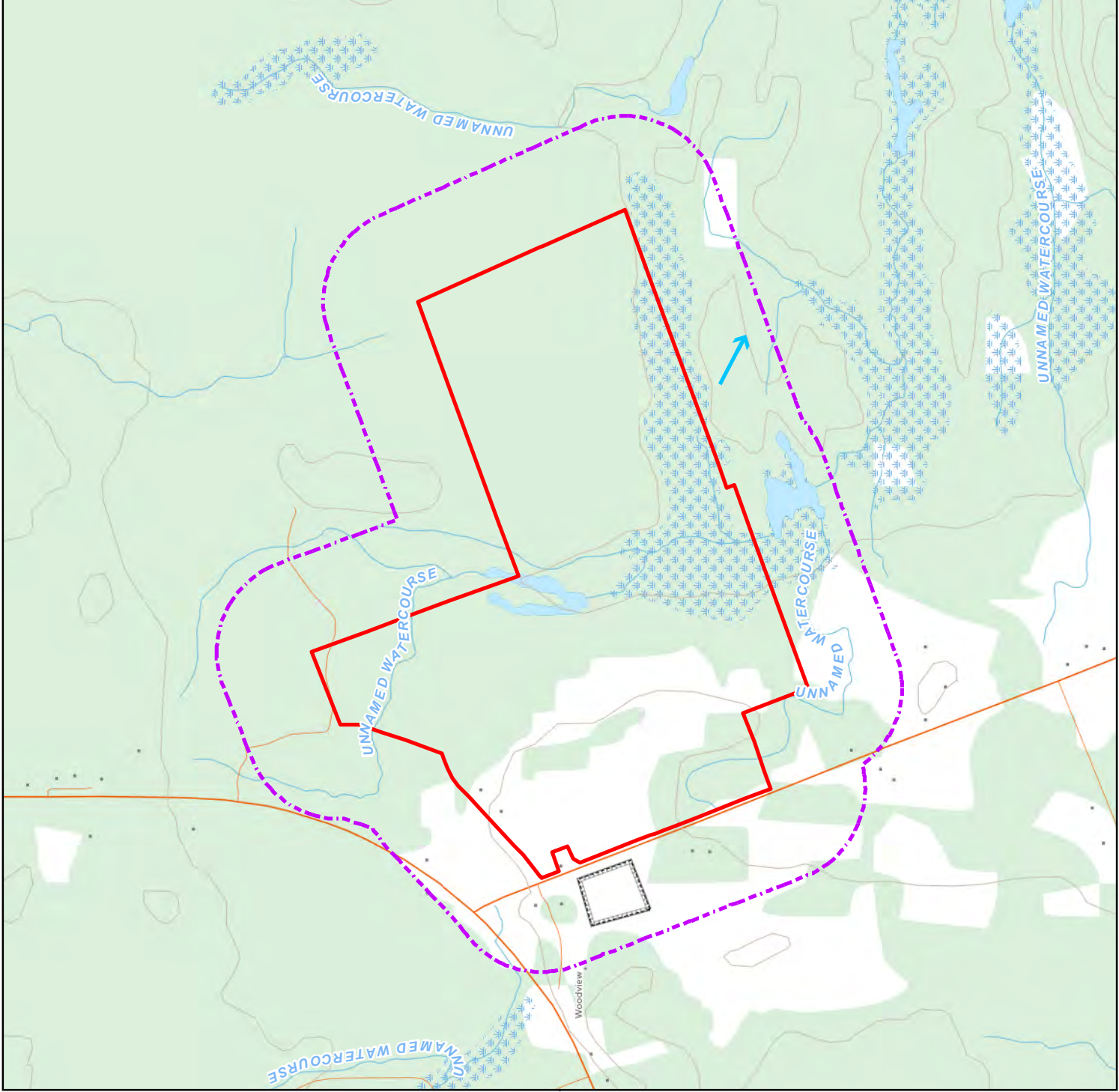
LEGEND

- Phase One Property
- Phase One Study Area
- Inferred Ground Water Flow Direction



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Universal Transverse Mercator Projection Zone 17
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Page Size: Letter (8.5 x 11 inches)
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Checked: SD
Date: Nov 22, 2022
Basemap:
Toporama web map service

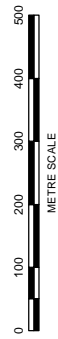
CLIENT	Eric Challenger
PROJECT	Woodview Golf Course Subdivision
TITLE	Topographic Map
REF. NO.	2204601-MR-302-1
Figure 2	



LEGEND

- Phase One Property
- Phase One Study Area
- Property Boundary
- Watercourse ¹
- Inferred Ground Water Flow Direction

1. LIO/MNRF

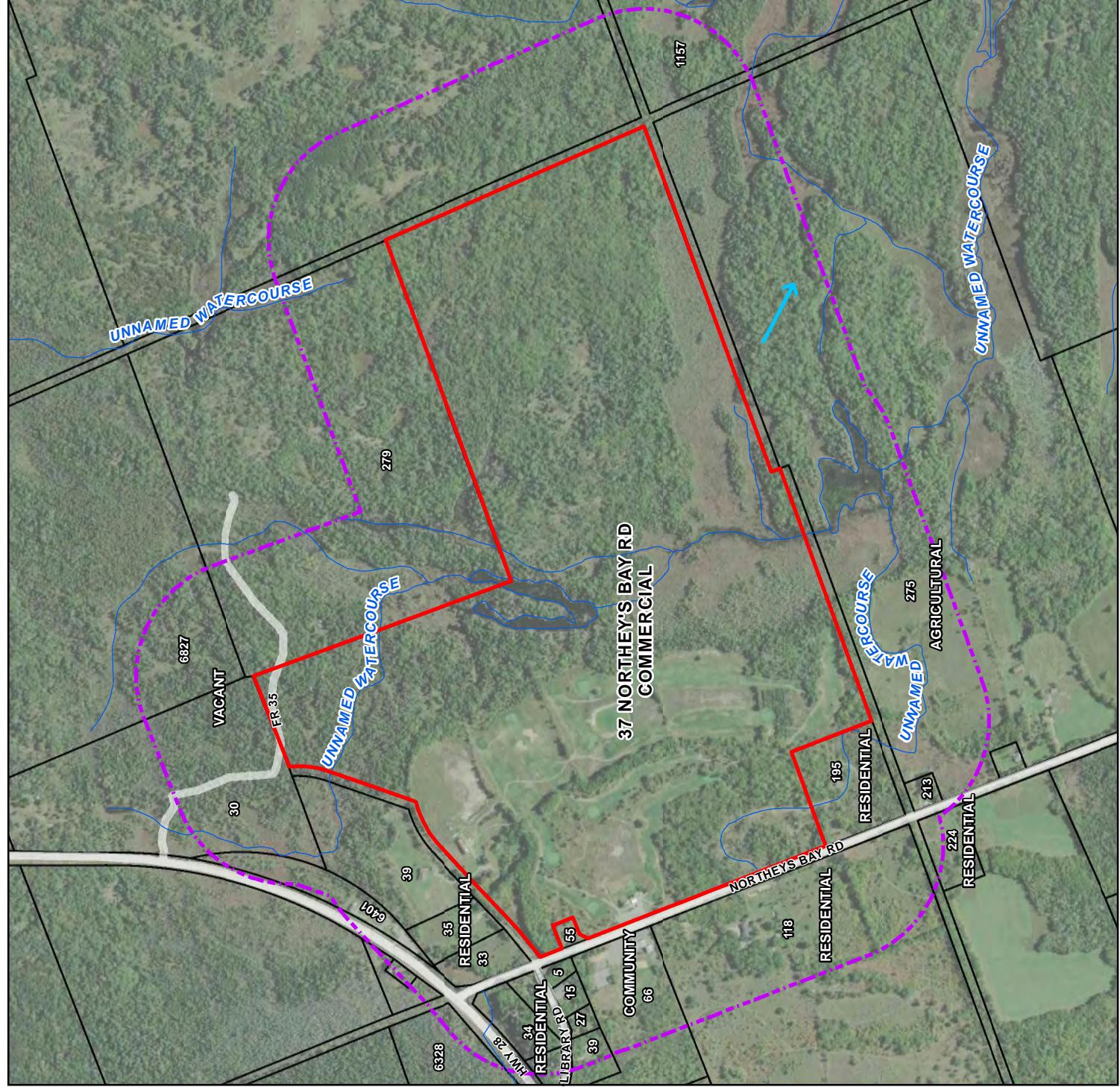


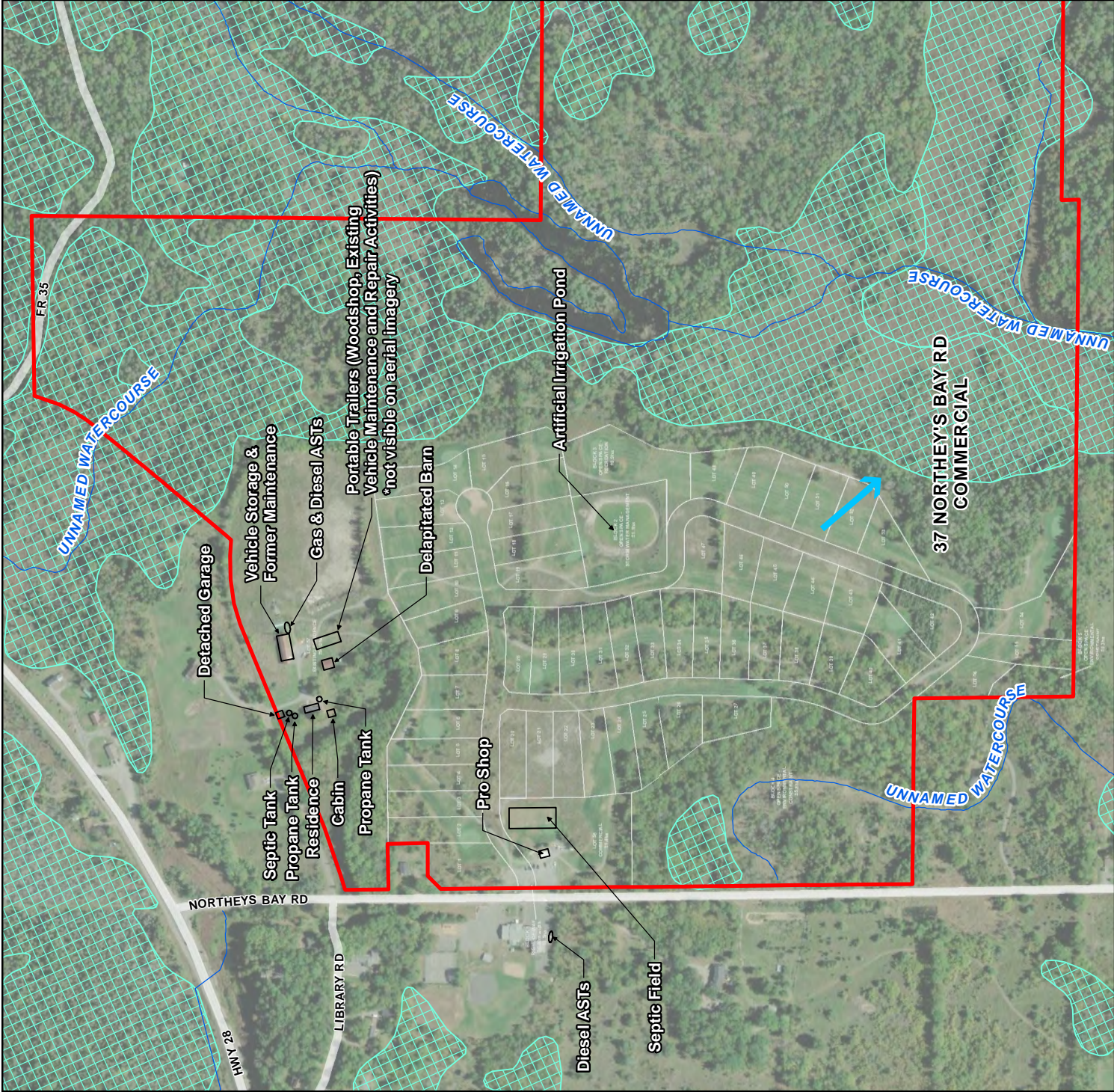
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Date: Nov 22, 2022



Source Notes:
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CLIENT	Eric Challenger
PROJECT	Woodview Golf Course Subdivision
TITLE	Phase One Property
REF. NO.	2204601-MR-303-1
Figure 3	





LEGEND

- Phase One Property
- Non-evaluated Wetland ¹
- Proposed Development Plan/Lotting
- Watercourse ¹
- Inferred Ground Water Flow Direction

1. LIO/MNRF

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METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17
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Source Notes:
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CLIENT
Eric Challenger

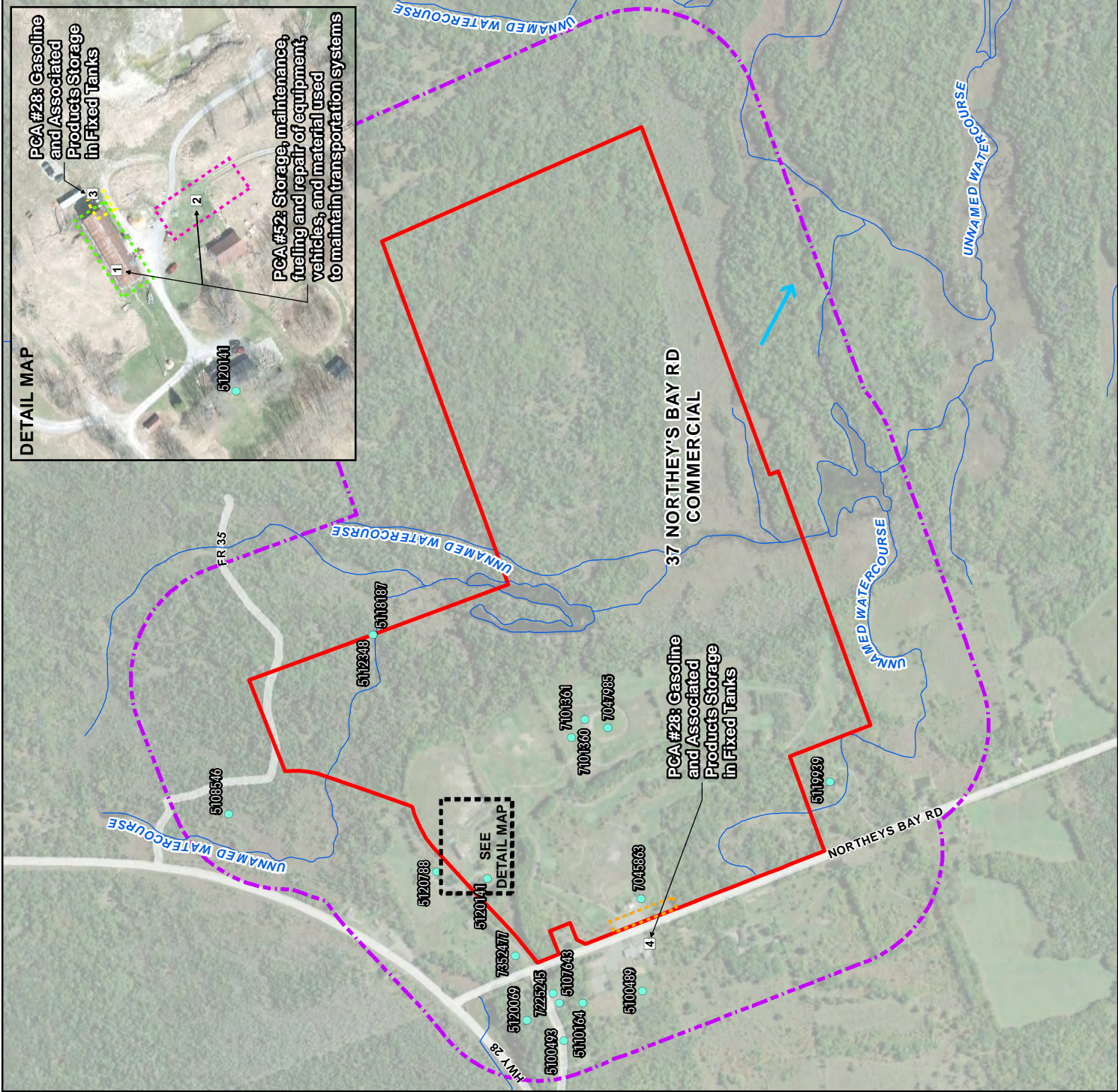
PROJECT
Woodview Golf Course Subdivision

TITLE
Detailed Site Plan

REF. NO. 2204601-MR-304-1

Palmer™

Figure 4



LEGEND

- Phase One Property
- Phase One Study Watercourse¹
- Inferred Ground Water Flow Direction
- MECP Well Record
- PCA of Concern
- APEC 1: Current Vehicle Storage and Former Maintenance Activities
- APEC 2: Existing Vehicle Maintenance and Repair Activities
- APEC 3: Existing Diesel and Gasoline Aboveground Storage Tanks (ASTs)
- APEC 4: Existing Diesel ASTs

1. LIO/MNRF

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METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:12,000
Page Size: Letter (8.5 x 11 inches)

Drawn: SM
Checked: SD
Date: Feb 26, 2023

Source Notes:
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CLIENT
Eric Challenger

PROJECT
Woodview Golf Course Subdivision

TITLE
**On-Site and Off-Site
Areas of Potential
Environmental Concern**

Appendix A

Photographic Documentation

**Photograph Log
Eric Challenger
65 Northey's Bay Road, Woodview, Ontario
Project No.: 2204601**



Photograph 1

Photo depicts south view of Northey's Bay Road.



Photograph 2

Photo depicts north view of Fire Route 35.



Photograph 3

Photo depicts north view of residence on Phase One Property.



Photograph 4

Photo depicts south view of residence on Phase One Property.



Photograph 5

Photo depicts private well to west of residence on Phase One Property.



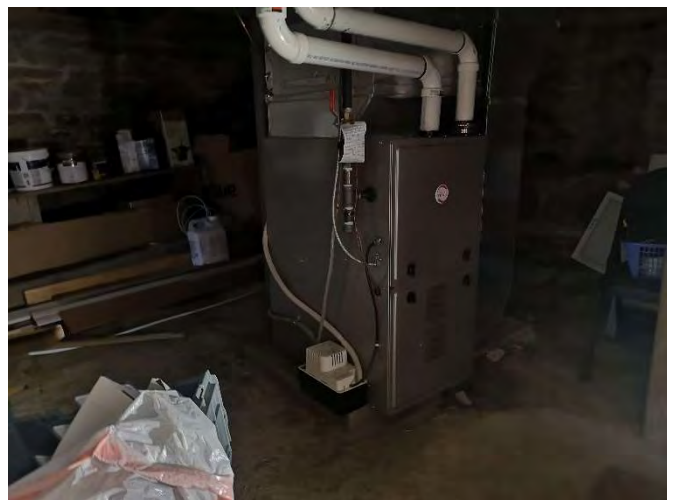
Photograph 6

Photo depicts Septic Tank to north of residence on Phase One Property.



Photograph 7

Photo depicts Propane Tank to north of residence on Phase One Property.



Photograph 8

Photo depicts Furnace in basement of residence on Phase One Property.

**Photograph Log
Eric Challenger
65 Northey's Bay Road, Woodview, Ontario
Project No.: 2204601**



Photograph 9

Photo depicts Cabin to south of residence on Phase One Property.



Photograph 10

Photo depicts Shed to south of residence on Phase One Property.



Photograph 11

Photo depicts barn to east of residence on Phase One Property.



Photograph 12

Photo depicts intact barn to east of residence on Phase One Property.



Photograph 13

Photo depicts interior of intact barn to east of residence on Phase One Property.



Photograph 14

Photo depicts Diesel and Gasoline ASTs to east of intact barn on Phase One Property.



Photograph 15

Photo depicts storage trailer to east of residence on Phase One Property.



Photograph 16

Photo depicts interior of storage trailer to east of residence on Phase One Property.

**Photograph Log
Eric Challenger
65 Northey's Bay Road, Woodview, Ontario
Project No.: 2204601**



Photograph 17

Photo depicts Golf Course Pro Shop on Phase One Property.



Photograph 18

Photo depicts location of Pro Shop Domestic Well on Phase One Property.



Photograph 19

Photo depicts Transformer to north of Pro Shop on Phase One Property.



Photograph 20

Photo depicts general view of artificial irrigation pond on Phase One Property.

**Photograph Log
Eric Challenger
65 Northey's Bay Road, Woodview, Ontario
Project No.: 2204601**



Photograph 21

Photo depicts wetland in eastern portion of Phase One Property.



Photograph 22

Photo depicts general view of Golf Course on Phase One Property.



Photograph 23

Photo depicts general view of Golf Course on Phase One Property.



Photograph 24

Photo depicts general view of bunker in Golf Course on Phase One Property.



Photograph 25

Photo depicts Monitoring Well near wetland on Phase One Property.



Photograph 26

Photo depicts general view of Fire Station to west of Phase One Property.



Photograph 27

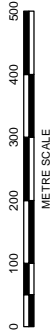
Photo depicts general view of neighboring property to south of Phase One Property.

Appendix B

Aerial Photographs

LEGEND

- Phase One Property
- Phase One Study



North American Datum 1983
Universal Transverse Mercator Projection Zone 17
Scale: 1:12,000
Page Size: Letter (8.5 x 11 inches)
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Checked: SD
Date: Dec 8, 2022
Source Notes:
Imagery provided by ERS

CLIENT	Eric Challenger
PROJECT	Woodview Golf Course Subdivision
TITLE	Aerial Imagery (1951)





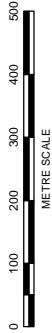
REF. NO. 2204601-MR-300-1

Figure A1



LEGEND

-  Phase One Property
-  Phase One Study

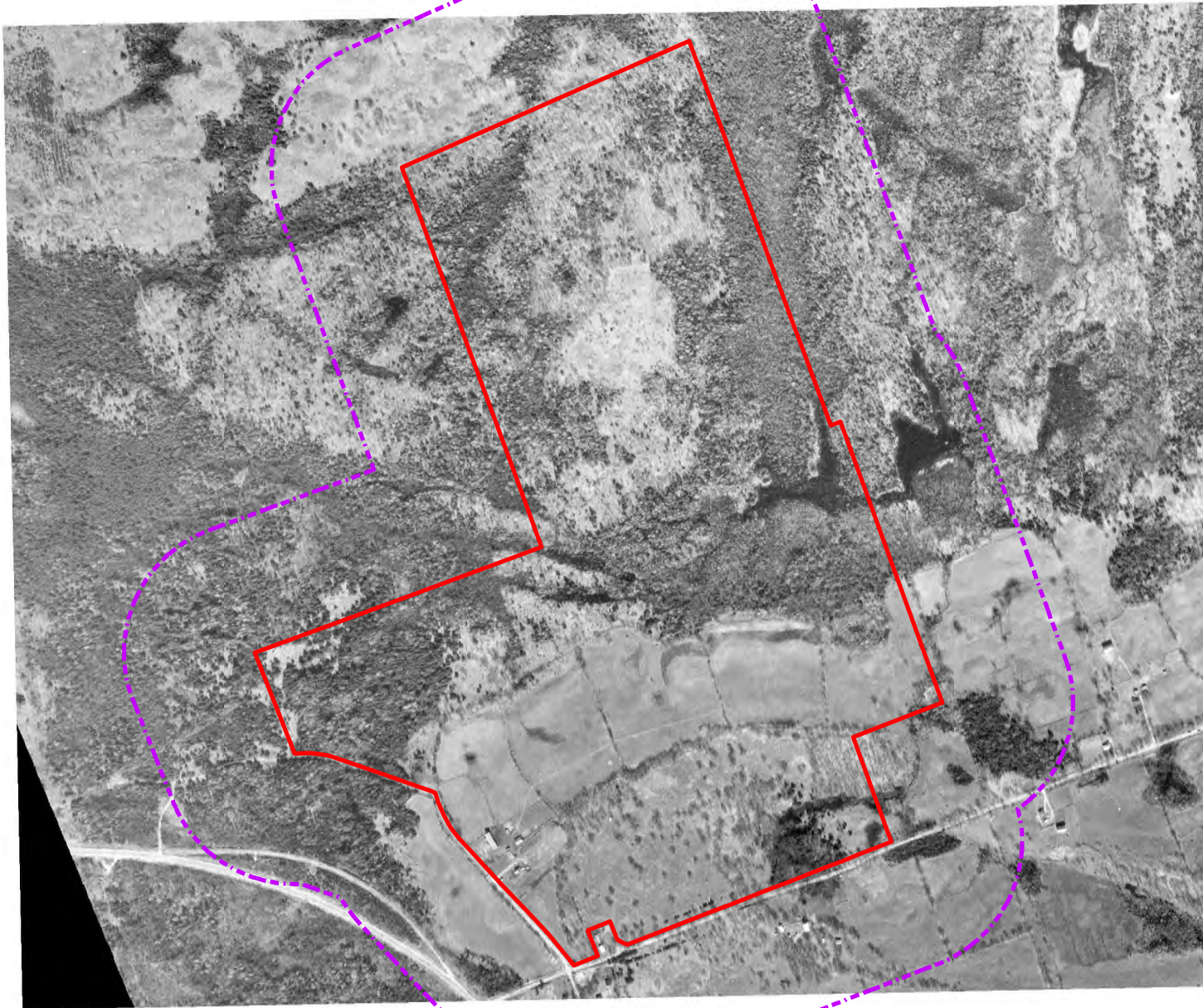


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Universal Transverse Mercator Projection Zone 17

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Page Size: Letter (8.5 x 11 inches)

Drawn: SM
Checked: SD
Date: Dec 8, 2022

Source Notes:
Imagery provided by ERIS



CLIENT

Eric Challenger

PROJECT

Woodview Golf Course Subdivision

TITLE

Aerial Imagery
(1965)

REF. NO. 2204601-MR-300-1

Palmer™

Figure A2

LEGEND

- Phase One Property
- Phase One Study



North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:12,000
Page Size: Letter (8.5 x 11 inches)

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Checked: SD
Date: Dec 8, 2022

Source Notes:
Imagery provided by ERS



CLIENT

Eric Challenger

PROJECT

Woodview Golf Course Subdivision

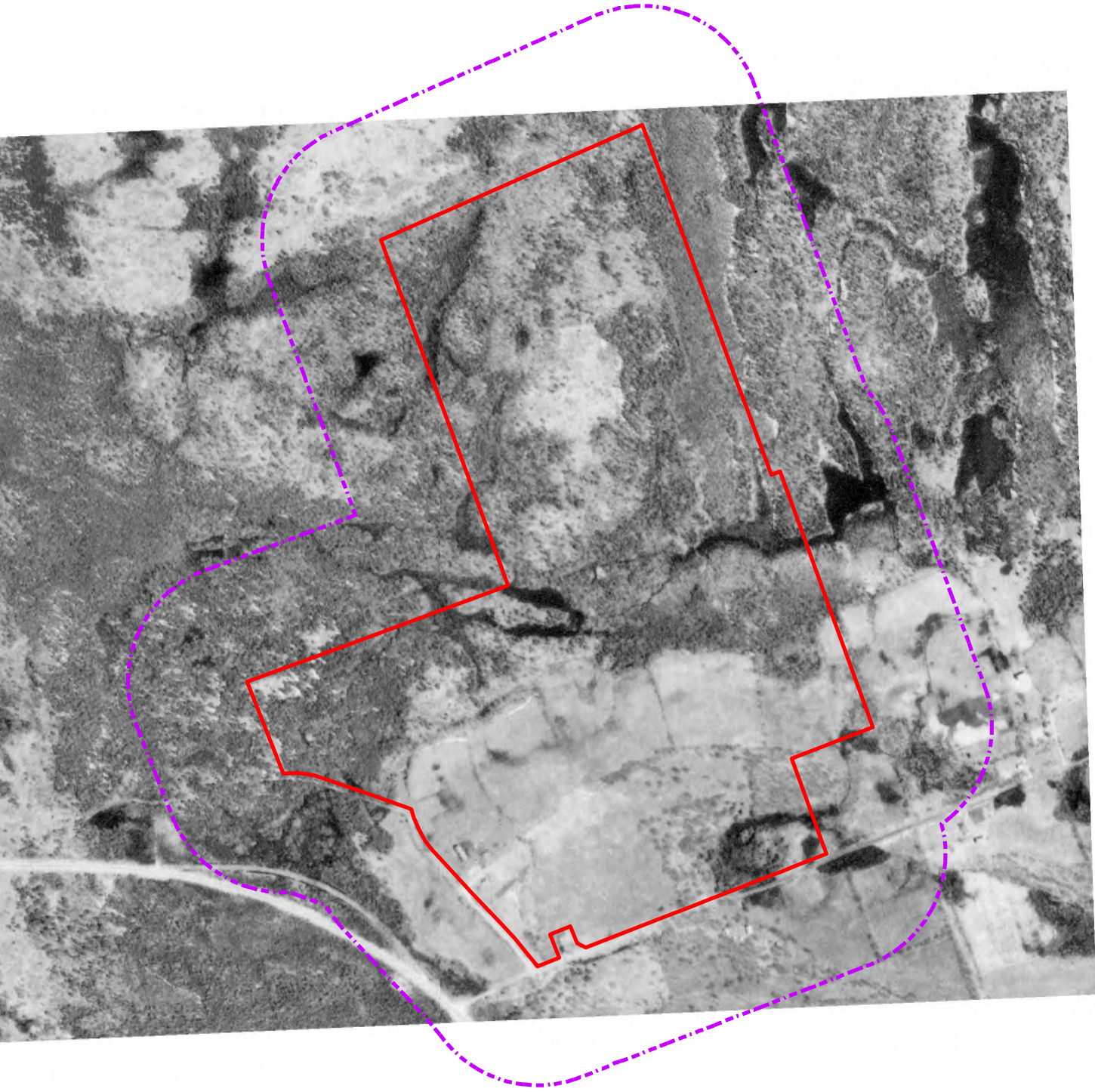
TITLE

Aerial Imagery
(1976)



Palmer™

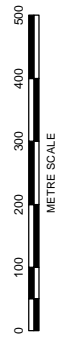
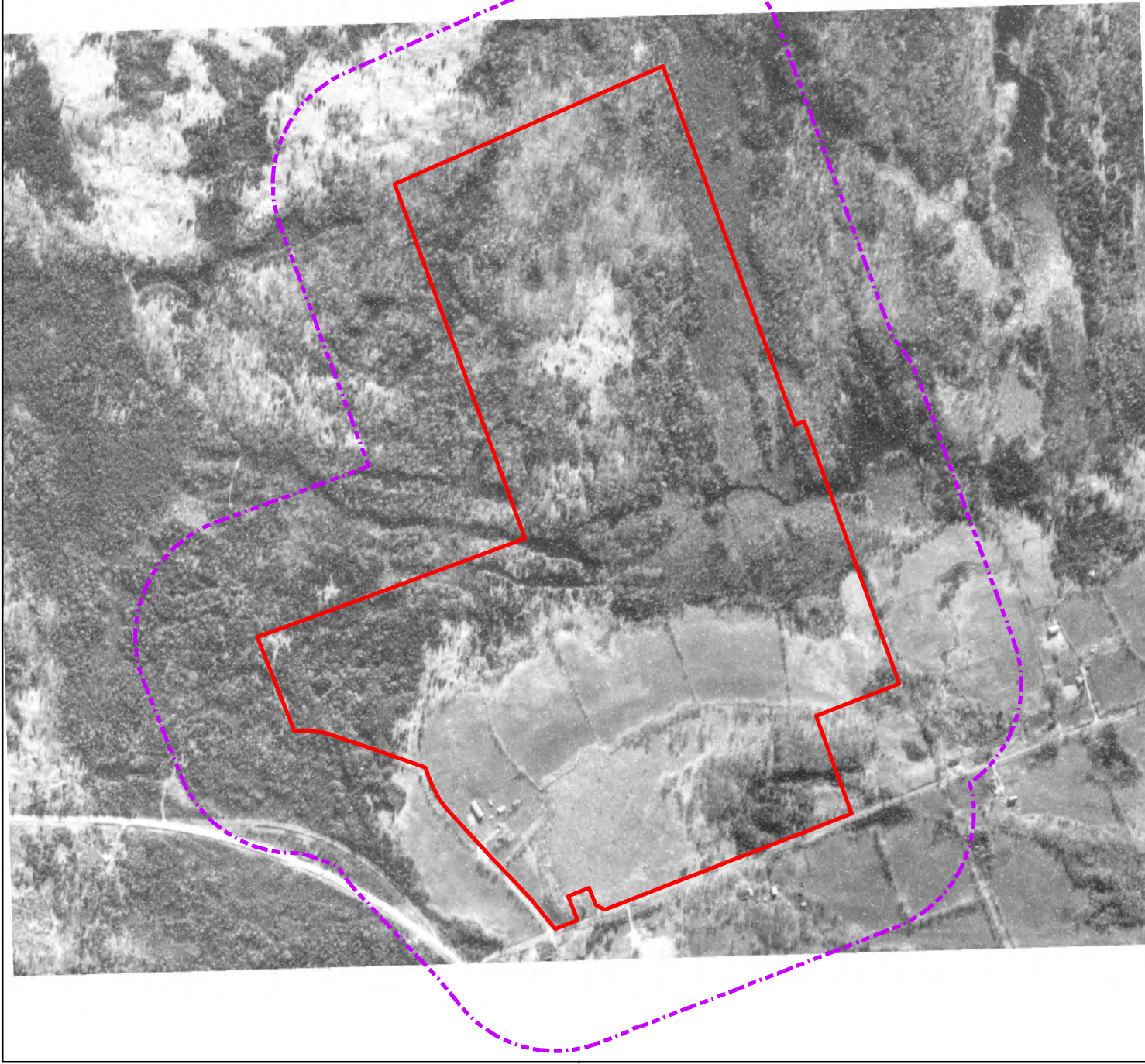
REF. NO. 2204601-MR-300-1

Figure A3



LEGEND

-  Phase One Property
-  Phase One Study



North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:12,000
Page Size: Letter (8.5 x 11 inches)

Drawn: SM
Checked: SD
Date: Dec 8, 2022

Source Notes:
Imagery provided by ERS



CLIENT	Eric Challenger
PROJECT	Woodview Golf Course Subdivision
TITLE	Aerial Imagery (1981)
REF. NO.	2204601-MR-300-1
Figure A4	



LEGEND

- Phase One Property
- Phase One Study



North American Datum 1983
Universal Transverse Mercator Projection Zone 17
Scale: 1:12,000
Page Size: Letter (8.5 x 11 inches)
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Date: Dec 8, 2022



Source Notes:
Imagery provided by ERS

CLIENT

Eric Challenger

PROJECT

Woodview Golf Course Subdivision

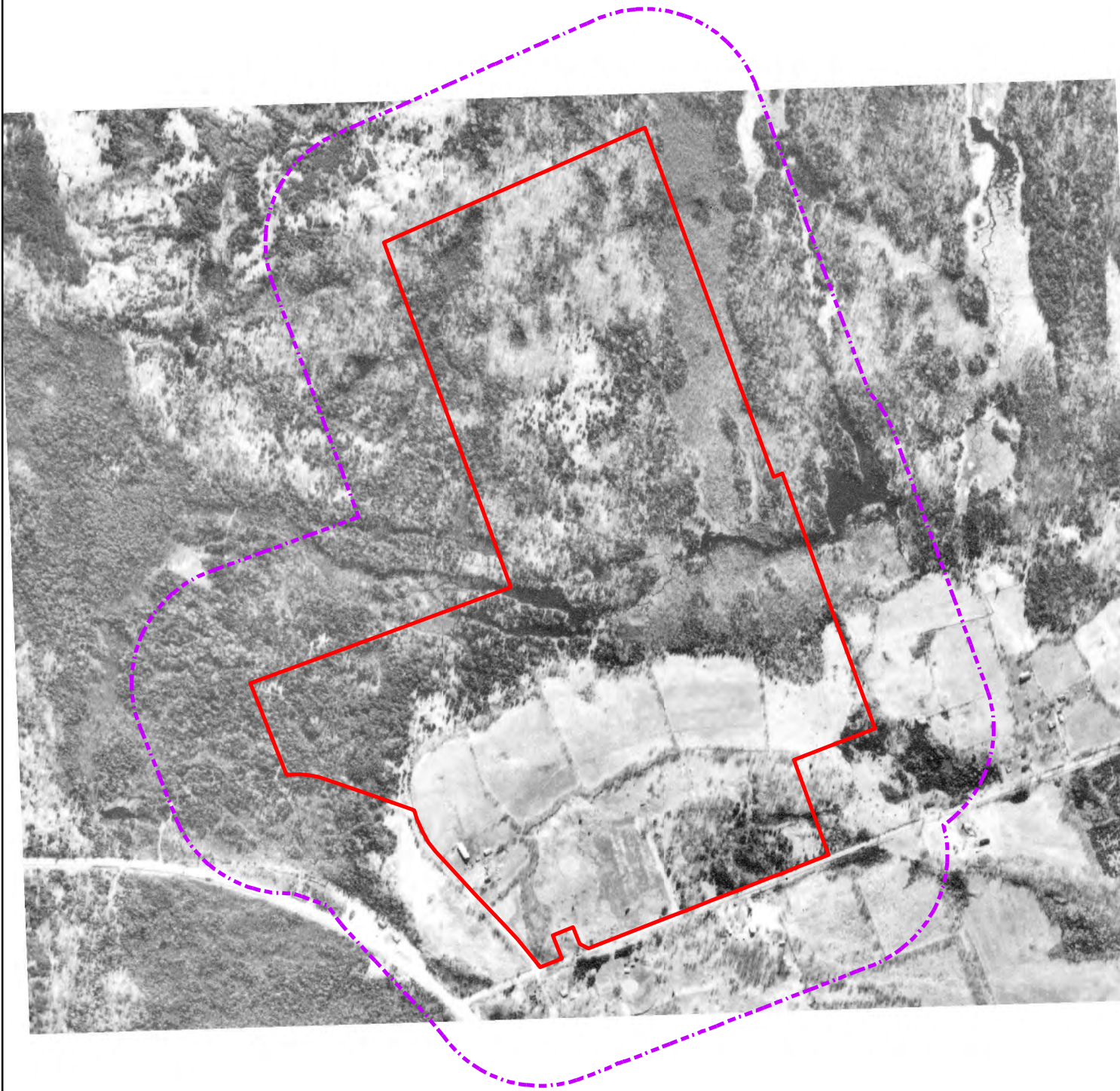
TITLE

Aerial Imagery
(1995)



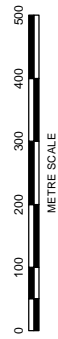
REF. NO. 2204601-MR-300-1

Figure A5



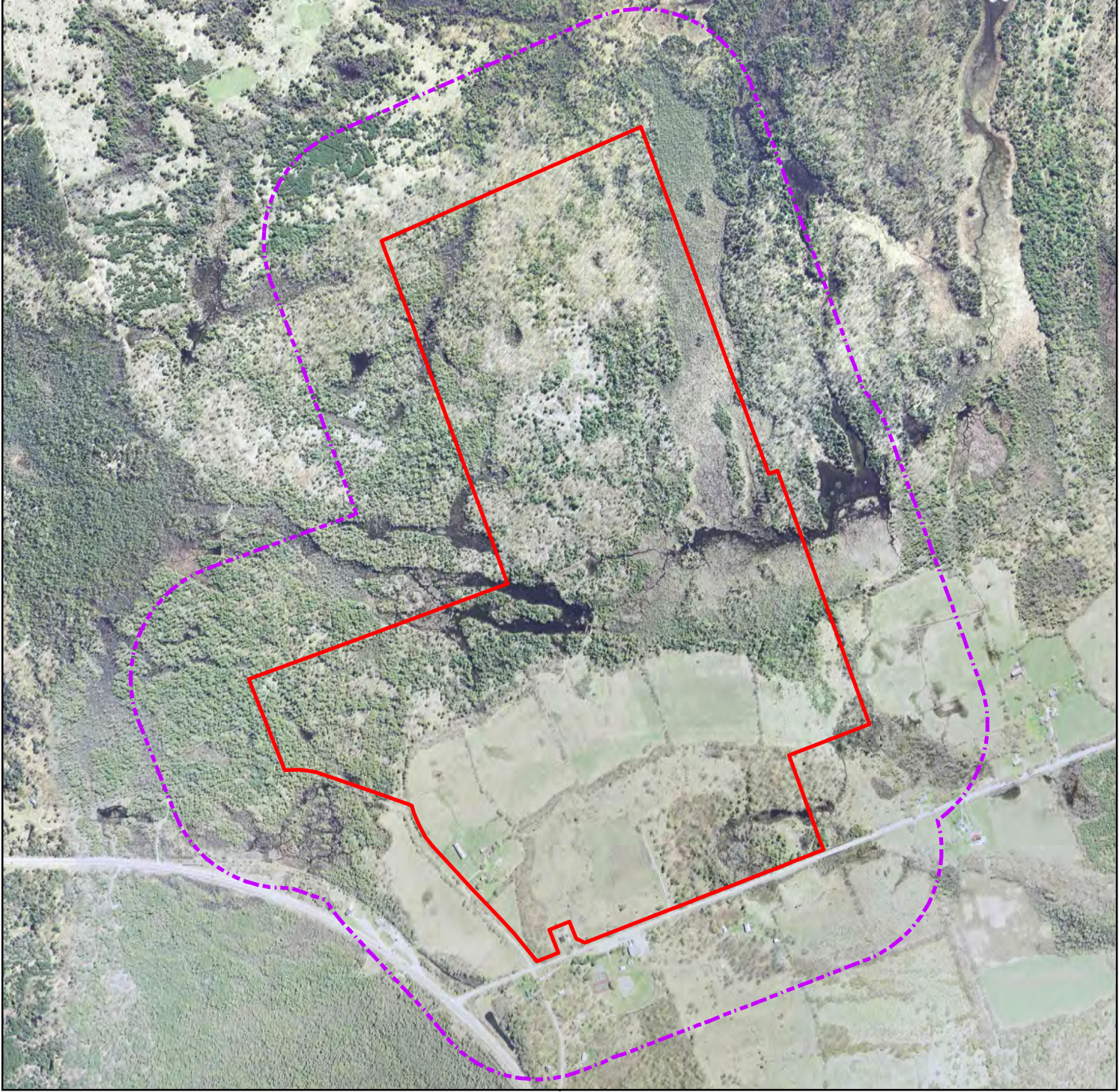
LEGEND

- Phase One Property
- Phase One Study Area



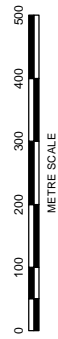
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Universal Transverse Mercator Projection Zone 17
Scale: 1:12,000
Page Size: Letter (8.5 x 11 inches)
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Checked: SD
Date: Nov 22, 2022
Source Notes:
Imagery from Peterborough County webmap

CLIENT	Eric Challenger
PROJECT	Woodview Golf Course Subdivision
TITLE	Aerial Imagery (2002)
REF. NO.	2204601-MR-300-1
Figure A6	



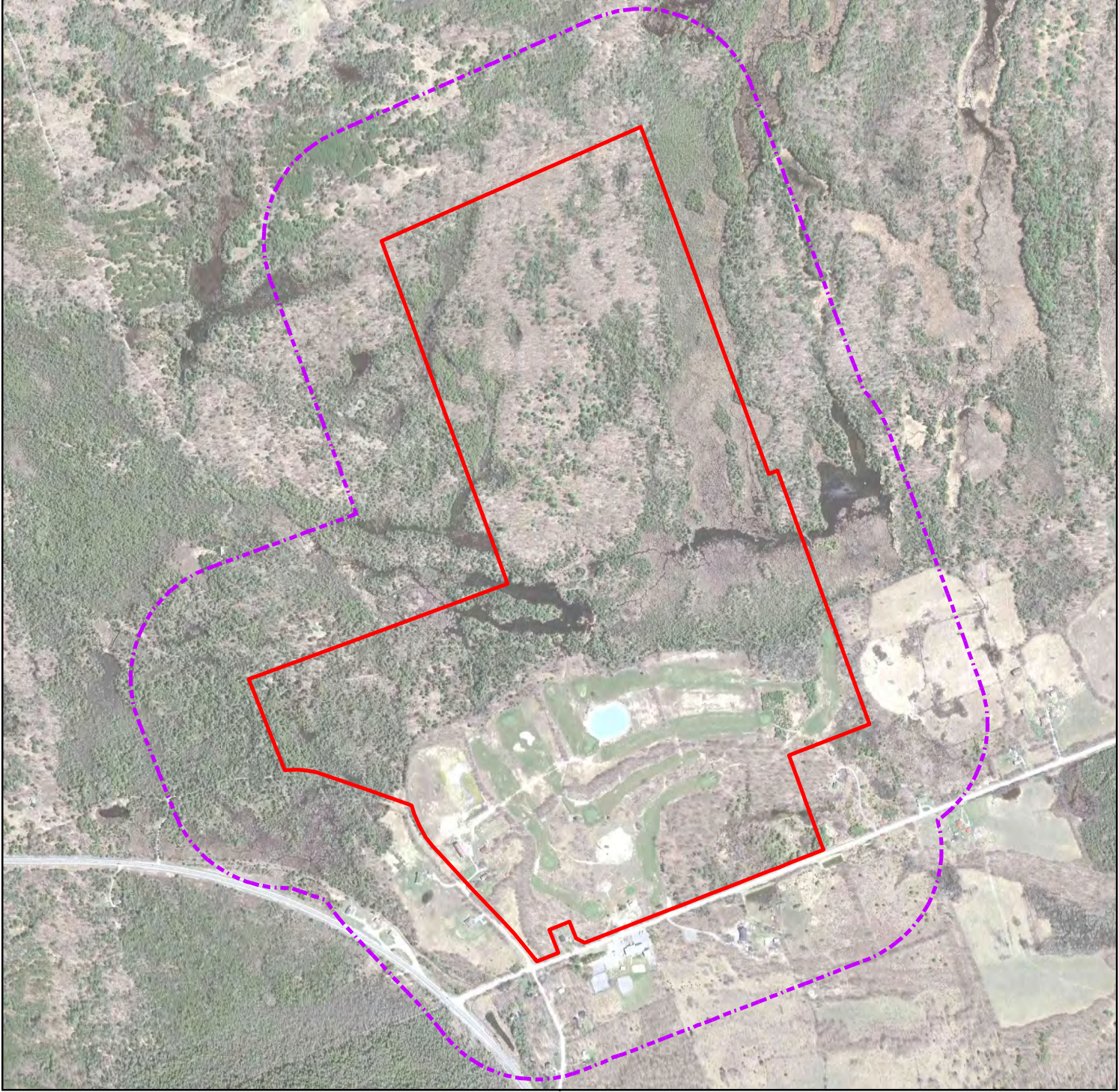
LEGEND

- Phase One Property
- Phase One Study Area



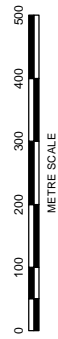
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Checked: SD
Date: Nov 22, 2022
Source Notes:
Imagery from Peterborough County webmap

CLIENT	Eric Challenger
PROJECT	Woodview Golf Course Subdivision
TITLE	Aerial Imagery (2013)
REF. NO.	2204601-MR-300-1
Figure A7	



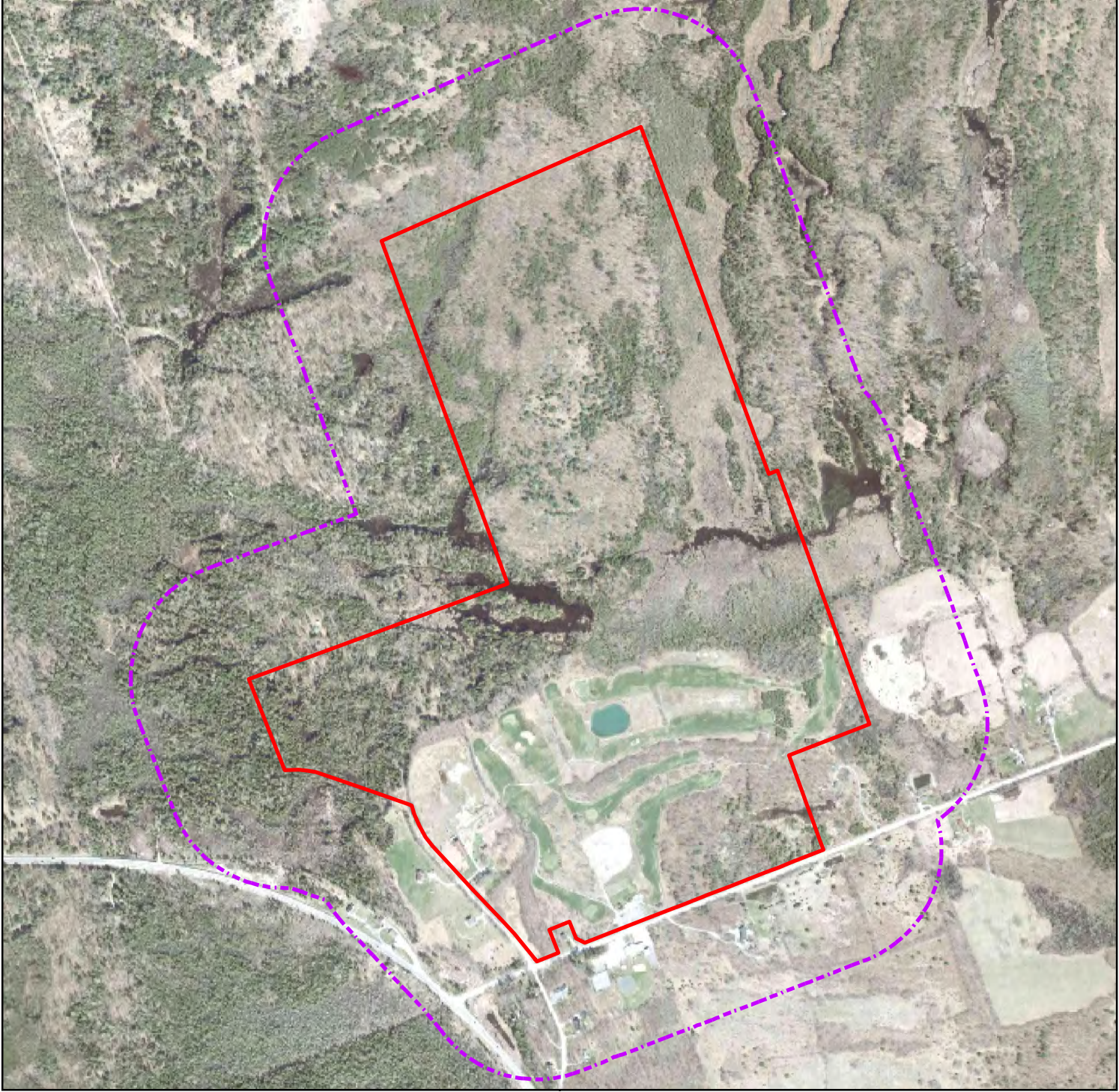
LEGEND

- Phase One Property
- Phase One Study Area



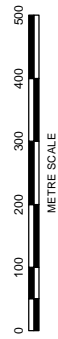
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Universal Transverse Mercator Projection Zone 17
Scale: 1:12,000
Page Size: Letter (8.5 x 11 inches)
Drawn: SM
Checked: SD
Date: Nov 22, 2022
Source Notes:
Imagery from Peterborough County webmap

CLIENT	Eric Challenger
PROJECT	Woodview Golf Course Subdivision
TITLE	Aerial Imagery (2018)
REF. NO.	2204601-MR-300-1
Figure A8	



LEGEND

- Phase One Property
- Phase One Study Area



North American Datum 1983
Universal Transverse Mercator Projection Zone 17
Scale: 1:12,000
Page Size: Letter (8.5 x 11 inches)
Drawn: SM
Checked: SD
Date: Nov 22, 2022
Source Notes:
Imagery from MNRF

CLIENT	Eric Challenger
PROJECT	Woodview Golf Course Subdivision
TITLE	Aerial Imagery (2022)
REF. NO.	2204601-MR-303-1
Figure A9	



Appendix C

Parcel Boundaries and Concept Plan



County of Peterborough Parcel Map



1: 10,973



Legend

- Roads < 50,000
- PRIV ; Private; PRIV
- City Arterial
- City Collector and Local
- City Owned Unclassified
- Provincial
- County
- Township
- Water Access Only
- Outside Roads < 50,000
- Major Roads
- Local Roads
- First Nations
- Parcel Fabric
- Lots and Concessions
- Parcel First Nations - Canada I
- Lakes - Local Scale
- Municipal Boundary - Upper Ti
- <all other values>
- COUNTY OF PETERBOROUGH

Notes

65 Northeys Bay Road, Woodview, ON

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION

557.4 0 278.71 557.4 Meters

North_American_1983_CSRS_UTM_Zone_17N
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