

Stage 1 Archaeological Assessment Stroud Water Storage Facility, Booster Pumping Station (Lot 15 and 16, Concession 9 and 10, Innisfil Geographical Township, County of Simcoe) Town of Innisfil

Original Report

Prepared for:

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Executive Summary

Archaeological Services Inc. was contracted by R.V. Anderson Associates Limited, on behalf of InnServices Utilities Inc. to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Stroud Water Storage Facility and Booster Pumping Station project.

The Preliminary Design is part of the Town of Innisfil 2024 Master Servicing Plan update which identified short- and long-term strategies for water and wastewater servicing to accommodate population and employment growth outlined in the Innisfil Official Plan.

The Stroud Water Storage Facility and Booster Pumping Station is proposed to be located on Yonge Street between the 9th Line and Lockhart Road.

The Stage 1 Project Area includes five potential locations which are primarily located in agricultural fields:

- Alternative 1 - east of Yonge Street and south of Stroud
- Alternative 2 - west of Yonge Street and south of Stroud
- Alternative 3 - west of Yonge Street and south of Stroud
- Alternative 5 - west of Yonge Street and north of Stroud
- Alternative 6 - east of Yonge Street and north of Stroud.

Stage 1 background research determined three previously registered archaeological sites are located within one kilometre of the Project Area. The property inspection identified areas of archaeological potential which require further archaeological assessment before development.



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1.0 Project Context

Archaeological Services Inc. (ASI) was contracted by R.V. Anderson Associates Limited, on behalf of InnServices Utilities Inc. to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Stroud Water Storage Facility and Booster Pumping Station project.

The Preliminary Design is part of the Town of Innisfil 2024 Master Servicing Plan (MSP) update which identified short- and long-term strategies for water and wastewater servicing to accommodate population and employment growth outlined in the Innisfil Official Plan.

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The Stage 1 Project Area (Figure 1) includes five potential locations which are primarily located in agricultural fields:

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- Alternative 5 - west of Yonge Street and north of Stroud
- Alternative 6 - east of Yonge Street and north of Stroud.

Alternative 4 is not being carried forward for evaluation and was not included as part of the Stage 1 Archaeological Assessment

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (R.S.O. c. O.18, 1990, as amended in 2025) and the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), currently administered by the Ministry of Citizenship and Multiculturalism (MCM, 2011).



1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act* (R.S.O. c. E.18, 1990, as amended in 2025) and regulations made under the Act, and are therefore subject to all associated legislation. This project is being conducted in accordance with the Schedule B *Municipal Class Environmental Assessment* process (Municipal Engineers Association, 2023).

The *County of Simcoe Archaeological Management Plan* (ASI, 2019) was also consulted.

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment and property inspection was granted by R.V. Anderson & Associates Limited on September 22, 2025.

1.1.1 Treaties

The Project Area is within the Nottawasaga Purchase (Treaty 18).

The Nottawasaga Purchase is a provisional agreement sometimes called the Lake Simcoe-Nottawasaga Treaty, signed on October 17, 1818, by representatives of the Government of Upper Canada and the Anishinaabe (Ministry of Indigenous Affairs, 2020). Treaty 18 encompassed 1,592,000 acres of land between the District of London in the west, Lake Huron in the north, the west limit of the Penetanguishene Purchase (1815) in the east, and the west shore of Lake Simcoe, Cook's Bay, and the Holland River in the northwest. In exchange for the land, the Crown agreed to pay an annual sum of £1200 in goods at the "Montreal price" (Ministry of Indigenous Affairs, 2020). The Nottawasaga Purchase territory includes the present-day communities of Wasaga, Bradford, and Collingwood.

1.2 Historical Context

1.2.1 Indigenous Land Use and Settlement

Current archaeological evidence indicates humans were present in southern Ontario approximately 13,000 years before present (BP) (Ferris, 2013).



Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 BP, the environment had progressively warmed (Edwards & Fritz, 1988) and populations now occupied less extensive territories (Ellis & Deller, 1990).

Between approximately 10,000-5,500 BP, the Great Lakes basins experienced low-water levels, and many sites which would have been located on those former shorelines are now submerged. This period produces the earliest evidence of heavy wood working tools, an indication of greater investment of labour in felling trees for fuel, to build shelter, and watercraft production. These activities suggest prolonged seasonal residency at occupation sites. Polished stone and native copper implements were being produced by approximately 8,000 BP; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest archaeological evidence for cemeteries dates to approximately 4,500-3,000 BP and is interpreted by archaeologists to be indicative of increased social organization, investment of labour into social infrastructure, and the establishment of socially prescribed territories (Brown, 1995, p. 13; Ellis et al., 1990, 2009).

Between 3,000-2,500 BP, populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. The Woodland period begins around 2,500 BP and exchange and interaction networks broaden at this time (Spence et al., 1990, pp. 136, 138) and by approximately 2,000 BP, evidence exists for small community camps, focusing on the seasonal harvesting of resources (Spence et al., 1990, pp. 155, 164). By 1,500 BP there is macro botanical evidence for maize in southern Ontario, and it is thought that maize only supplemented people's diet. There is earlier phytolithic evidence for maize in central New York State by 2,300 BP - it is likely that once similar analyses are conducted on Ontario ceramic vessels of the same period, the same evidence will be found (Birch & Williamson, 2013, pp. 13–15). As is evident in detailed Anishinaabek ethnographies, winter was a period during which some families would depart from the larger group as it was easier to sustain smaller populations (Rogers, 1962). It is generally understood that these



populations were Algonquian-speakers during these millennia of settlement and land use.

From the beginning of the Late Woodland period at approximately 1,000 BP, lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (CE), larger settlement sites focused on horticulture begin to dominate the archaeological record. Seasonal dispersal of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson, 1990, p. 317). By 1300-1450 CE, archaeological research focusing on these horticultural societies note that this episodic community dispersal was no longer practised and these populations now occupied sites throughout the year (Dodd et al., 1990, p. 343). By the mid-sixteenth century these small villages had coalesced into larger communities thought to house several thousand people (Birch et al., 2021). Through this process, the socio-political organization of these First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed. Other First Nation communities continued to practice residential mobility and to harvest available resources across landscapes they returned to seasonally/annually.

The Odawa are first described in the historical record 1615 when Samuel de Champlain encountered a group of Odawas at the mouth of the French River (Langton & Ganong, 1971, p. 44). The Odawa were an Algonquian Nation who occupied Bruce County, Grey County and Manitoulin Island. The Odawa subsisted primarily from fishing but also practiced horticulture and were extensively involved in trade. They were known to co-reside with Iroquoian populations (Thwaites, 1896, p. 125).

By 1600 CE, the Confederation of Nations were encountered by the first European explorers and missionaries in Simcoe County. By the 1640s, devastating epidemics and the traditional enmity between the Haudenosaunee and the Attawandaron and the Huron-Wendat (and their Algonquian allies such as the Nipissing and Odawa) led to their dispersal from southern Ontario. Shortly afterwards, the Haudenosaunee established a series of settlements at



strategic locations along the trade routes inland from the north shore of Lake Ontario.

In 1763, following the fall of Quebec, New France was transferred to British control at the Treaty of Paris. The British government began to pursue major land purchases to the north of Lake Ontario in the early nineteenth century.

1.2.2 Post-Contact Settlement

Historically, the Project Area is located in the Geographical Innisfil Township, County of Simcoe, in Lots 15 and 16 of Concession 9 and 10.

The S & G stipulates that areas of early Euro-Canadian settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches, and early cemeteries are considered to have archaeological potential. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the Ontario Heritage Act or a federal, provincial, or municipal historic landmark or site are also considered to have archaeological potential.

For the Euro-Canadian period, the majority of early nineteenth century farmsteads (i.e., those that are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be located in proximity to water. The development of the network of concession roads and railroads through the course of the nineteenth century frequently influenced the siting of farmsteads and businesses. Accordingly, undisturbed lands within 100 metres of an early settlement road are also considered to have potential for the presence of Euro-Canadian archaeological sites.

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes followed existing Indigenous trails,



both along the lakeshore and adjacent to various creeks and rivers (ASI 2006). Early European settlements occupied similar locations as Indigenous settlements as they were generally accessible by trail or water routes and would have been in locations with good soil and suitable topography to ensure adequate drainage.

Throughout the period of initial European settlement, Indigenous groups continued to fish, gather, and hunt within their traditional and treaty territories, albeit often with legal and informal restrictions imposed by colonial authorities and settlers. In many cases, Indigenous peoples acted as guides and teachers, passing on their traditional knowledge to settlers, allowing them to sustain themselves in their new homes. Indigenous peoples entered into economic arrangements and partnerships, and often inter-married with settlers. However, pervasive and systemic oppression and marginalization of Indigenous peoples also characterized Euro-Canadian colonization, with thousands being displaced from their lands, denied access to traditional and treaty hunting, fishing, and collecting grounds, and forced to assimilate with Euro-Canadian culture through mandatory attendance at Day and Residential Schools (Ray, 2005; Rogers & Smith, 1994).

1.2.2.1. Township of Innisfil

The Township of Innisfil was surveyed in 1820 and the first settlement began that year. The township was named after the poetical name for Ireland, Innisfail, by its early settlers. Growth was slow during the first ten years of the township and the first sawmill was not erected until the 1830s. In 1835 a grist mill was constructed. Early settlement focused around Kempenfeldt Bay. The southwestern area of the township was not settled until after 1840. By 1843, the first school was constructed and the following year the Innisfil Methodist Congregation built the first church. The first census of the township recorded a population of only 762 inhabitants, by 1850, the township had a population of 1,807.

Following the connection of the Northern Railway in 1853, the township became an important shipping hub for the lumber industry of central Ontario (Mika & Mika, 1981). With the arrival of the railway a number of communities developed



and prospered, Allandale, Lefroy, and Craigvale all boasted stations. On the western border of the township, Thorton was a stop for the Hamilton and Northwestern Railway. The community of St. Paul's was established at the corner of Penetanguishene Road (Yonge Street) and Mapleview Drive, and was centered around St. Paul's Anglican Church (established 1851) and a schoolhouse as depicted on the 1879 Illustrated Historical Atlas (Belden, 1881). The small community consisted of a cluster of houses, and would have been along the main path of anyone travelling between Toronto and Georgian Bay along Penetanguishene Road. Other early post office communities included Bramley, Cherry Creek, Fennell, Holly, Innisfil, Killyleagh, Beaumont, Painswick, and Stroud. Today, Innisfil attracts large numbers of tourists and cottagers in the summertime who travel from Toronto via Highway 400 and Highway 11, the northern extension of Yonge Street. This extension travels the length of the township and was built in the late eighteenth century by Colonel John Graves Simcoe from York (Toronto) to Lake Simcoe (Mika & Mika, 1981).

1.2.2.2. Village of Stroud

The community of Stroud is located at the crossroads of Victoria Street and Yonge Street/Highway 4, southeast of the City of Barrie. The first settler was John Lawrence, who built a house in 1840 (Mika and Mika, 1983:461; Scott, 1997:210). The first store was opened a decade later, and a Methodist Church was then constructed on Lawrence's farm in 1852. In 1860, the S.S. Number 10 schoolhouse was opened (Barrie Today, 2021), and by 1864, a brick church had been built and the earlier wood frame structure reused for Sunday School classes. By the late nineteenth century, the settlement had grown to a village. Although the village had first been called Victoria, when a post office was established in 1873 it was renamed to Stroud after the birthplace of a local MP, W.C. Little, because there were already three post offices called Victoria (Mika and Mika, 1983:461; Rayburn, 1997:333; Scott, 1997:210; Barrie Today, 2021).

One of the earliest storekeepers in Stroud was John Chandler, who created the first library in his store in 1912. In 1925, after the destruction of the church and Sunday School by fire, St. James United church was erected (Mika and Mika, 1983:461). In 1923, a new brick school replaced the original schoolhouse. By the



mid-twentieth century, Stroud had a population of 700, and included three churches, a restaurant and motel, a post office, fire hall, police station, and several small businesses (Barrie Today, 2021).

1.2.2.3. Yonge Street

Yonge Street was conceived by Lieutenant-Governor John Graves Simcoe who envisioned it as a way to connect York (Toronto) to Lake Simcoe (Gentilcore & Head, 1983). The construction of Yonge Street began in 1794 under the supervision of Mr. Augustus Jones, a well-known surveyor. In the beginning, Yonge Street was largely impassable north of Bloor and only extended south to Queen Street (Mulvaney & Adam, 1885). By 1797 Yonge Street had been extended north to Holland Landing. Yonge Street was frequently used by the North-West Company who encouraged the building of roads and used them for commercial purposes. The North-West Company even supplied funds for the improvement of Yonge Street and by 1810 the road was serviceable along its entire length. The land on both sides of Yonge Street was granted to settlers on the condition that they build a house, clear a portion of the land, and contribute to the construction of the road fronting the lot (Berchem, 1977). Settlers were given one year to accomplish these requirements or their claims would be considered forfeit. The original terminus of Yonge Street was the Pine Fort on the western branch of the Holland River.

1.2.3 Map Review

The 1871 *Map of the County of Simcoe* (Hogg, 1871) and the 1928 topographic map of Barrie (Department of National Defence, 1928) were examined to determine the presence of historic features within the Project Area during the nineteenth and twentieth centuries (Figure 2 and Figure 3).

It should be noted that not all features of interest were mapped systematically in the Ontario series of historical atlases. For instance, they were often financed by subscription limiting the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases. The use of historical map sources to reconstruct or predict the location of former features within the modern landscape generally begins by using common



reference points between the various sources. The historical maps are geo-referenced to provide the most accurate determination of the location of any property on a modern map. The results of this exercise can often be imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including differences of scale and resolution, and distortions introduced by reproduction of the sources.

The 1871 map (Figure 2) shows the Project Area is rural. Alternatives 1, 2 and 3 are located south of the community of Stroud adjacent to the east and west side of Yonge Street. There are no built structures, waterways nor railways symbolized within 100 metres of the Project Area however every lot is labelled by owner. Alternatives 5 and 6 are situated within the same context north of the community of Stroud.

The 1928 map (Figure 3) symbolizes the historical features within the crossroad community of Stroud. At this time there is no development within the Project Area however two structures are symbolized adjacent to the southside of Alternative 1 and north of Alternative 6.

1.2.4 Aerial and Orthoimagery Review

Figure 4 shows historical aerial imagery from 1954 (Hunting Survey Corporation Limited, 1954). All alternatives for the Project Area are situated within active agricultural fields. Built structures directly south of Alternative 1, Alternative 2 and north of Alternative 6 appear to be within the same footprint as the 1928 topographic map.

A review of available Google satellite imagery between 2004 and 2025 shows no instances of significant land alterations within this timeframe.

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the Project Area, its environmental characteristics (including drainage, soils or surficial geology and topography, etc.), and current land use and field conditions. Three sources of



information were consulted to provide information about previous archaeological research: the site record forms for registered sites available online from the MCM through “Ontario’s Past Portal”; published and unpublished documentary sources; and the files of ASI.

1.3.1 Geography

In addition to the known archaeological sites, the state of the natural environment is a helpful indicator of archaeological potential. Accordingly, a description of the physiography and soils are briefly discussed for the Project Area.

The S & G stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential.

Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in Ontario since 5,000 B.P. (Karrow & Warner, 1990, Figure 2.16), proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location.

Other geographic characteristics that can indicate archaeological potential include elevated topography (eskers, drumlins, large knolls, and plateaux), pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground, distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories



and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings. Resource areas, including; food or medicinal plants (migratory routes, spawning areas) are also considered characteristics that indicate archaeological potential (S & G, Section 1.3.1).

1.3.1.1. Physiography

The Project Area is located within the drumlinized till plains of the Peterborough Drumlin Field physiographic region of southern Ontario (Chapman & Putnam, 1984).

The Peterborough Drumlin Field extends from Simcoe County east to Hastings County and is generally characterized by rolling till plains overlying limestone bedrock. The region is approximately 4,532 square kilometres and contains over 3000 drumlins in addition to many other drumlinoid hills and surface flutings (Chapman & Putnam, 1984). The drumlins are composed of highly calcareous till but there are local differences in composition. The till plains of the regions were formed during the retreat of the Lake Ontario ice lobe of the Laurentide glacier and they indicate directionality of glacial advance and retreat. Till is produced from the advance of continental glacial ice. Soil and rock is carried forward by the ice, mixed and milled, producing a heterogeneous soil which is characteristic of glaciations (Chapman & Putnam, 1984).

1.3.1.2. Surficial Geology

Figure 5 shows the surficial geology of the Project Area (Ontario Geological Survey, 2010).

The Project Area is underlain by:

- Stone-poor, sandy silt to silty sand-textured till on Paleozoic terrain, and
- Massive-well laminated fine-textured glaciolacustrine deposits of silt and clay, minor sand and gravel.



1.3.1.3. Soil Types and Drainage

The soil type within the Project Area is Bondhead, a sandy loam with good drainage (Soil Research Institute, 1959).

Soil drainage is shown in Figure 6.

1.3.1.4. Water Sources

West of Yonge Street a channelized ditch carrying a tributary of Lovers Creek intersects the Project Area within Alternative 2.

The Project Area is within the Lovers Creek subwatershed (Ministry of Natural Resources and Forestry, 2020), which is a part of the larger Lake Simcoe watershed. The Lake Simcoe Watershed consists of 18 major river systems and drains an area of approximately 3,400 square kilometres, from the Oro Moraine in the north to the Oak Ridges Moraine in the south, ultimately draining into Lake Huron to the west (Lake Simcoe Region Conservation Authority, no date).

1.3.2 Previously Registered Archaeological Sites

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database maintained by the MCM. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 kilometres east to west, and approximately 18.5 kilometres north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The Project Area under review is located in Borden block *BbGv*.

According to the Ontario Archaeological Sites Database, three previously registered archaeological sites are located within one kilometre of the Project Area (MCM 2025).



Table 1: Registered Sites within One Kilometre of the Project Area

Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
BcGv-40	George Warnica	Post-Contact	Homestead	Archaeological Assessments Ltds., 2014
BcGv-51	J.Pratt	Post-Contact	Farmstead	Earthworks Archaeological Services, 2019
BbGv-74	Thompson Site	Post-Contact	Farmstead	ASI, 2024

1.3.3 Previous Archaeological Assessments

ASI reviewed previous archaeological assessments that detail fieldwork within 50 metres of the Project Area. Only those specific archaeological assessments of direct relevance to the present undertaking have been included here:

- (ASI, 2022) *Stage 1 Archaeological Assessment, Stroud Sewage Pumping Station, (Lot 15 and 16, Concession 8 and 9, Former Township of Innisfil, County of Simcoe), Town of Innisfil, Simcoe County. P383-0303-2021.*
 - This Stage 1 archaeological assessment partially overlaps with Project Area. Within the overlapping area archaeological potential was determined beyond the disturbed road right-of-way which requires Stage 2 test pit and pedestrian survey at five metre intervals before development.
- **Report Awaiting MCM Review:** (ASI) *Stage 1 Archaeological Assessment, County Road 4 Widening, (Lot 15, 16 Concession 1-11, Former Township of Innisfil, County of Simcoe), Town of Innisfil, County of Simcoe. P383-0239-2020.*



- This Stage 1 archaeological assessment partially overlaps with Alternative 1, 2, 3, 5 and 6 along the sections fronting Yonge Street. Within the overlapping area archaeological potential was determined beyond the disturbed road right-of-way which requires Stage 2 test pit and pedestrian survey at five metre intervals before development.
- **Report Awaiting MCM Review:** (ASI) *Stage 1 and 2 Archaeological Assessment of 7665 and 7667 Yonge Street, Part of Lot 16, Concession 9, Geographic Township of Innisfil, County of Simcoe, now in the Town of Innisfil, County of Simcoe. P449-0735-2023.*
 - This Stage 1 and 2 archaeological assessment completely overlaps Alternative Location 1 east of Yonge Street within the agricultural field. The overlapping area was cleared of archaeological concern.

2.0 Property Inspection

2.1 Field Methods

A Stage 1 property inspection must adhere to the S & G, Section 1.2, Standards 1-6, which are discussed below. The entire property and its periphery must be inspected. The inspection may be either systematic or random. Coverage must be sufficient to identify the presence or absence of any features of archaeological potential. The inspection must be conducted when weather conditions permit good visibility of land features. Natural landforms and watercourses are to be confirmed if previously identified. Additional features such as elevated topography, relic water channels, glacial shorelines, well-drained soils within heavy soils and slightly elevated areas within low and wet areas should be identified and documented, if present. Features affecting assessment strategies should be identified and documented such as woodlots, bogs or other permanently wet areas, areas of steeper grade than indicated on topographic mapping, areas of overgrown vegetation, areas of heavy soil, and recent land disturbance such as grading, fill deposits and vegetation clearing. The inspection should also identify and document structures and built features that will affect assessment strategies, such as heritage structures or landscapes, cairns, monuments or plaques, and cemeteries.



The Stage 1 archaeological assessment property inspection was conducted under the field direction of Blake Williams (P383) on October 10, 2025, in order to gain first-hand knowledge of the geography, topography, and current conditions and to evaluate and map archaeological potential of the Project Area. It was a systematic visual inspection from public right-of-ways only and did not include excavation or collection of archaeological resources. Fieldwork was conducted when weather conditions were deemed clear with good visibility (sunny with seasonal temperatures), per S & G Section 1.2., Standard 2. Field photography is presented in Section 7 (Image 1 to Image 9), and field observations are overlaid onto the existing conditions of the Project Area in Section 8 (Figure 7, Figure 8).

2.2 Current Land Use and Field Conditions

All Alternatives within the Project Area are located on lands adjacent to the the Yonge Street road right-of-way. Parallel to Yonge Street there are ditches which lead into active agricultural fields. Between the active agricultural fields and Yonge Street, Alternatives 1, 2, 3, 5 and 6 have tall grassy areas and vegetation. Within Alternative 3 a straight, channelized ditch has been used to direct a small tributary of Lovers Creek (Image 2). Image 4 shows a long, gravel laneway intersecting the northern border of Alternative 6. This lane is lined with vegetation and leads to an active farm.

3.0 Analysis of Archaeological Potential

The S & G, Section 1.3.1, lists criteria that are indicative of archaeological potential. The Project Area meets the following criteria indicative of archaeological potential:

- Previously identified archaeological sites within 300 metres (BbGv-74);
- Well-drained soils within the Project Area (Bondhead);
- Early settlements within 100 metres (farmsteads, Stroud); and
- Early historic transportation routes within 100 metres (Yonge Street, farmsteads)



According to the S & G, Section 1.4 Standard 1e, no areas within a property containing locations listed or designated by a municipality can be recommended for exemption from further assessment unless the area can be documented as disturbed. The Town of Innisfil Municipal Heritage Register (Town of Innisfil, n.d.) was consulted and no properties within the Project Area are Listed or Designated under the *Ontario Heritage Act*.

The *County of Simcoe Archaeological Management Plan* (ASI, 2019) was reviewed for background information and to help inform any indicators of archaeological potential not captured in other research. Generally speaking, archaeological management plans are high-level analyses of archaeological potential for non-specialists but cannot be considered a replacement for Stage 1 archaeological assessments. ASI's review of the above archaeological management plan indicates the entirety of the Project Area retains archaeological potential.

The property inspection determined that parts of the Project Area exhibit archaeological potential. These areas will require Stage 2 archaeological assessment prior to any construction activities or other proposed impacts. According to the S & G Section 2.1.1, pedestrian survey is required in actively or recently cultivated fields (Image 1 to Image 9; Figure 7, Figure 8: areas highlighted in orange). According to the S & G Section 2.1.2, test pit survey is required on terrain where ploughing is not viable, such as wooded areas, properties where existing landscaping or infrastructure would be damaged, overgrown farmland with heavy brush or rocky pasture, and narrow linear corridors up to 10 metres wide (Image 1 to Image 9; Figure 7, Figure 8: areas highlighted in green).

Part of the Project Area has been subjected to deep soil disturbance events, such as a residential laneway and a channelized ditch. According to the S & G Section 1.3.2 these areas do not retain archaeological potential (Image 2, Image 4; Figure 7, Figure 8: areas highlighted in yellow) and do not require further survey.



3.1 Conclusions

Stage 1 background research determined three previously registered archaeological sites are located within one kilometre of the Project Area. The property inspection determined archaeological potential which requires further archaeological assessment before development.

4.0 Recommendations

The following recommendations are made:

- 1) Parts of the Project Area exhibit archaeological potential. These lands require Stage 2 archaeological assessment by test pit and pedestrian survey at five metre intervals, where appropriate (Figure 7, Figure 8). Stage 2 is required prior to any proposed construction activities on these lands;
- 2) The remainder of the Project Area does not retain archaeological potential on account of being previously assessed (P449-0735-2023) and deep and extensive land disturbance. These lands do not require further archaeological assessment; and,
- 3) Should the proposed work extend beyond the current Project Area, further archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

NOTWITHSTANDING the results and recommendations presented in this study, ASI notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Archaeology Programs Unit of the MCM should be immediately notified.

The above recommendations are subject to MCM approval and it is an offence to alter any archaeological site without MCM concurrence. No grading or other activities that may result in the destruction or disturbance of any archaeological sites are permitted until notice of MCM approval has been received.



5.0 Advice on Compliance with Legislation

- This report is submitted to the Minister as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Citizenship and Multiculturalism a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
- The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Public and Business Services Delivery.



- Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

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7.0 Images



Image 1: Alternative 2. Archaeological potential beyond ditch. Test pit and pedestrian survey required.



Image 2: Alternative 3. Archaeological potential beyond disturbed channelized creek. Test pit and pedestrian survey required.



Image 3: Alternative 3. Archaeological potential beyond ditch. Test pit and pedestrian survey required.



Image 4: Alternative 6. Archaeological potential beyond disturbed lane. Test pit and pedestrian survey required.



Image 5: Alternative 6. Archaeological potential. Test pit and pedestrian survey required.



Image 6: Alternative 6. Archaeological potential. Test pit and pedestrian survey required.



Image 7: Alternative 5. Archaeological potential. Test pit and pedestrian survey required.



Image 8: Alternative 5. Archaeological potential. Test pit and pedestrian survey required.



Image 9: Alternative 5. Archaeological potential. Test pit and pedestrian survey required.

8.0 Maps

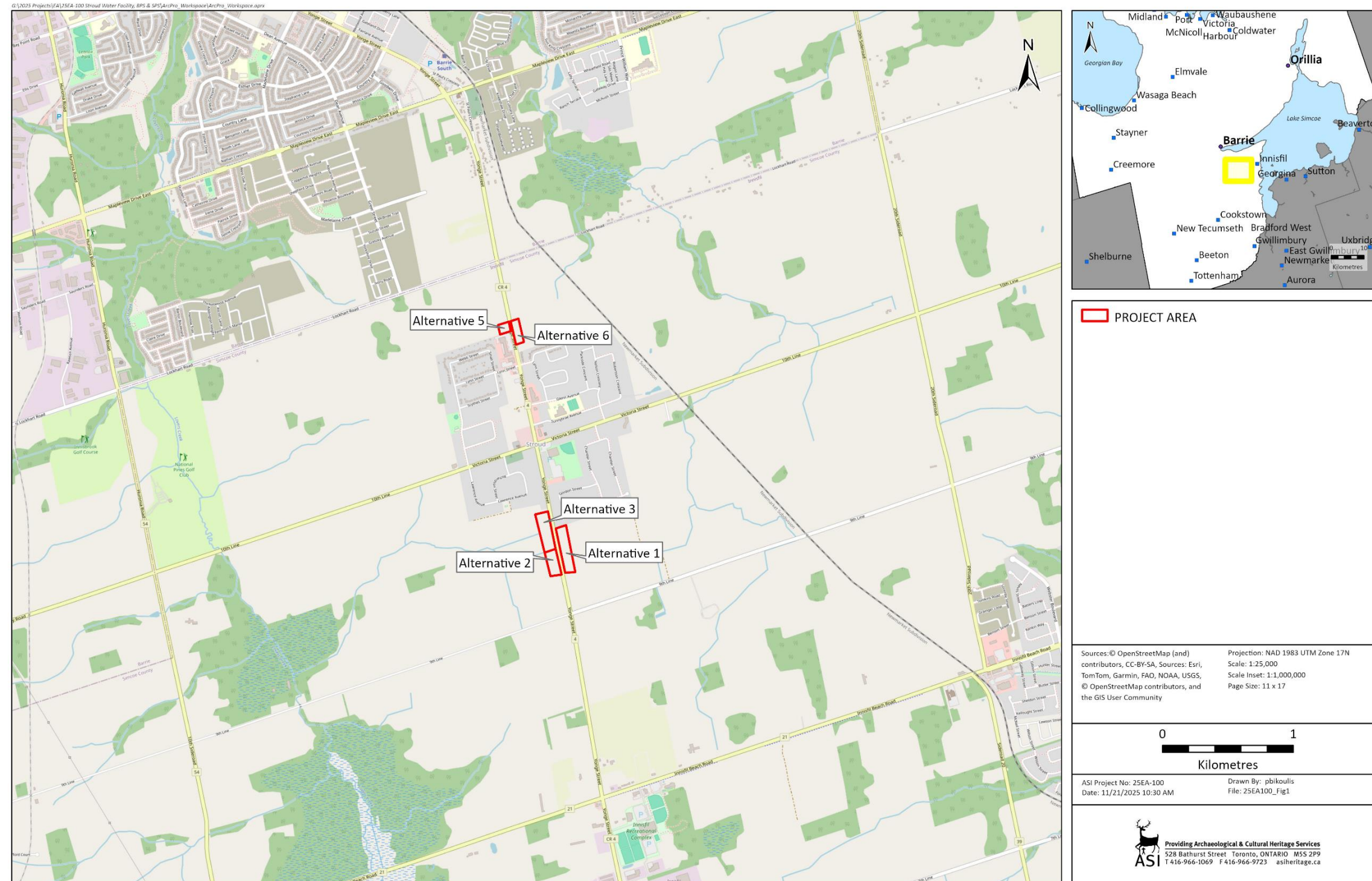


Figure 1: Stroud Water Storage Facility, Booster Pumping Station Stage 1 Project Area



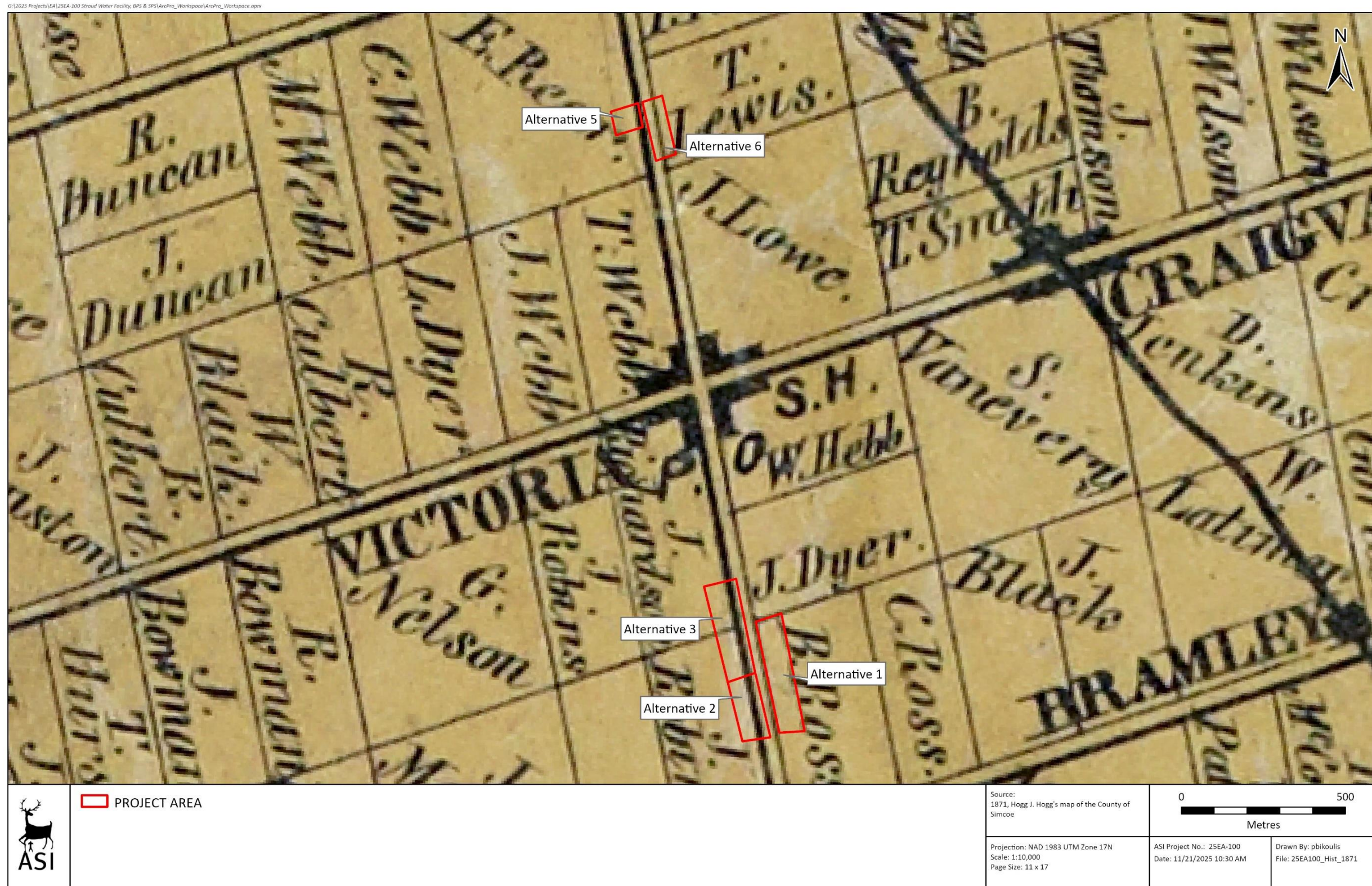


Figure 2: The Project Area (approximate location) overlaid on the 1871 Hogg Map of the County of Simcoe

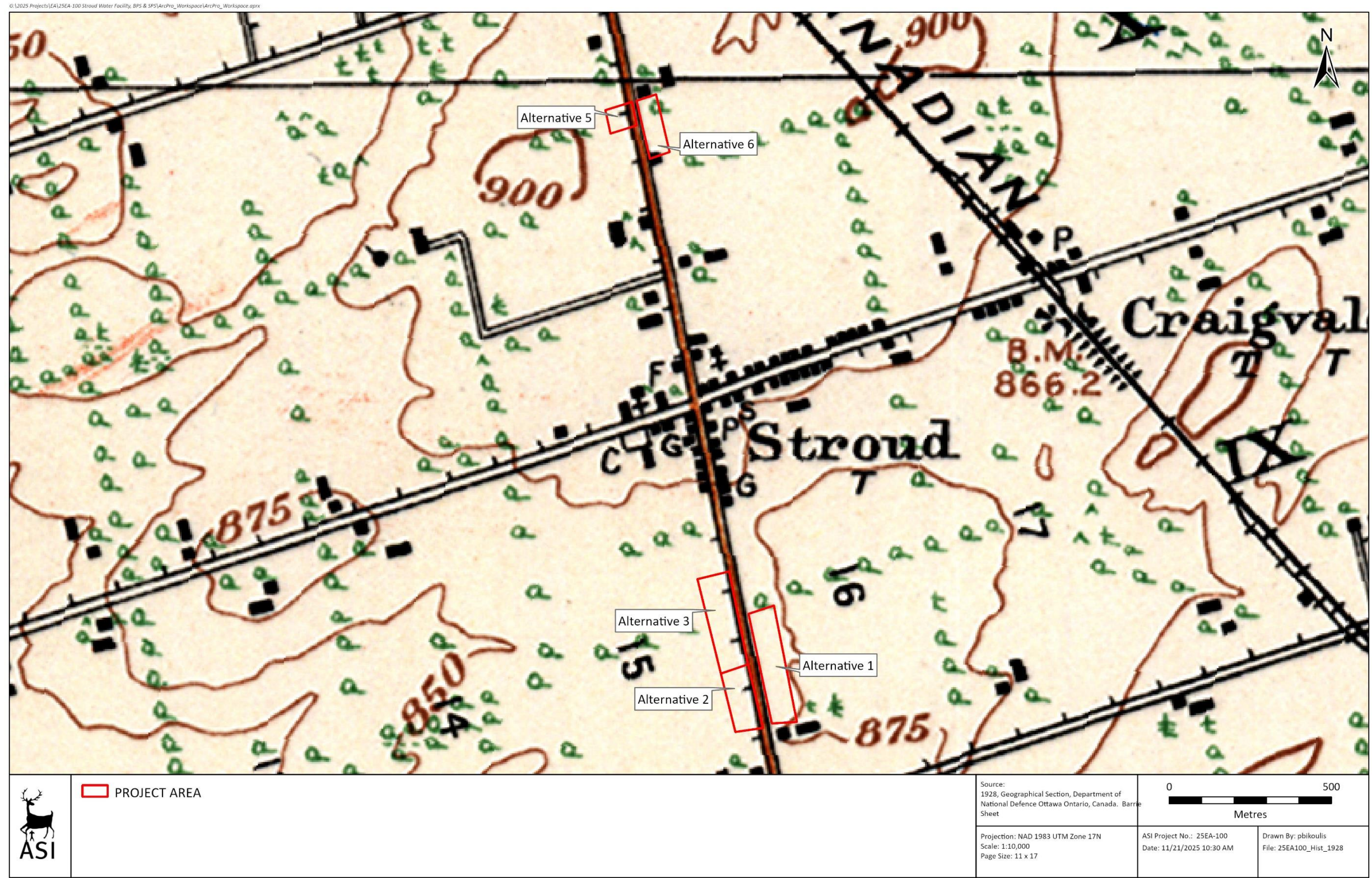


Figure 3: The Project Area (approximate location) overlaid on the 1928 Barrie Topographic Map





Figure 4: The Project Area (approximate location) overlaid on 1954 aerial imagery

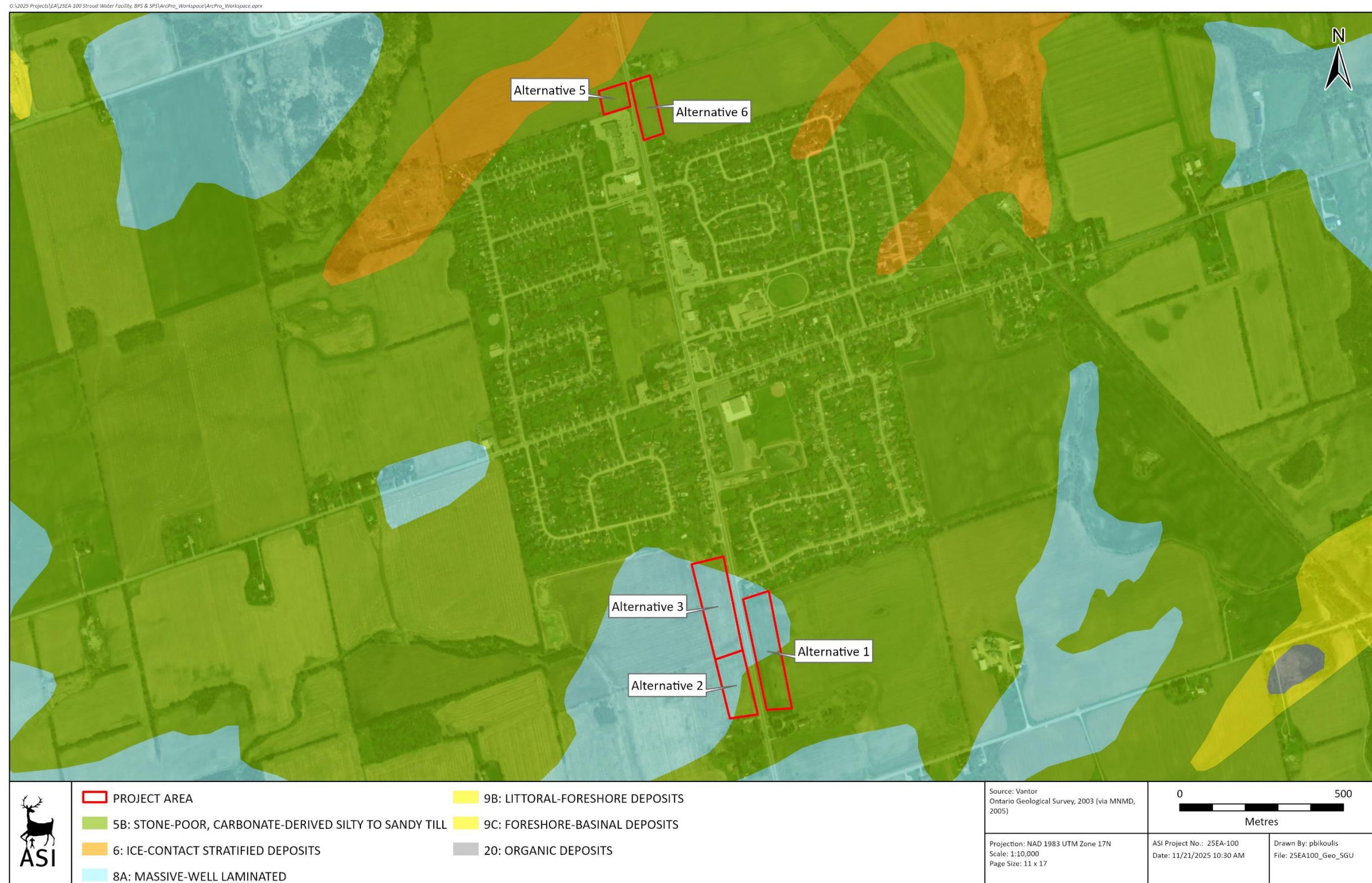


Figure 5: Project Area – Surficial Geology





Figure 6: Project Area – Soil Drainage





Figure 7: Stroud Water Storage Facility and Booster Pumping Station Stage 1 Results – Sheet 1





Figure 8: Stroud Water Storage Facility and Booster Pumping Station Stage 1 Results – Sheet 2

