

Stage 1 Archaeological Assessment Barrie Collingwood Trail (Various Lots and Concessions, Former Townships of Nottawasaga, Sunnidale, Essa, County of Simcoe) Township of Clearview and Essa, County of Simcoe, Ontario

Original Report

Prepared for:

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Executive Summary

Archaeological Services Inc. was contracted by R.J. Burnside and Associates Limited, on behalf of the County of Simcoe, to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Barrie Collingwood Railway Active Transportation Trail project in the County of Simcoe. The project involves converting 23 kilometres of the former Barrie Collingwood Railway into a multiuse recreational trail. The intended multiuse trail will begin in the community of Stayner and will end in the community of Angus. The Stage 1 Study Area includes the railway plus a 10-metre buffer on either side of the existing rail corridor.

The Stage 1 background study determined one archaeological site is located within one kilometre of the Study Area, which is not within 50 metres. The property inspection determined parts of the Study Area retain archaeological potential and will require Stage 2 Survey.

The following recommendations are made:

- 1 Parts of the Study Area exhibit archaeological potential. These lands require Stage 2 archaeological assessment by test pit survey at five metre intervals. Stage 2 is required prior to any proposed construction activities on these lands;
- 2 The marine archaeological potential of Mad River, Pine River, and Nottawasaga River are to be evaluated following the M.H.S.T.C.I.'s *Criteria For Evaluating Marine Archaeological Potential* checklist if impacts to the river or creek beds are proposed;
- 3 The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance or low and wet conditions. These lands do not require further archaeological assessment; and,



- 4 Should the proposed work extend beyond the current Study Area, further archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.



Project Personnel

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1.0 Project Context

Archaeological Services Inc. (ASI) was contracted by R.J. Burnside and Associates Limited, on behalf of the County of Simcoe, to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Barrie Collingwood Railway Active Transportation Trail project in the County of Simcoe. The project involves converting 23 kilometres of the former Barrie Collingwood Railway into a multiuse recreational trail. The intended multiuse trail will begin in the community of Stayner and will end in the community of Angus. The Stage 1 Study Area includes the now abandoned railway with a 10-metre buffer from the centerline on each side of the existing rail corridor (Figure 1).

1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act, RSO* (Environmental Assessment Act, R.S.O., 1990 as amended 2020) and regulations made under the Act, and are therefore subject to all associated legislation. This project is being conducted in accordance with the Municipal Engineers' Association document *Municipal Class Environmental Assessment* (Municipal Class Environmental Assessment, 2000, as amended 2015).

The County of Simcoe Archaeological Management Plan (ASI, 2019a) 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.J. Burnside and Associates Limited on October 18, 2021.

1.1.1 Treaties and Traditional Territories

The Study Area is within the Nottawasaga Purchase (Treaty 18), 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; Williams Treaties First Nations, 2021). 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" (Crown-Indigenous Relations and Northern Affairs, 2016; 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

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years before present (B.P.) (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 B.P., the environment had progressively warmed (Edwards & Fritz, 1988) and populations now occupied less extensive territories (Ellis & Deller, 1990).

Between approximately 10,000-5,500 B.P., 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 B.P.; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest evidence for cemeteries dates to approximately 4,500-3,000 B.P. and is indicative of increased social organization, investment of labour into social infrastructure, and the establishment of socially prescribed territories (J. Brown, 1995, p. 13; Ellis et al., 1990, 2009).

Between 3,000-2,500 B.P., populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. The Woodland period begins around 2,500 B.P. and exchange and interaction networks broaden at this time (Spence et al., 1990, pp. 136, 138) and by



approximately 2,000 B.P., evidence exists for small community camps, focusing on the seasonal harvesting of resources (Spence et al., 1990, pp. 155, 164). By 1,500 B.P. 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 B.P. - 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 B.P., lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (C.E.), the communal site is replaced by the village focused on horticulture. Seasonal disintegration 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 C.E., this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd et al., 1990, p. 343). From 1450-1649 C.E. this process continued with the coalescence of these small villages into larger communities (Birch & Williamson, 2013). Through this process, the socio-political organization of the First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed.

By 1600 C.E., the communities within Simcoe County had formed the Confederation of Nations encountered by the first European explorers and missionaries. In the 1640s, the traditional enmity between the Haudenosaunee and the Huron-Wendat (and their Algonquian allies such as the Nippissing and Odawa) led to the dispersal of the Huron-Wendat. Shortly afterwards, the Haudenosaunee established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. By the 1690s however, the Anishinaabeg were the only communities with a permanent presence in southern Ontario. From the beginning of the eighteenth century to



the assertion of British sovereignty in 1763, there was no interruption to Anishinaabeg control and use of southern Ontario.

1.2.2 Post-Contact Settlement

Historically, the Study Area is located in the Former Townships of Nottawasaga, Sunnidale and Essa in the County of Simcoe in the following lots and concessions:

The Township of Nottawasaga:

- Concession 2, Lots 23, 24
- Concession 1, Lots 21-23

The Township of Sunnidale:

- Concession 9, Lots 1, 2
- Concession 8, Lots 2-4
- Concession 7, Lots 4-6
- Concession 6, Lots 6-8
- Concession 5, Lots 8, 9
- Concession 4, Lots 10, 11
- Concession 3, Lot 12
- Concession 3 West of Sunnidale Road, Lot 24
- Concession 2 West of Sunnidale Road, Lots 25, 26
- Concession 2 East of Sunnidale Road, Lot 26
- Concession 1 East of Sunnidale Road, Lots 27, 28
- Concession 1, Lot 17

The Township of Essa:

- Concession 1, Lot 32
- Concession 2, Lots 30-32
- Concession 3, Lot 30
- Concession 4, Lot 30



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).

Nottawasaga Township

The township was named in 1832 after the Nottawasaga River, derived from the Anishinaabemowin word *nahdowasaga*, meaning “outlet of the river of the Iroquois.” Early maps dating from 1828 and 1836 describe the north part of the township as Java, and the south part as Merlin (Rayburn, 1997).

The Township of Nottawasaga was first surveyed in 1833 by Thomas Kelly, a government surveyor. A second survey took place later in 1833, by Charles Rankin, who noted irregularities in the original survey. By 1834, the first settlers arrived in the township, many from the Island of Islay in Scotland, while others



arrived from Ireland and Germany. Settlement was slow, largely because the 200 acre lots assigned to United Empire Loyalists were not all settled. Many Loyalists received the patent for their parcels, but held the land on speculation, or sold their rights to speculators. The first settlement in the township was located at Dunedin, on the banks of Noisy River, approximately 22 km southeast of Collingwood. This settlement had been previously named Bowerman's Hollow, after early settler Israel Bowerman built the township's first grist mill (Mika & Mika, 1983).

The first roads in the township followed Indigenous trails. In exchange for supplies, early Euro-Canadian settlers began clearing huge tracts of land including those areas for new roads. However, settlers had to carry goods on their backs from Barrie until a time when a government overseer was appointed. By 1842, the population was 420. Population began to increase in 1844, when a road linking Barrie, Bomore, Meaford and Owen Sound was completed (Mika & Mika, 1983).

Sunnidale Township

The land within Sunnidale Township was first surveyed in 1831-1832 by Thomas Kelly, however this survey omitted the southeast corner of the township. Additional survey occurred in 1833 by William Hawkins, including Sunnidale Road, which laid out irregular lots from the southern boundary to Nottawasaga Bay (Mika & Mika, 1983).

Development in the township formed around Sunnidale Road, although its conditions were recorded as appalling due to water often creating swampy and hazardous conditions along the route. In 1834, the first recorded settlers obtained five acre lots on the west side of Sunnidale Road, extending over Concessions 1-3. Among the early recorded settlers were Henry Seelor, John Donald, Duncan and James Shaw, Alexander and Jamie Gillespie, Samuel Lamont, Alexander McNeill, and George Cathey. Between 1833 and the 1940s, the township had a government office to aid settlement, two schools, a post office, a tavern, stables and a hostelry. The first church was not constructed until 1868, and instead service was held in private homes for many years. In 1842, the population was



174 with 378 acres of land cleared. But by 1848, the population dropped to 144 (Mika & Mika, 1983).

In 1855, the Ontario, Simcoe and Huron Railway opened, which improved farmers' access to markets and helped to develop the lumber industry. In 1860, Sunnidale Township separated from Vespra Township and obtained independent municipal standing. This new independence allowed the township to take responsibility for improvements to Sunnidale Road, and in 1861, the southeast corner of the township was finally surveyed after settlers petitioned the new independent council (Mika & Mika, 1983).

Essa Township

Situated southwest of the city of Barrie, Essa Township was first surveyed in 1820. The township was named after the daughter of local Indigenous chief. The first settlers arrived in Essa shortly after the survey, locating on the 1st Concession in the southeast corner of the township. They were George Donwoody, Thomas Duff, and Samuel McClain, all from County Monaghan, Ireland. Donwoody took up Lot 10 where a log shanty was erected on the property. These first settlers lived there until they could clear sufficient land to build their own shelters (Mika & Mika, 1977).

Stayner

The northern end of the study area is located within the village of Stayner. First called Warrington, the community's name was later changed to Nottawasaga Station when the Ontario, Simcoe and Huron Railway (later the Northern Railroad) was extended from Lake Simcoe to Georgian Bay ca. 1854-1857. In 1855, a post office with the same name was established by Donald Baine, a lumber merchant and storekeeper. In 1857, the village name was changed to Dingwall, and by 1864, both the post office and village took the name of Stayner. The name Stayner may have been in honour of Thomas Allen Stayner, a postmaster general of Upper and Lower Canada. Or perhaps his son, Sutherland Stayner, owned extensive properties in the area (Mika & Mika, 1983; Rayburn, 1997).



The first settlers arrived in the mid-1850s: Andrew Coleman built a roughhewn hotel for railway workers and Gideon Phillips built the first sawmill. Village lots were laid out by Edward Shortiss and Charles Lount who owned much of the land in Stayner. Due to the presence of the railway, the town flourished, becoming a centre for agricultural and lumber trade. Stayner was incorporated as a village in 1872, and by 1888, Stayner was incorporated as a town, owning the distinction of the smallest town in Ontario for several years (Mika & Mika, 1983).

In 1994, the communities of Stayner, Creemore and the Townships of Sunnidale and Nottawasaga amalgamated to form Clearview Township.

New Lowell

A short distance southeast of Sunnidale is the village of New Lowell that the study area transects. The first family to settle in this community was that of Paton in 1853. Impetus for future growth occurred in 1855, when the line of the Northern Railway was constructed. The place was named “Sunnidale Station” in 1856. By 1860, the furniture manufacturing company, Jacques & Hay, established a lumber mill here, as well as factories which produced wooden spindles as well as hair cloth for upholstery. This firm owned 1,100 acres (445 ha) upon which it was hoped that other industries would be established. Jacques & Hay built their own factories, as well as employee’s houses, an inn, school, church and railway station for the Toronto, Simcoe and Lake Huron railroad. Few other industries were attracted to New Lowell. The post office name was changed to “New Lowell” in April 1856 or 1858. The first postmaster was named Peter Paton. In 1873, it contained “several stores and mills,” and two telegraph offices. The population numbered approximately 200 inhabitants. The village may have been named after a town in Massachusetts (Crossby, 1873; Rayburn, 1997; Scott, 1997). The first school for the community was established for the mill worker’s children in the back room of the store. The first public school for the village was a frame building that was destroyed by fire in 1870, however a brick schoolhouse soon replaced it (Mika & Mika, 1983).

During the early-twentieth century, the Toronto City Dairy, opened a large dairy farm near the village and operated until it closed in the 1940s. Around that time,



tobacco farming was introduced to the area. By 1957, the earlier brick schoolhouse was replaced with a three-room school building (Mika & Mika, 1983).

Brentwood

The study area travels southwest of the crossroads community of Brentwood. The first post office opened in the area of Brentwood in May 1864, with Louis E. Dubois appointed to serve as postmaster (Crossby, 1873). The village itself was laid out four years later in 1868 by Andrew and Lewis Anger on both sides of Sunnidale Road at the Northern Railway crossing (Mika & Mika, 1977). In 1873, it contained two sawmills and stores. The population numbered about 200 (Crossby, 1873). By the 1880s, there were two hotels in the village, a brick schoolhouse, and two churches, a Methodist and a Roman Catholic (Mika & Mika, 1977). The post office closed in November 1926 (ASI, 2019b; The Grey, Bruce, Dufferin & Simcoe Postal History Study Group, 2005, p. 380).

Angus

One of the first settlers in Angus was a farmer named Jonas Tarbush. Settlement began slowly following the construction of the Sunnidale Road during the 1830s. Further impetus for settlement followed after the construction of the Northern Railway in 1857. The plan for the village was laid out by Tarbush and William Proudfoot, in February 1857. This plan showed a number of details, including views and the location of the sawmill, engine house, grist mill, store and tavern. It was named “Angus” in honour of Angus Morrison, a Member of Parliament and director of the railway. The first post office in this village was opened in August 1856, with John B. Curtis appointed to serve as postmaster. By 1873, it was referred to as a “flourishing” village. It then contained seven sawmills, three grist mills, “several stores and hotels,” a printing office and two telegraph offices. A tavern had been erected in the village sometime before 1857 by one “Mr. Harper.” The population numbered approximately 400 (Crossby, 1873; Rayburn, 1997; Scott, 1997; Yarnold, 1857).

Barrie Collingwood Railway

The conceptual planning for a railway following the original portage route that connected Lake Ontario, Lake Simcoe and Lake Huron originated in the 1830s



when Toronto businessmen were devising ways to improve trade to the north of the city. Renowned bridge engineer Casimir Gzowski and Frederick Chase Capreol spearheaded the drive to have a railway for the north incorporated, and in July 1849 the Toronto, Simcoe & Lake Huron Union Railroad Company was formed. The company was renamed the Ontario, Simcoe, and Huron Union Rail Road Company and construction commenced.

The inaugural trip on May 16, 1853 from Toronto to Aurora is commemorated by a plaque at Toronto's Union Station, as it was the first steam locomotive operated in Ontario (Mika & Mika, 1977). The original route connected Toronto to Aurora (formerly Matchell's Corners) via a 48 kilometre track (Andreae, 1997). The line was expanded with service to Bradford beginning June 13, 1853, and further expanded to Barrie at Allandale on October 11, 1853 (forming the path for the present GO Barrie rail corridor). The railway was further extended from Allandale into Collingwood to provide access to shipping on Lake Huron, with the official opening on January 2, 1855 (R. Brown, 1952).

In 1858, the name was changed to the Northern Railway Company of Canada. In 1881 the section of the rail line between Allandale and Meaford, which passed through Collingwood, was converted from Provincial gauge (66 inches) to Standard gauge (56 ½ inches) (Smith, 2019). In 1888 the Northern Railway amalgamated with the Grand Trunk Railway Company of Canada, with the subject railway from Allandale to Meaford designated the Meaford Subdivision.

In 1923, the railway company amalgamated with the government-owned Canadian National Railway. The section of rail line between Barrie and Collingwood was abandoned by Canadian National Railway in 2011 and purchased by the County of Simcoe in 2018 (Cooper, 2014; WSP, 2019).

The branch from Allandale to Collingwood is 52 kilometres and includes stations at Angus, New Lowell, and Stayner.

1.2.3 Map Review

The 1871 *Hogg's Map of the County of Simcoe* (Hogg, 1871), the 1881 *Illustrated Historical Atlas of the County of Simcoe* (Belden, 1881), the 1940 topographic map



Barrie sheet (Department of National Defence, 1940), the 1941 topographic map Collingwood sheet (Department of National Defence, 1941), the 1986 National Topographic System Collingwood sheet (Department of Energy, Mines and Resources, 1986), and the 1993 National Topographic System Collingwood sheet (Department of Energy, Mines and Resources, 1993) were examined to determine the presence of historic features within the Study Area during the nineteenth and twentieth centuries (Figures 2-5).

The 1871 and 1881 maps feature the Northern Railway within the Study Area, connecting the communities of Stayner and Angus. The 1871 map shows the planned streets of Stayner laid out in a grid formation, with the railway line cutting through town diagonally. From northwest to southeast the railroad travels through Stayner, Sunnidale, New Lowell, Brentwood and through the planned grid streets of Angus. The Study Area ends between the communities of Angus and Utopia.

The maps show the main branch of the Nottawasaga River intersect with the Study Area on the east side of Angus, its tributaries intersecting the west and centre sections of Angus. Mad River intersects the Study Area west of Angus. Coates Creek crosses the Study Area around its midpoint. Two creeks intersect the Study Area just east of Stayner. Many parcels of land in this settler system have been identified with the 1871 property owner, however many blank parcels of land are visible on this map. The 1881 atlas depicts a railway station in the village of Sunnidale, the community of New Lowell with planned streets, the planned community of Warrington southwest of Stayner and the village of Brentwood.

The 1940/1941 map depicts the rail line as the Canadian National Railway, and many of the previously illustrated rivers, creeks, and tributaries are also present. The previously depicted villages and crossroads communities continue to be shown in a similar rural context as earlier mapping, except for Warrington which is no longer illustrated.

The 1986/1993 map shows that the Study Area remains in a largely undeveloped rural area.



1.2.4 Aerial and Orthoimagery Review

The 1954 aerial photography (Hunting Survey Corporation Limited, 1954) shows the Study Area was largely open agricultural fields and farmsteads, with some forested areas seen near creeks and tributaries (Figure 6). At the western and eastern ends of the Study Area are the communities of Stayner and Angus, respectively.

A review of available Google satellite imagery since 2007 shows the extension of Greenwood Drive, in Angus, north into the Study Area in 2017, completed by 2020 (Images 45-47).

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the Study 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 M.H.S.T.C.I. through “Ontario’s Past Portal”; published and unpublished documentary sources; and the files of ASI.

1.3.1 Current Land Use and Field Conditions

The Study Area is 20-metres wide with the centre line following the former Barrie Collingwood Railway between Stayner and Angus, through the communities of Sunnidale, New Lowell, and Brentwood. The former Barrie Collingwood Railway is currently overgrown with vegetation in most places. Railway tracks remain in place and are visible through most of the corridor. At the time of the property inspection, construction was occurring north of Highway 26 and east of Brock Street in Stayner. There the railway tracks have been removed and covered between the northern terminus of the Study Area and Superior Street. A recreational trail runs roughly parallel to the railway corridor between Superior Street and Centre Line Road. In several places this recreational trail cuts into the Study Area. Between the communities of Stayner, Sunnidale, New Lowell and



Brentwood the Study Area is surrounded by active agricultural land and private residences. Within the communities of Stayner, Sunnivale, New Lowell, Brentwood, and Angus, the Study Area is at times surrounded by residential and some industrial development.

1.3.2 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 Study 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 BP (Karrow & Warner, 1990, p. 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).

The Study Area is within the Simcoe Lowlands physiographic region of southern Ontario. The Simcoe Lowlands physiographic region consists of low-lying belts of sand plain, which cover an area of 280,000 hectares, bordering Georgian Bay and Lake Simcoe. The area was once inundated by the waters of glacial Lake Algonquin, inland of the present day shorelines. Remnant shoreline features (beaches, shorecliffs, bars, etc.) mark the former water level of Lake Algonquin. Topography is generally flat and subsoil consists of variable sand, gravel, silt and clay deposits as formed on the lake bottom (Chapman and Putnam 1984:177-182). Sand plains and beach ridges are glaciolacustrine features and are products of the Late Wisconsinian glacial stage (ca. 25,000-10,000 BP). Sand plains are formed in shallow waters and beach ridges mark the former shorelines (Karrow and Warner 1990:5).

Figure 7 depicts surficial geology for the Study Area (Ontario Geological Survey, 2010). The surficial geology mapping demonstrates that the Study Area is underlain by foreshore basinal deposits, stone poor carbonate derived silty to sandy till, massive well laminated deposits, and older and modern alluvial deposits.

Soil within the Study Area consist of: Tioga loamy sand, Tioga fine sandy loam, and Tioga fine sandy loam with good drainage; Alliston sandy loam, Berrien sandy loam, Minesing marly silty clay loam, and Edenvale sandy loam with imperfect drainage; and Parkhill loam with poor drainage (Figure 8).

The Study Area lays within the Nottawasaga Valley Watershed which from west to east travels through the Lower Nottawasaga River subwatershed, the Mad River subwatershed, Minesing wetlands and the Middle Nottawasaga River subwatershed. The railway corridor crosses Warrington Creek and its tributaries, Coates Creek and its tributaries, Mad River, Pine River, and Nottawasaga River and its tributaries. The Nottawasaga Valley Watershed is shaped like a bowl – the Niagara Escarpment (west), Oak Ridges Moraine (south) and Simcoe Uplands/Oro Moraine (north and east) represent the height of land along the edges of the bowl. Streams arise from these high areas and flow down slope into the Simcoe



Lowlands (the bottom of ancient Lake Algonquin), which forms the bottom of the bowl. These lowlands extend to Wasaga Beach and Collingwood (a “chip” at the edge of the bowl) which allows the Nottawasaga River and Blue Mountain streams to reach Georgian Bay (Nottawasaga Valley & Conservation Authority, 2018).

1.3.3 Previously Registered Archaeological Sites

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (O.A.S.D.) maintained by the M.H.S.T.C.I. 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 Study Area under review is located in Borden blocks BcHa, BcGx, BbGx.

According to the O.A.S.D., one archaeological site is located within one kilometre of the Study Area, which is not within 50 metres (M.H.S.T.C.I., 2022). A summary is provided below in Table 1.

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

Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
BbGx-4	Centre Street	Pre-Contact Indigenous	Findspot	AMICK Consultants Limited 1997

1.3.4 Previous Archaeological Assessments

According to background research, there are three previous reports detailing fieldwork within 50 metres of the Study Area:



(ASI, 1995) Stage 1 and 2 Archaeological Resource Assessment, Essa TS X Collingwood TS 115 kV Transmission line upgrade, Vespra, Sunnidale, and Nottawasaga Townships, Simcoe County, Ontario [94-013]

The project area overlaps the current Study Area northwest of the Sunnidale community crossroads. Test pit and pedestrian surveys were conducted at five metre intervals. No cultural materials were encountered, and no further archaeological assessment was recommended.

(Archaeological Research Associated Ltd., 2020) Stage 1 and 2 Archaeological Assessments Angus – Ontario Tree Seed Plant Project No. D1060221 Property No. N00520/N73722 141 King Street, 6 Huron Street and 14 Huron Street Township of Essa Part of Lot 30, Concession 3 and Part of Lot 30, Concession 4 Geographic Township of Essa Simcoe County, Ontario [P007-1072-2019]

The project area is within 50 metres of the current Study Area, to the north of King Street in Angus. Test pit survey was conducted at five metre intervals, which did not result in the identification of archaeological materials. No further archaeological assessment was recommended.

(The Archaeologists Inc., 2020) Stage 1 & 2 Archaeological Assessment for Stonemount – Block 142 of Plan 51M 732, Part of the East Halves of Lots 29 and 30, Concession 4, Geographic Township of Essa, County of Simcoe [P052-1021-2020]

The project area is adjacent to the Study Area, located south of the railway corridor and west of Line 5 in Angus. Test pit survey was conducted at five metre intervals and no archaeological resources were identified. No further archaeological assessment was recommended.

2.0 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 John Sleath, MA (P382), of ASI, on December 3rd and 4th, in order to gain first-hand knowledge of the geography, topography, and current conditions and to evaluate and map archaeological potential of the Study Area. It was a systematic visual inspection from publicly accessible lands and did not include excavation or collection of archaeological resources. Fieldwork was conducted when weather conditions were deemed clear with good visibility (partly cloudy with seasonal temperatures), per S & G Section 1.2., Standard 2. Field observations are compiled onto the existing conditions of the Study Area in Section 8.0 (Figures 9-32) and associated photographic plates are presented in Section 7.0 (Images 1-44).

3.0 Analysis and Conclusions

The historical and archaeological contexts have been analyzed to help determine the archaeological potential of the Study Area. Results of the analysis of the Study Area property inspection and background research are presented in Section 3.1.



3.1 Analysis of Archaeological Potential

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

- Water sources: primary, secondary, or past water source (Warrington Creek, Coates Creek, Mad River, Pine River, Nottawasaga River);
- Early historic transportation routes (Barrie Collingwood Railway);
- Proximity to early settlements (Stayner, Sunnidale, New Lowell, Brentwood, Angus); and
- Well-drained soils (Tioga)

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 Municipal Heritage Register was consulted. No properties within the Study Area are Listed or Designated under the Ontario Heritage Act.

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

These criteria are indicative of potential for the identification of archaeological resources, depending on soil conditions and the degree to which soils have been subject to deep disturbance.

The property inspection determined that parts of the Study Area exhibit archaeological potential. These areas will require Stage 2 archaeological assessment prior to any construction activities. 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 (Images 3, 7, 10, 12, 16, 20, 23, 30-31, 34, 41, 43-44, 47; Figures 10-32: areas highlighted in green).

A part of the Study Area is located within low lying wet areas, and according to the S & G Section 2.1 do not retain potential (Plate 37-38; Figures 26-27: areas highlighted in light blue). These areas do not require further survey.

Part of the Study Area intersects Mad River, Pine River, and Nottawasaga River. Archaeological potential must be evaluated following the M.H.S.T.C.I.'s *Criteria for Evaluating Marine Archaeological Potential* checklist if impacts to the riverbed are proposed (Images 42, 45; Figures 28, 30, 31: areas highlighted in dark blue).

The remainder of the Study Area has been subjected to deep and extensive soil disturbance events due to construction of the rail line, modern utilities, construction of roads and associated drainage ditches, the creation of current recreation trails, and artificial drainage systems and culverts to direct watercourses under and/or along the rail corridor. According to the S & G Section 1.3.2 these areas do not retain archaeological potential (Images 1-51; Figures 10-32: areas highlighted in yellow) and do not require further survey.

3.2 Conclusions

The Stage 1 background study determined one archaeological site is located within one kilometre of the Study Area, which is not within 50 metres. The property inspection determined parts of the Study Area retain archaeological potential and will require Stage 2 Survey (Images 3, 7, 10, 12, 16, 20, 23, 30-31, 34, 41, 43-44, 47; Figures 10-32: areas highlighted in green).

4.0 Recommendations

The following recommendations are made:

- 1 Parts of the Study Area exhibit archaeological potential. These lands require Stage 2 archaeological assessment by test pit survey at five metre intervals (Figures 10-32: areas highlighted in green). Stage 2 is required prior to any proposed construction activities on these lands;



- 2 The marine archaeological potential of Mad River, Pine River, and Nottawasaga River are to be evaluated following the M.H.S.T.C.I.'s *Criteria For Evaluating Marine Archaeological Potential* checklist if impacts to the river or creek beds are proposed (Figures 28, 30, 31: areas highlighted in dark blue);
- 3 The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance or low and wet conditions. These lands do not require further archaeological assessment; and,
- 4 Should the proposed work extend beyond the current Study 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 Cultural Programs Unit of the Ministry of Heritage, Sport, Tourism and Culture Industries should be immediately notified.

The above recommendations are subject to Ministry approval and it is an offence to alter any archaeological site without Ministry of Heritage, Sport, Tourism and Culture Industries concurrence. No grading or other activities that may result in the destruction or disturbance of any archaeological sites are permitted until notice of M.H.S.T.C.I. approval has been received.



5.0 Legislation Compliance Advice

ASI advises compliance with the following legislation:

- This report is submitted to the Ministry of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, RSO 2005, 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 field work and report recommendations ensure the conservation, preservation, and protection 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 Heritage, Sport, Tourism and Culture Industries, a letter will be issued by the Ministry stating that there are no further concerns with regards 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 field work 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 Archaeology 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 sec. 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 or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the



Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

- Archaeological sites recommended for further archaeological field work or protection remain subject to Section 48(1) of the Ontario Heritage Act and may not be altered, nor may artifacts be removed from them, except by a person holding an archaeological license.



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7.0 Images

7.1 Field Photography



Image 1 View of rail corridor; Area is disturbed, no potential



Image 2 View of rail corridor; Area is disturbed, no potential



Image 3 View of rail corridor; Area east of trail requires Stage 2 survey



Image 4 View from Superior Street; Area is disturbed, no potential



Image 5 View of rail corridor; Area is disturbed, no potential



Image 6 Culvert under rail corridor; Channelized and culverted section of Warrington Creek is disturbed, no potential



Image 7 View of rail corridor; Area beyond disturbed rail right-of-way requires Stage 2 survey



Image 8 View of rail corridor; Road and rail right-of-ways are disturbed, no potential



Image 9 View of rail corridor; Road and rail right-of-ways are disturbed, no potential





Image 10 View from rail corridor; Area beyond disturbed rail right-of-way requires Stage 2 survey



Image 11 Culvert under rail corridor; Channelized and culverted section of Warrington Creek tributary is disturbed, no potential



Image 12 View from rail corridor; Area beyond disturbed rail right-of-way requires Stage 2 survey



Image 13 View of rail corridor; Area is disturbed, no potential



Image 14 Culvert under rail corridor; Area is disturbed, no potential



Image 15 Culvert under rail corridor; Area is disturbed, no potential



Image 16 View of rail corridor; Area beyond disturbed right-of-way requires Stage 2 survey



Image 17 View of rail corridor at grade crossing of Sideroad 3 and 4, disturbed, no potential



Image 18 Culvert under rail corridor; Area is disturbed, no potential



Image 19 Culvert under rail corridor; Area is disturbed, no potential



Image 20 View of rail corridor; Area beyond disturbed rail right-of-way requires Stage 2 survey



Image 21 View of rail corridor at grade crossing of Sideroad 6 and 7; area disturbed, no potential



Image 22 View of rail corridor; Area is disturbed, no potential



Image 23 View of rail corridor; Area beyond disturbed rail right-of-way requires Stage 2 survey



Image 24 Culvert under rail corridor; Area is disturbed, no potential



Image 25 View of rail corridor; Area is disturbed, no potential



Image 26 View of rail corridor; Area is disturbed, no potential



Image 27 View of rail corridor; Area is disturbed, no potential



Image 28 View of rail corridor; Area is disturbed, no potential



Image 29 View of rail corridor; Area is disturbed, no potential



Image 30 View of rail corridor; Area beyond disturbed rail right-of-way requires Stage 2 survey



Image 31 View of rail corridor; Area beyond disturbed rail right-of-way requires Stage 2 survey



Image 32 Culvert under rail corridor; Area is disturbed, no potential



Image 33 Culvert under rail corridor; Area is disturbed, no potential



Image 34 View of rail corridor; Area beyond disturbed road and rail right-of-ways requires Stage 2 survey



Image 35 View of rail corridor; Area is disturbed, no potential



Image 36 View of rail corridor; Area is disturbed, no potential



Image 37 View of rail corridor; Area south of disturbed corridor is low and wet, no potential



Image 38 View of rail corridor; Area beyond disturbed rail right-of-way is low and wet marshland, no potential



Image 39 View of rail corridor; Area is disturbed, no potential



Image 40 View of rail corridor; Area is disturbed, no potential



Image 41 View of rail corridor; Area beyond dicturbed rail corridor requires Stage 2 Survey



Image 42 View of rail corridor over Mad River; Evaluation of marine archaeological potential is required if impacts to the riverbed are proposed beyond disturbance from existing rail bridge



Image 43 View of rail corridor; Area beyond disturbed rail right-of-way requires Stage 2 survey



Image 44 View of rail corridor; Area beyond disturbed rail right-of-way requires Stage 2 survey



Image 45 View of rail corridor over Pine River; Evaluation of marine archaeological potential is required if impacts to the riverbed are proposed beyond disturbance from existing rail bridge



Image 46 View of rail corridor; Area is disturbed, no potential



Image 47 View of rail corridor; Area beyond disturbed rail right-of-way requires Stage 2 survey



Image 48 View of rail corridor; Area is disturbed, no potential



Image 49 View of rail corridor; Area is disturbed, no potential



Image 50 Culvert under rail corridor; Area is disturbed, no potential



Image 51 Culvert under road; Area is disturbed, no potential

7.2 Historical Imagery



**Image 52 Greenwood Drive (Figure 32) in 2016 prior to extension north
(Google Earth Pro, 2021)**

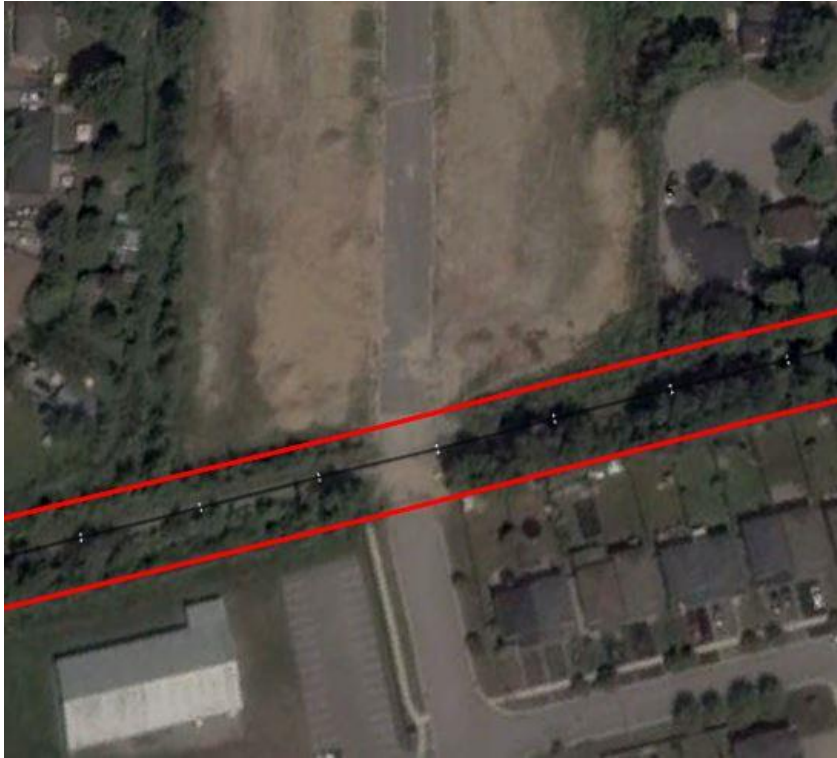


Image 53 Construction of Greenwood Drive (Figure 32) in 2017 (Google Earth Pro, 2021)



**Image 54 Completion of Greenwood Drive (Figure 32) northern extension
(Google Earth Pro, 2021)**

8.0 Maps

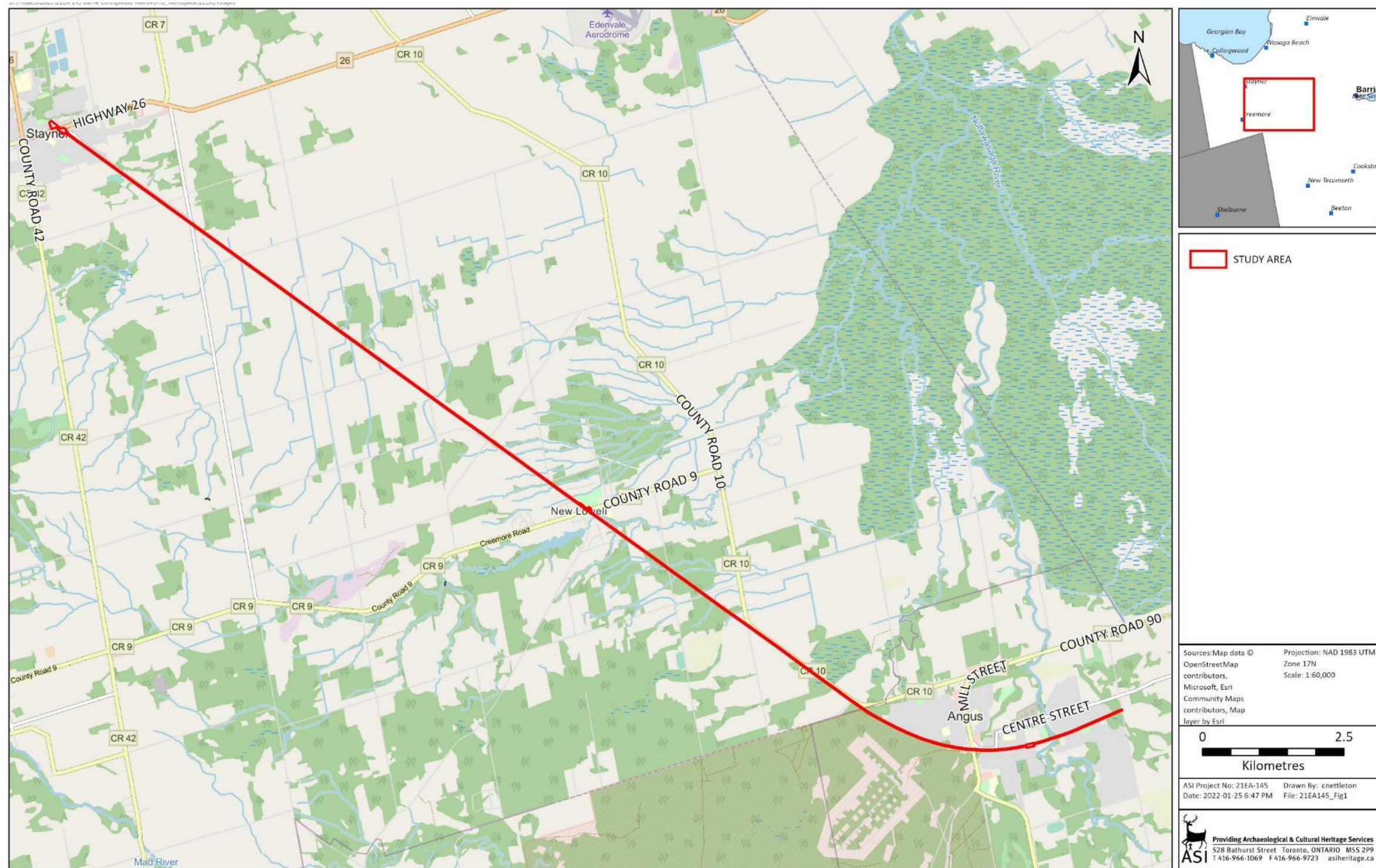


Figure 1: Barrie Collingwood Trail Bridge Study Area



Figure 2: Study Area (Approximate Location) Overlaid on 1871 Hogg's Map of the County of Simcoe County



Figure 3: Study Area (Approximate Location) Overlaid on the 1881 Illustrated Historical Atlas of the County of Simcoe



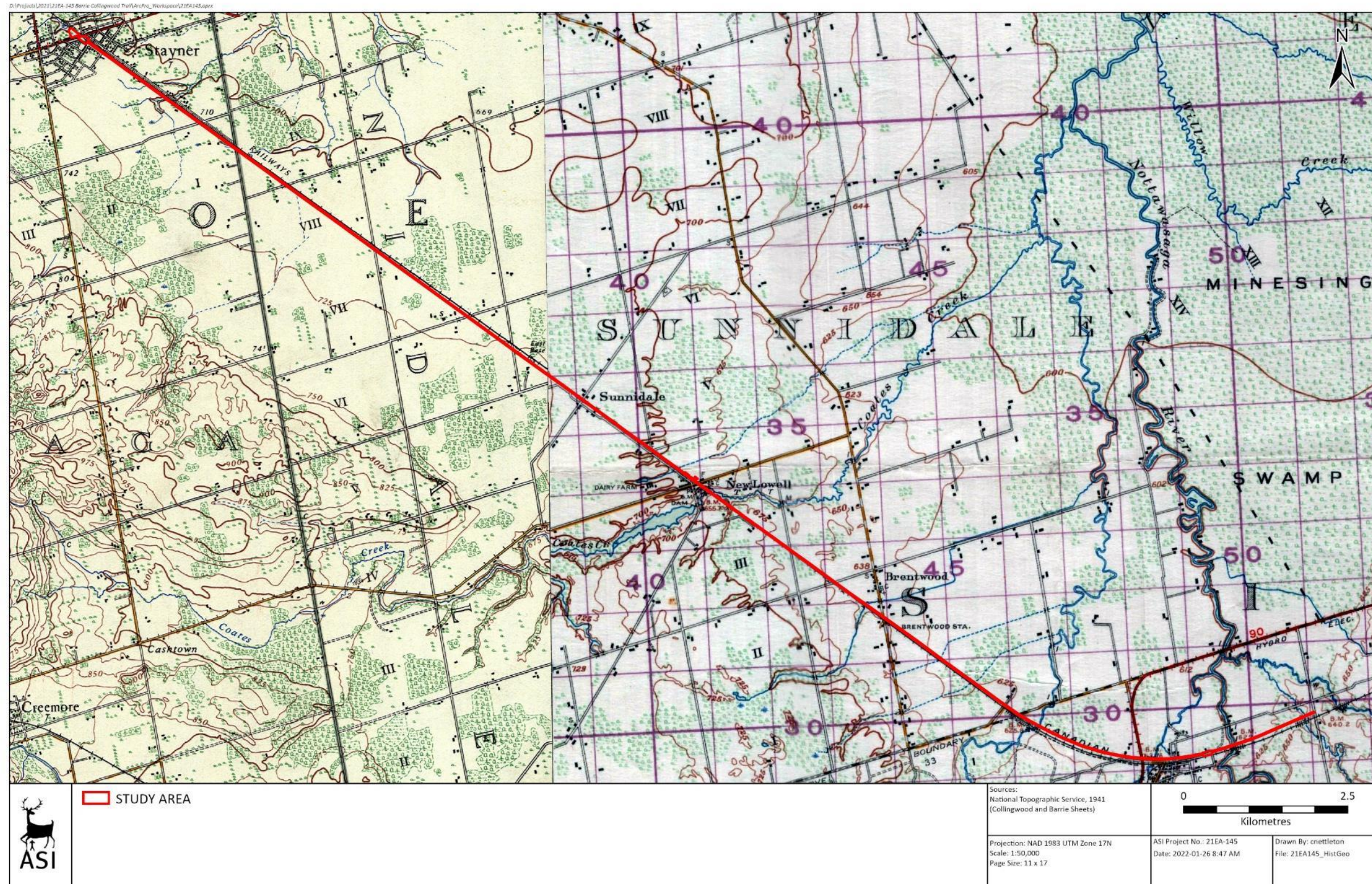


Figure 4: Study Area (Approximate Location) Overlaid on the 1940 Topographic Map Barrie sheet and 1941 Topographic Map Collingwood sheet

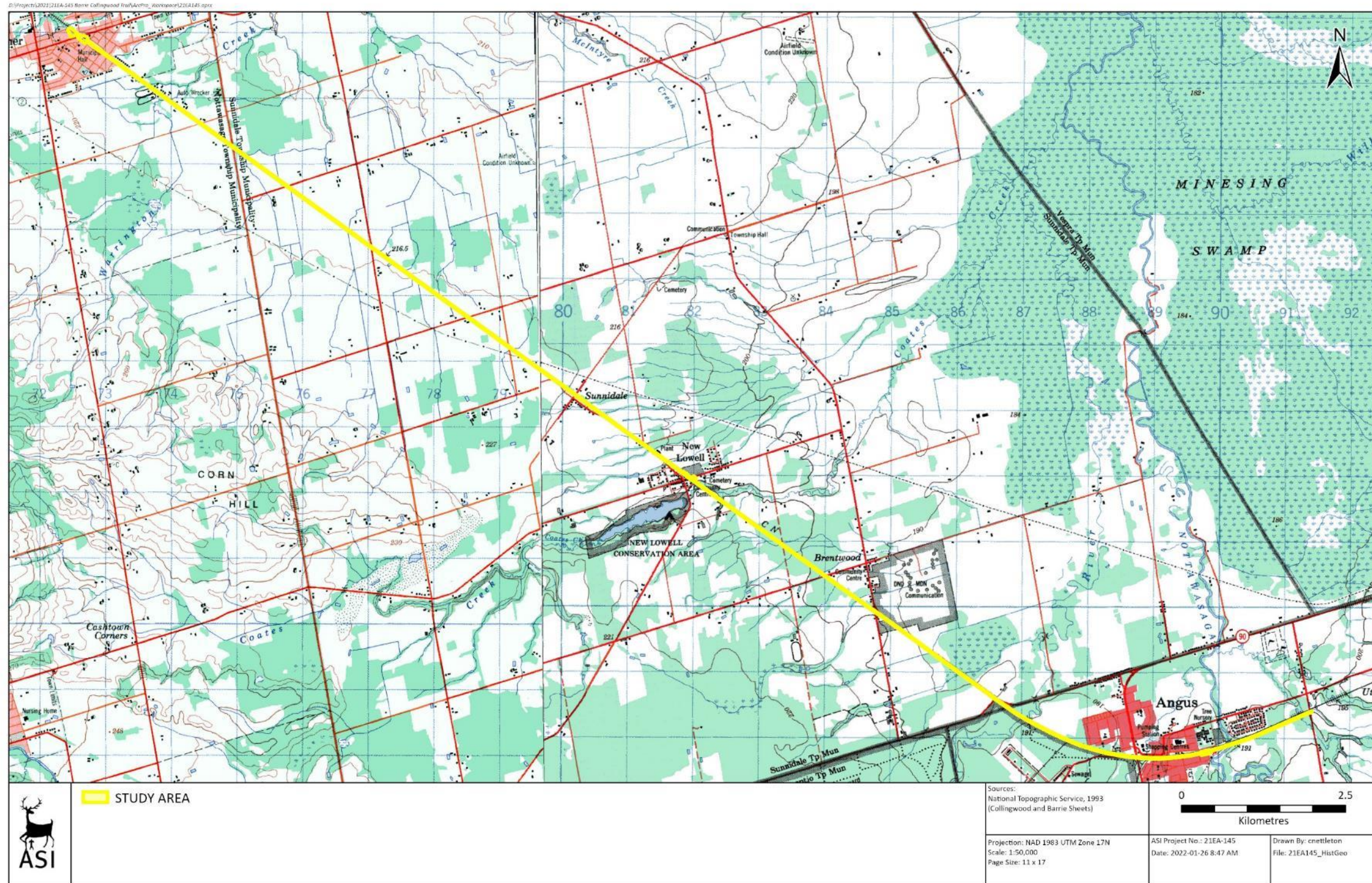


Figure 5: Study Area (Approximate Location) Overlaid on the 1986 Topographic Map Barrie sheet and 1993 Topographic Map Collingwood sheet



Figure 6: Study Area (Approximate Location) Overlaid on the 1954 Aerial Photograph

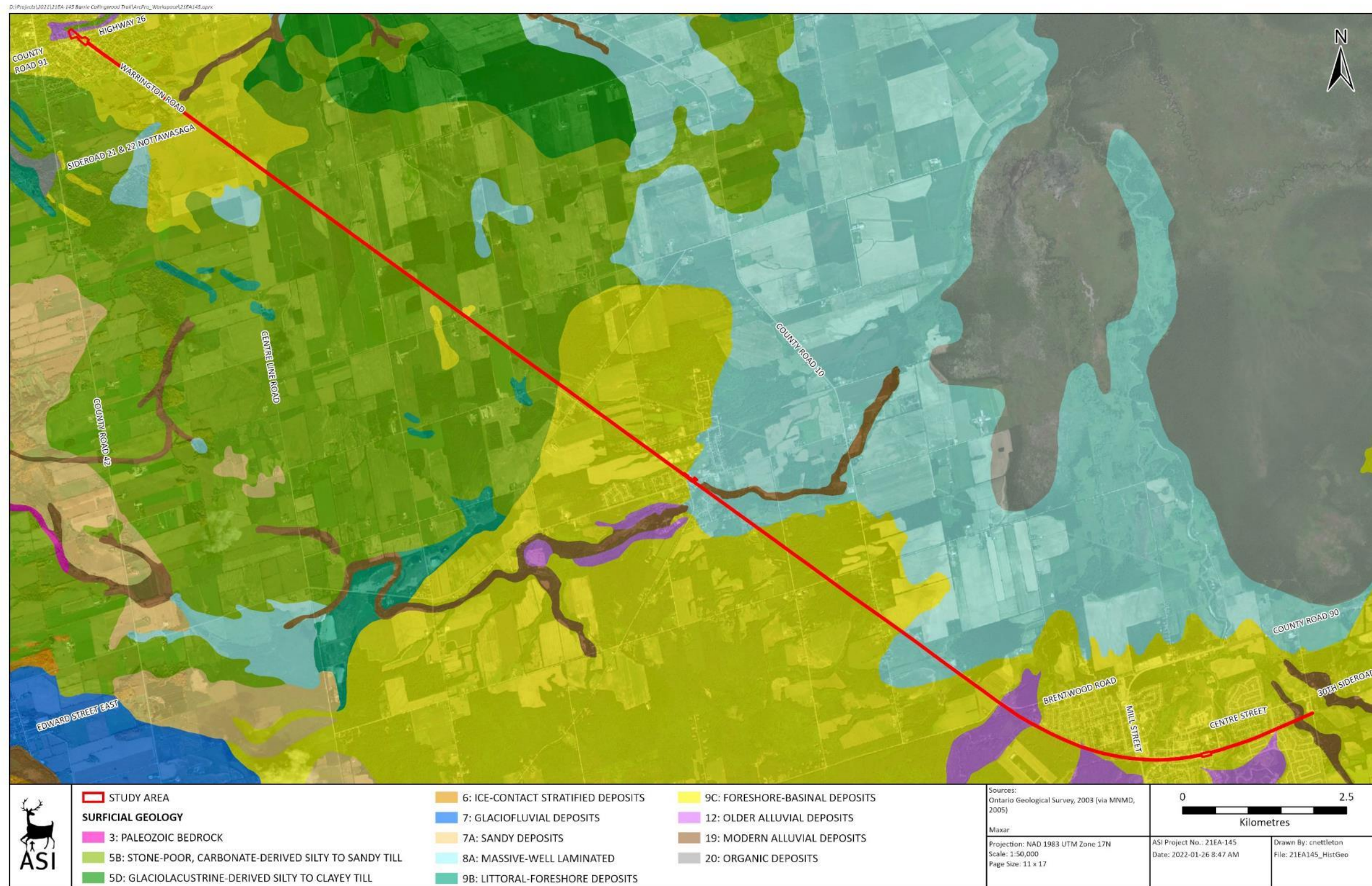


Figure 7: Study Area - Surficial Geology

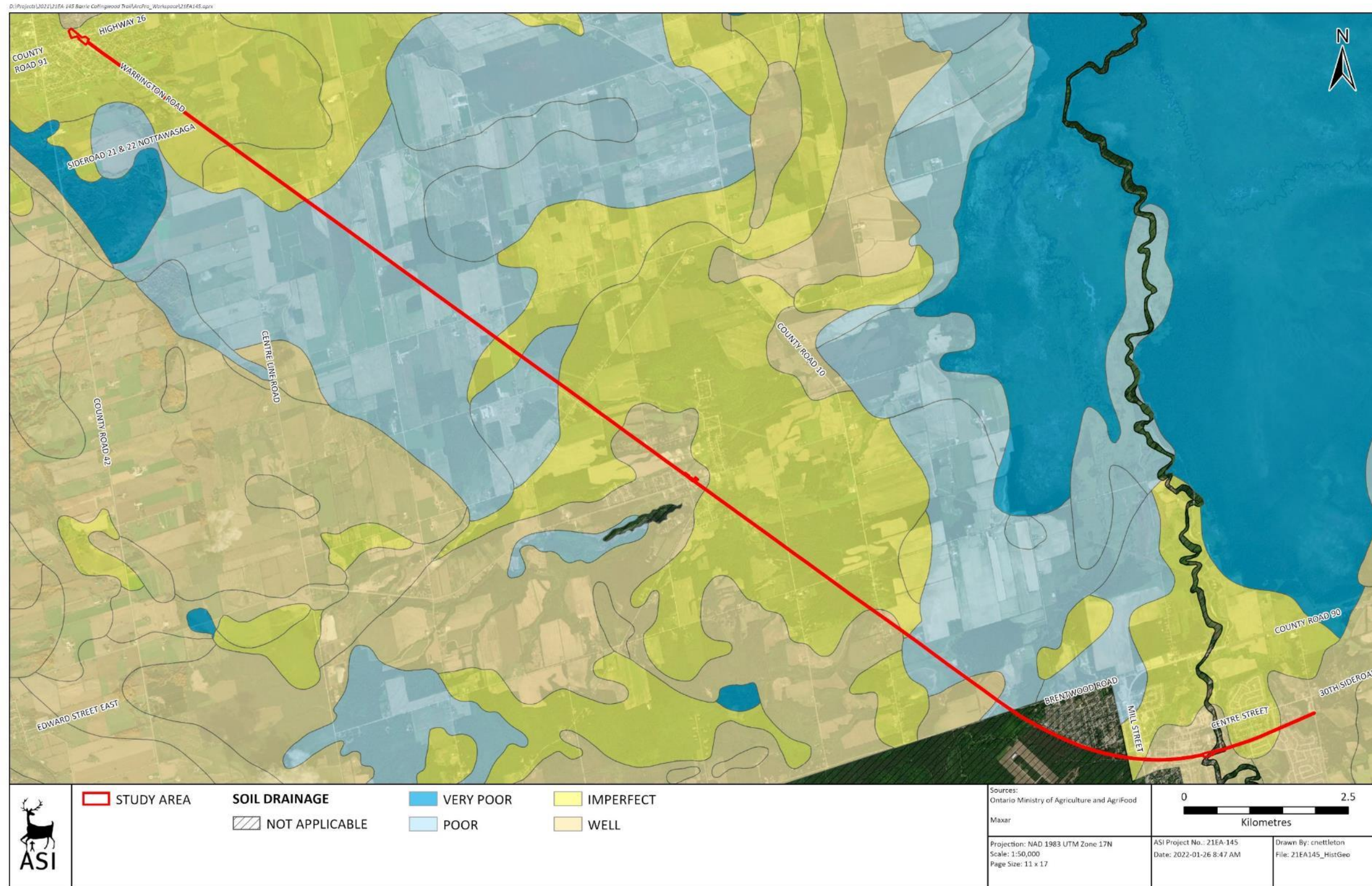


Figure 8: Study Area - Soil Drainage

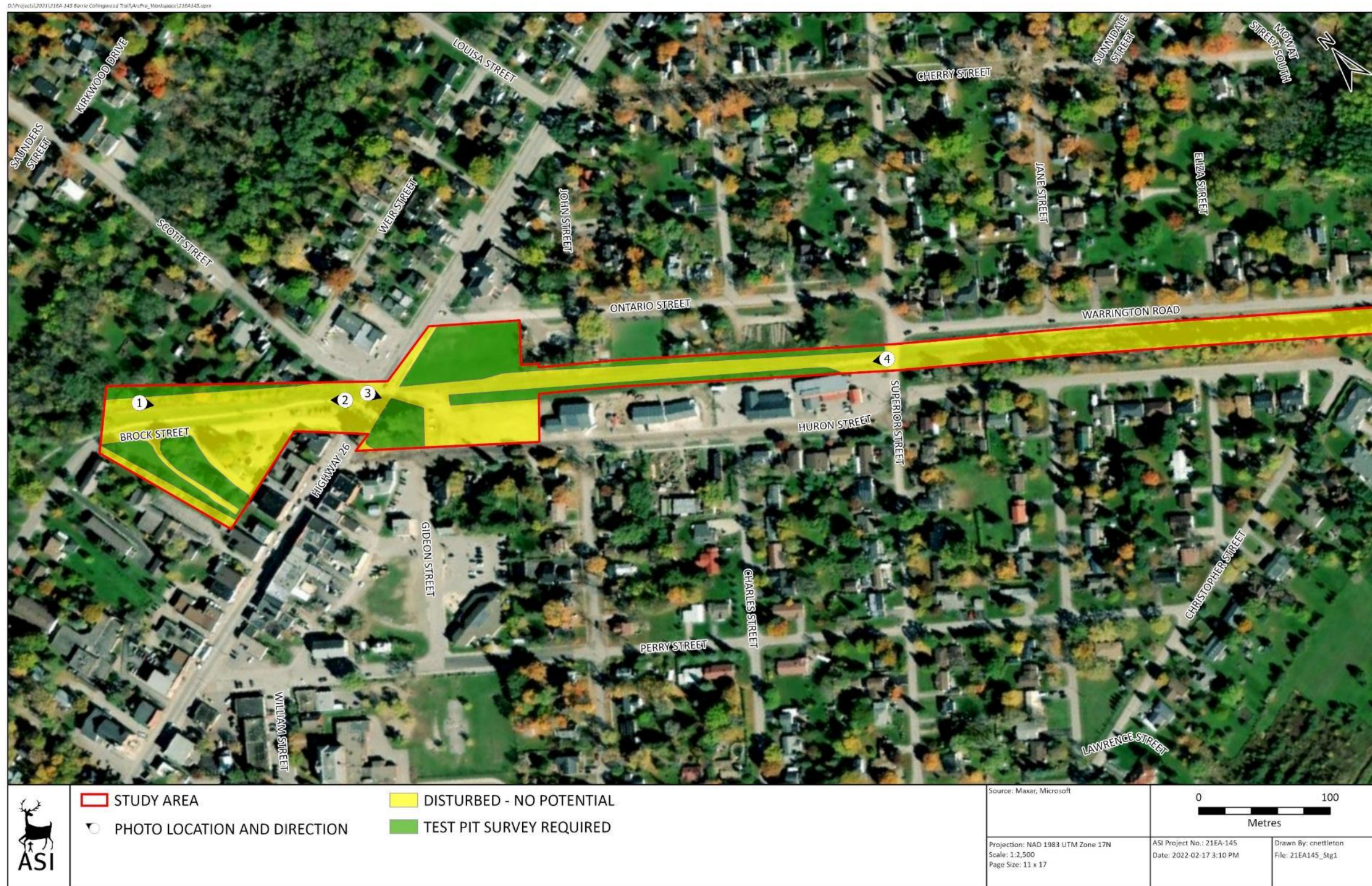


Figure 10: Barrie Collingwood Trail – Stage 1 Results (Sheet 1)





Figure 11: Barrie Collingwood Trail – Stage 1 Results (Sheet 2)



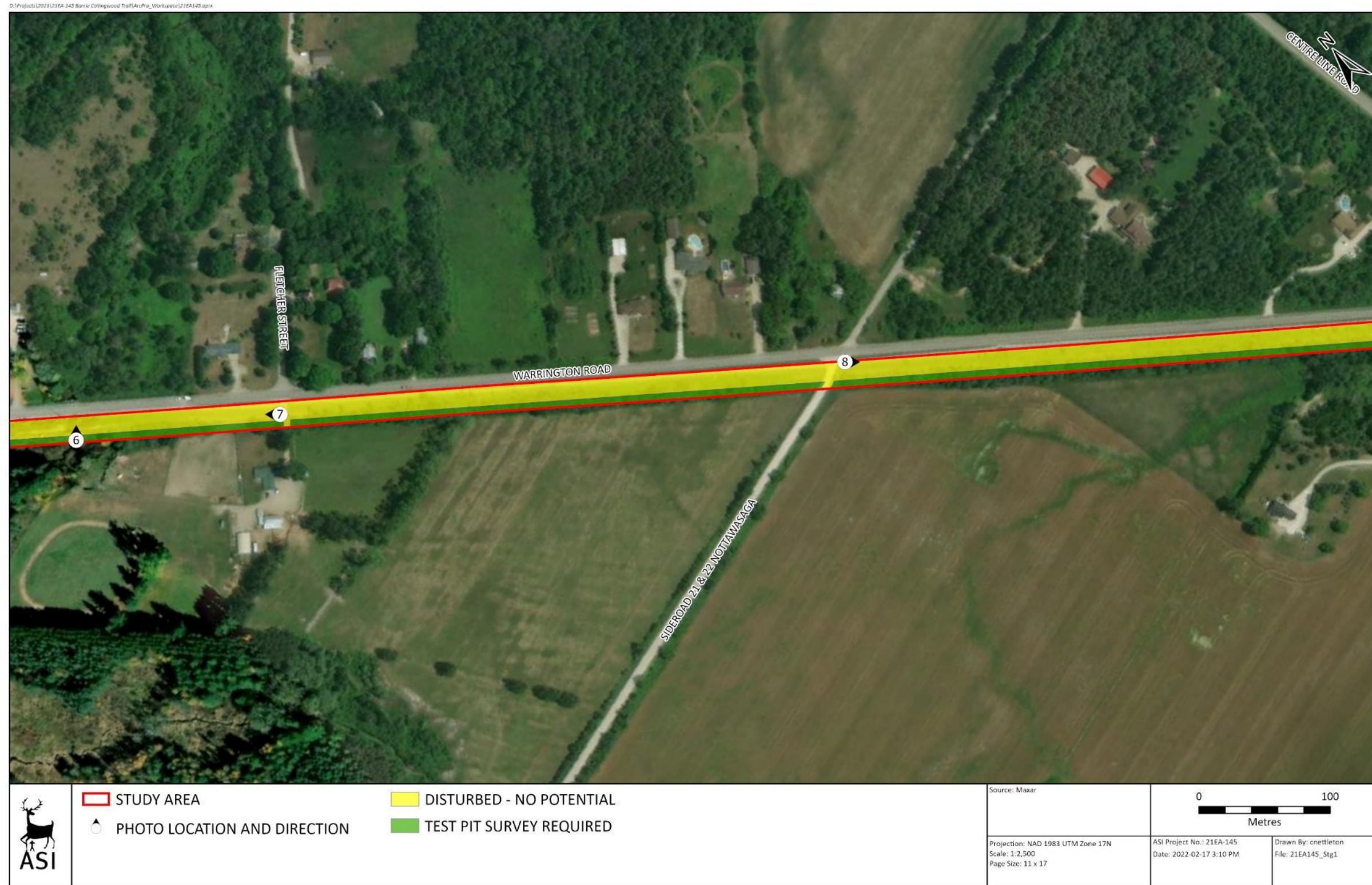


Figure 12: Barrie Collingwood Trail – Stage 1 Results (Sheet 3)





Figure 13: Barrie Collingwood Trail – Stage 1 Results (Sheet 4)





Figure 14: Barrie Collingwood Trail – Stage 1 Results (Sheet 5)





Figure 15: Barrie Collingwood Trail – Stage 1 Results (Sheet 6)





Figure 16: Barrie Collingwood Trail – Stage 1 Results (Sheet 7)





Figure 17: Barrie Collingwood Trail – Stage 1 Results (Sheet 8)



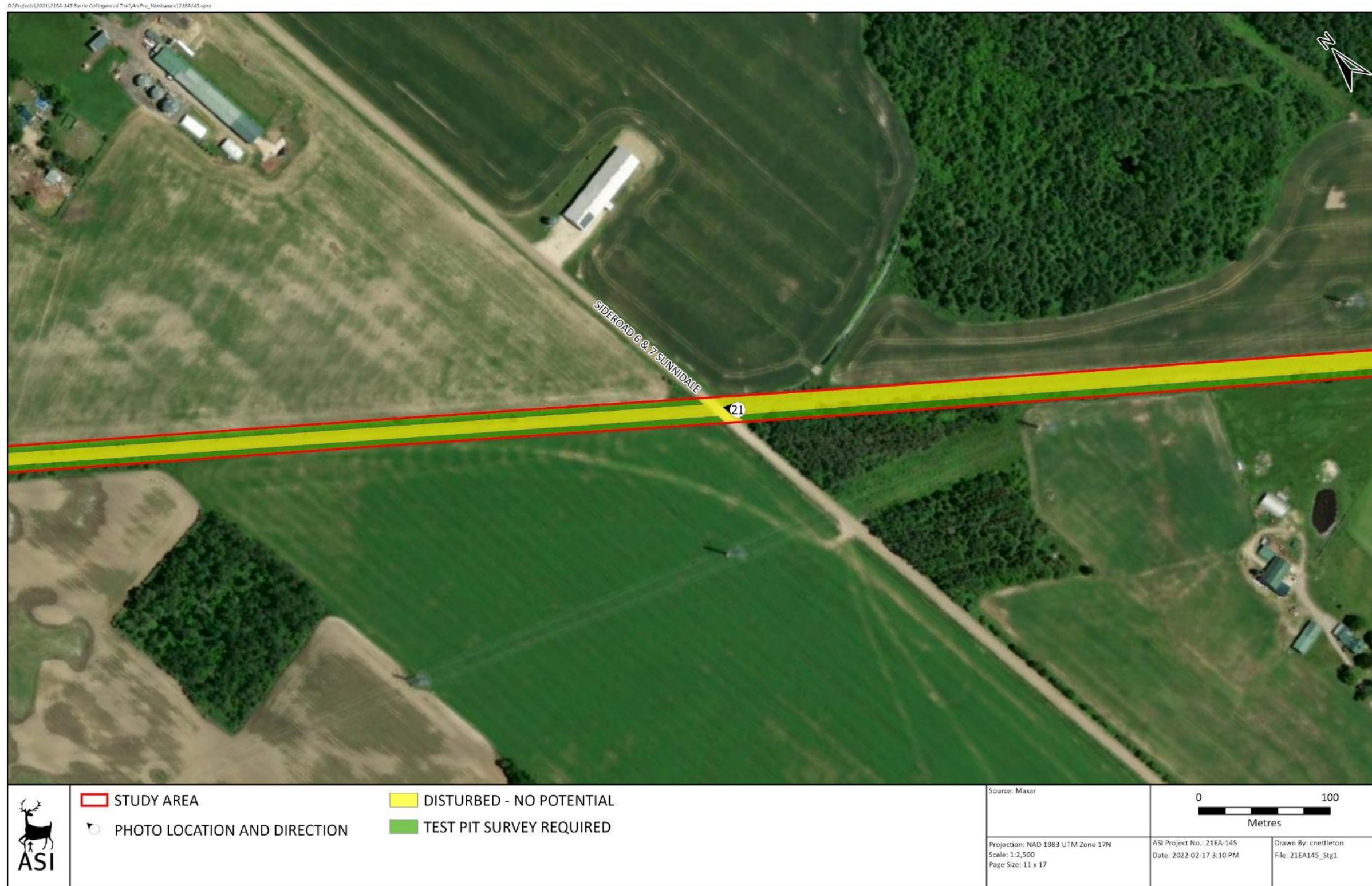


Figure 18: Barrie Collingwood Trail – Stage 1 Results (Sheet 9)





Figure 19: Barrie Collingwood Trail – Stage 1 Results (Sheet 10)





Figure 20: Barrie Collingwood Trail – Stage 1 Results (Sheet 11)



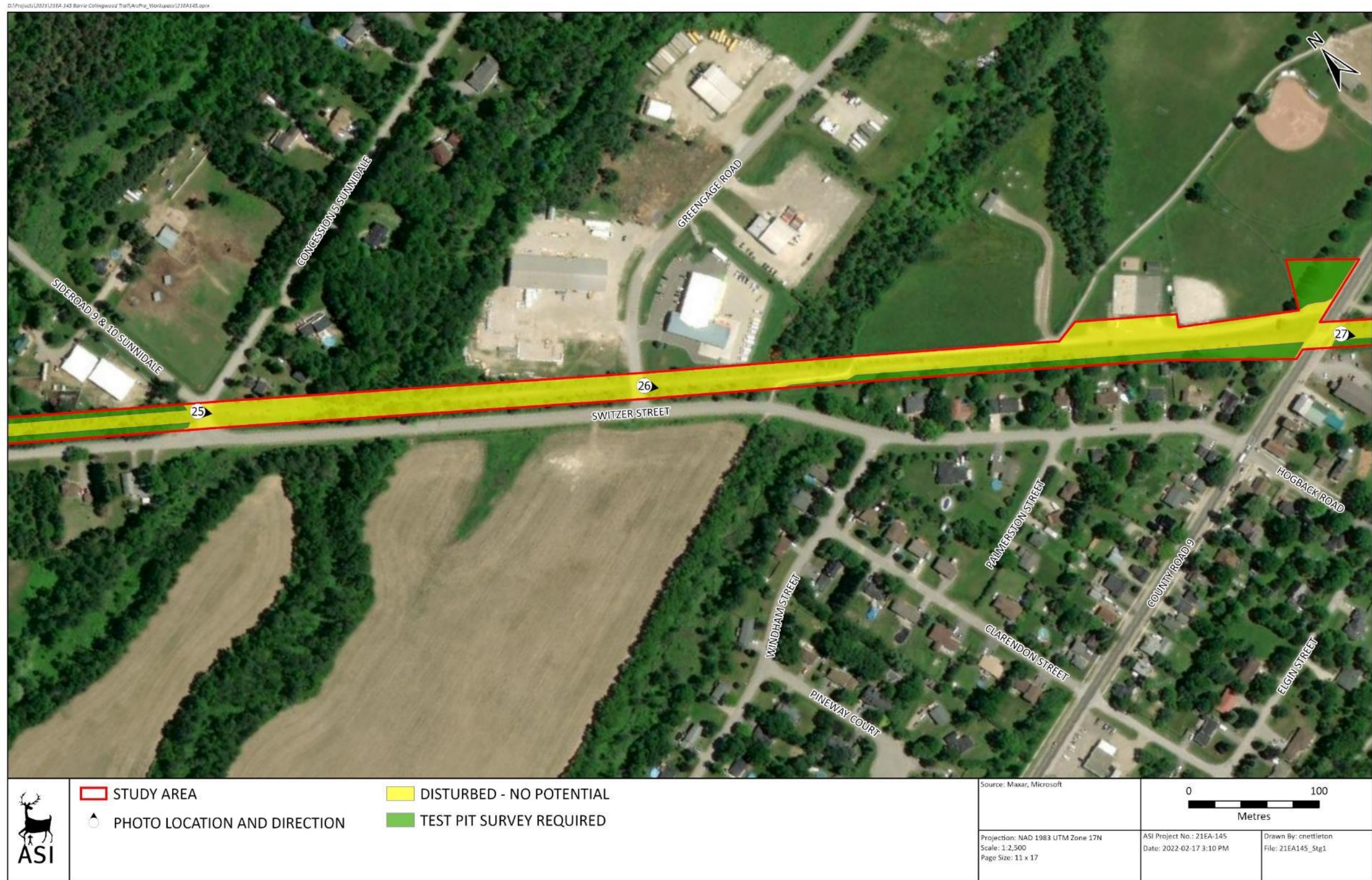


Figure 21: Barrie Collingwood Trail – Stage 1 Results (Sheet 12)



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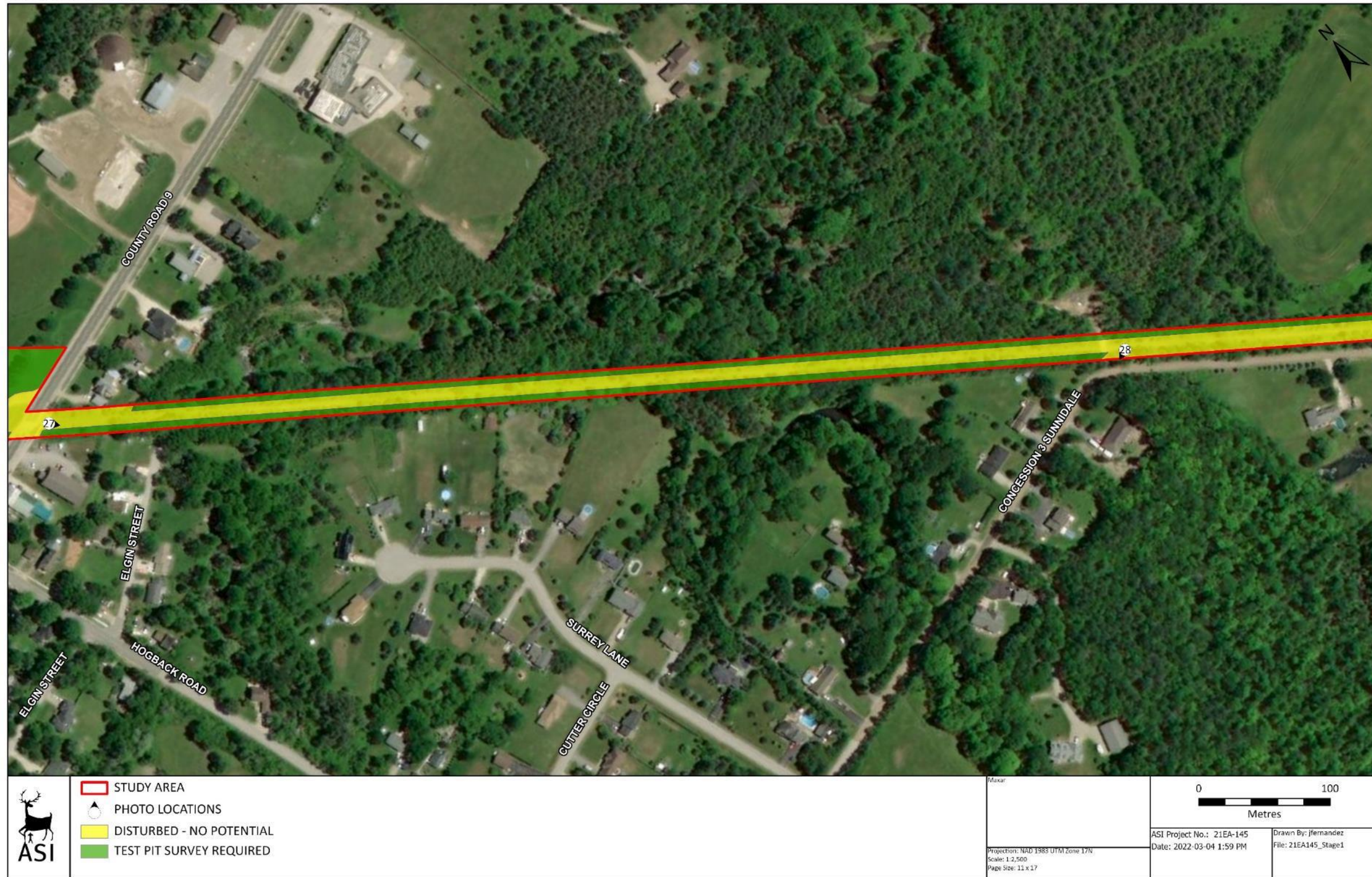


Figure 22: Barrie Collingwood Trail – Stage 1 Results (Sheet 13)



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Figure 23: Barrie Collingwood Trail – Stage 1 Results (Sheet 14)



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Figure 24: Barrie Collingwood Trail – Stage 1 Results (Sheet 15)





Figure 25: Barrie Collingwood Trail – Stage 1 Results (Sheet 16)



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Figure 26: Barrie Collingwood Trail – Stage 1 Results (Sheet 17)



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Figure 27: Barrie Collingwood Trail – Stage 1 Results (Sheet 18)



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Figure 28: Barrie Collingwood Trail – Stage 1 Results (Sheet 19)





Figure 29: Barrie Collingwood Trail – Stage 1 Results (Sheet 20)



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Figure 30: Barrie Collingwood Trail – Stage 1 Results (Sheet 21)



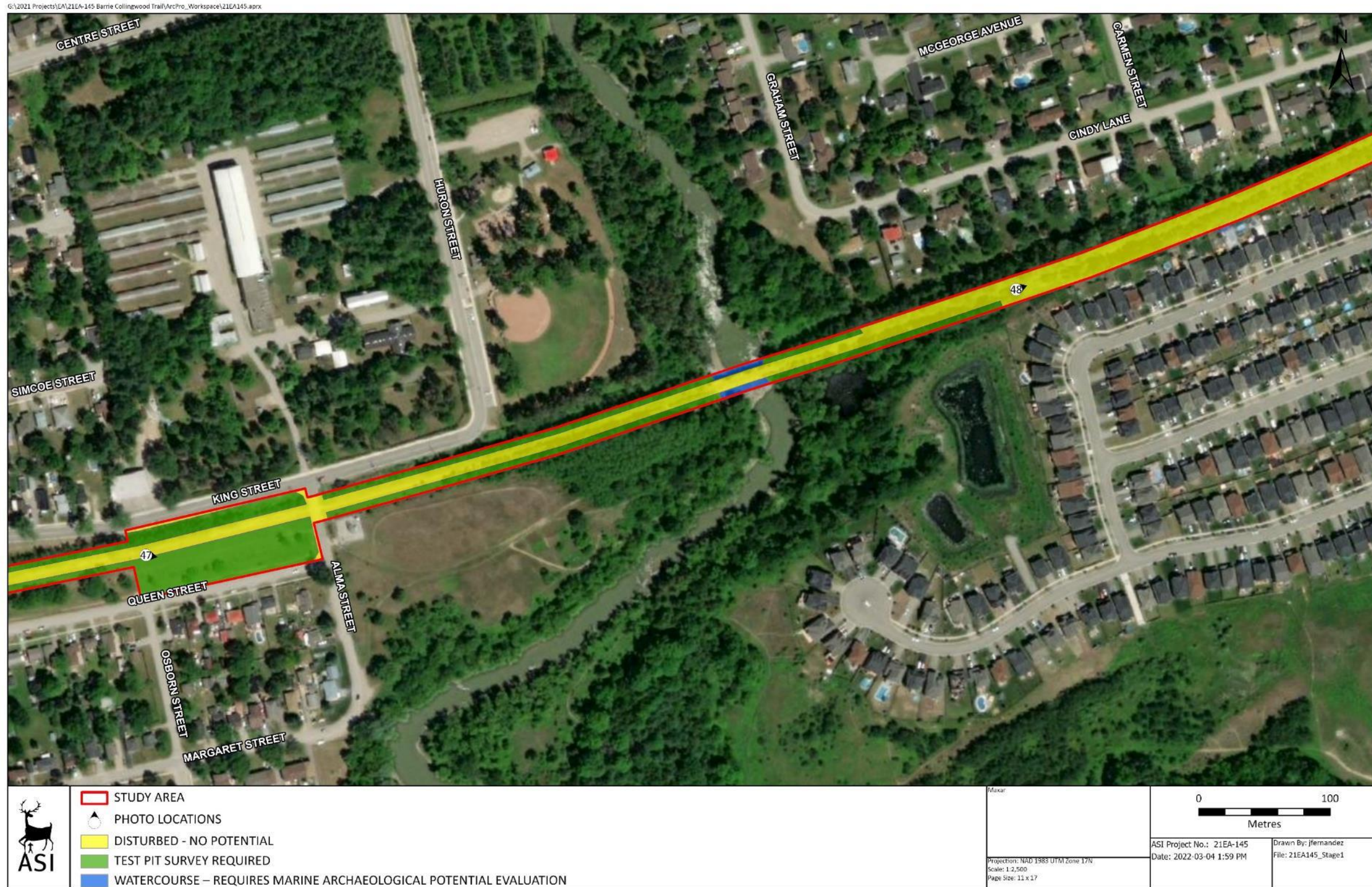


Figure 31: Barrie Collingwood Trail – Stage 1 Results (Sheet 22)



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Figure 32: Barrie Collingwood Trail – Stage 1 Results (Sheet 23)

