

**Stage 1 Archaeological Assessment
Grand Niagara Project
City of Niagara Falls
Regional Municipality of Niagara
Part of Lots 1–7, Broken Front Concession
Geographic Township of Crowland
Former Welland County, Ontario**

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Revised Report

EXECUTIVE SUMMARY

Under a contract awarded in October 2021, Archaeological Research Associates Ltd. carried out a Stage 1 assessment of lands with the potential to be impacted by the Grand Niagara project in the City of Niagara Falls, Regional Municipality of Niagara, Ontario. The proposed project involves a subdivision development within the central and eastern parts of the property as well as a variety of ecological restoration opportunities. The assessment was carried out in support of Plan of Subdivision application and was triggered by the requirements set out in Section 2.6 of the Provincial Policy Statement, 2020 issued under Section 3 of the *Planning Act*. This report documents the background research and potential modelling involved in the investigation and presents conclusions and recommendations pertaining to archaeological concerns.

The Stage 1 assessment was conducted in November 2021 under Project Information Form #P007-1273-2021. The investigation encompassed the area to the subdivided ('application boundary') as well as an area comprising lands owned by another party and parts of a pipeline easement, utility corridor and railway corridor ('additional lands'). All field observations were made from accessible public areas; accordingly, no permissions were required for property access. At the time of assessment, the study area consisted of agricultural fields, overgrown and wooded areas, residential properties, the railway and part of the Grand Niagara Golf Club.

The Stage 1 assessment determined that the study area comprises a mixture of areas of archaeological potential, areas of no archaeological potential, previously assessed lands of further concern and previously assessed lands of no further concern. A total of 96 known locations of archaeological materials were identified within the study area, the majority of which were found to be of no further cultural heritage value or interest (CHVI). Seven sites that were recommended for additional assessment or capping fall within the study area, all of which must be considered to have further CHVI until they can be empirically evaluated. The recommendations for the application boundary and the additional lands are outlined below.

Application Boundary

Regarding the area to be subdivided, it is recommended that the identified areas of archaeological potential be subject to a Stage 2 assessment in accordance with Section 2.1 of the 2011 *Standards and Guidelines for Consultant Archaeologists (S&Gs)*. These include a narrow corridor north of Grassy Brook Road, part of a residential property south of Grassy Brook Road and part of the railway crossing. The application boundary also contains five sites of further CHVI: AgGs-20, AgGs-24, AgGs-27, AgGs-232 and AgGs-233. Given that the environs of AgGs-20, AgGs-27, AgGs-232 and AgGs-233 were developed into a golf course ca. 2005, their level of preservation remains unclear. It is recommended that these sites be subject to an additional Stage 2 assessment to confirm that they still have CHVI. AgGs-24 falls within agricultural lands and must be subject to a Stage 3 assessment in accordance with the requirements set out in Section 3.2, Section 3.2.2 and Section 3.2.3 of the 2011 *S&Gs*. A controlled surface pick-up (CSP) is required in advance of test unit excavation. Further work is therefore required within the application boundary.

Additional Lands

Multiple areas of archaeological potential were identified within the lands west of Crowland Avenue owned by another party (per agreement with the landowner, Empire is permitted to complete the restoration works on those lands in the future) and the remaining parts of the pipeline easement, utility corridor and railway corridor. These include part of a residential property south of Grassy Brook Road, part of another residential property west of Crowland Avenue, parts of the railway corridor and a wooded area in the southwest. The additional lands also contain two sites of further CHVI: AgGs-14 and AgGs-88. These areas of further archaeological concern will not be impacted by the subdivision development and do not require further assessment as part of that application. Since the ecological restoration areas within the additional lands do not traverse any areas of further archaeological concern, further assessment is not required at this time.

Although these lands do not require additional assessment as part of the Grand Niagara Project, appropriate next steps must be articulated so that assessment can occur in advance of any future ground alterations or development. If impacts are contemplated, the identified areas of archaeological potential would require a Stage 2 assessment in accordance with Section 2.1 of the 2011 S&Gs. AgGs-88 would require a Stage 3 assessment in accordance with the requirements set out in Section 3.2, Section 3.2.2 and Section 3.2.3 of the 2011 S&Gs, and a CSP would be needed in advance of test unit excavation. AgGs-14 would need to be subject to Stage 4 excavation in accordance with the requirements set out in Section 4.2.1, Section 4.2.2 and Section 4.3 of the 2011 S&Gs. For planning purposes, a 20 m protective buffer should be observed around each site.

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ABBREVIATIONS

ARA – Archaeological Research Associates Ltd.
CHVI – Cultural Heritage Value or Interest
CIF – Contract Information Form
CSP – Controlled Surface Pick-up
MCL – Ministry of Culture
MCM – Ministry of Citizenship and Multiculturalism
PIF – Project Information Form
S&Gs – Standards and Guidelines for Consultant Archaeologists

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1.0 PROJECT CONTEXT

1.1 Development Context

Under a contract awarded in October 2021, Archaeological Research Associates Ltd. (ARA) carried out a Stage 1 assessment of lands with the potential to be impacted by the Grand Niagara project in the City of Niagara Falls, Regional Municipality of Niagara, Ontario. The proposed project involves a subdivision development within the central and eastern parts of the property as well as a variety of ecological restoration opportunities. The assessment was carried out in support of Plan of Subdivision application and was triggered by the requirements set out in Section 2.6 of the Provincial Policy Statement, 2020 issued under Section 3 of the *Planning Act*. This report documents the background research and potential modelling involved in the investigation and presents conclusions and recommendations pertaining to archaeological concerns.

The study area consists of an irregularly-shaped parcel of land with an area of 308.33 ha (Map 1). This parcel is generally bounded by the Welland River to the north, Montrose Road to the east, Biggar Road to the south and a mixture of agricultural and wooded lands beyond Morris Road to the west. In legal terms, the study area falls on part of Lots 1–7, Broken Front Concession in the Geographic Township of Crowland, former Welland County. The Crown obtained these lands from the Mississaugas as part of a much larger purchase in 1784, but there were uncertainties relating to the area involved. The extent of the cession was clarified during the Between the Lakes Purchase (Treaty 3) in 1792.

The Stage 1 assessment was conducted in November 2021 under Project Information Form (PIF) #P007-1273-2021. The investigation encompassed the area to the subdivided (‘application boundary’) as well as an area comprising lands owned by another party and parts of a pipeline easement, utility corridor and railway corridor (‘additional lands’). All field observations were made from accessible public areas; accordingly, no permissions were required for property access. In compliance with the objectives set out in Section 1.0 of the 2011 *Standards and Guidelines for Consultant Archaeologists (S&Gs)*, this investigation was carried out in order to:

- Provide information concerning the geography, history and current land condition of the study area;
- Determine the presence of known archaeological sites in the study area;
- Present strategies to mitigate project impacts to such sites, if they are located;
- Evaluate in detail the archaeological potential of the study area; and
- Recommend appropriate strategies for Stage 2 archaeological assessment, if some or all of the study area has archaeological potential.

The Ministry of Citizenship and Multiculturalism (MCM) is asked to review the results and recommendations presented herein and enter the report into the Ontario Public Register of Archaeological Reports. A Record of Indigenous Engagement is included in the project report package in accordance with the requirements set out in Section 7.6.2 of the 2011 *S&Gs*.

1.2 Historical Context

After a century of archaeological work in southern Ontario, scholarly understanding of the historical usage of the area has become very well-developed. With occupation beginning in the Palaeo period approximately 11,000 years ago, the greater vicinity of the study area comprises a complex chronology of Indigenous and Euro-Canadian histories. Section 1.2.1 summarizes the region’s settlement history, whereas Section 1.2.2 documents past and present land uses. Multiple previous archaeological reports containing relevant background information were obtained during the research component of the study. These reports are summarized in Section 1.3.3, and the references (including title, author and PIF number) appear in Section 7.0.

1.2.1 Settlement History

1.2.1.1 Pre-Contact

The Pre-Contact history of the region is lengthy and rich, and a variety of Indigenous groups inhabited the landscape. Archaeologists generally divide this vibrant history into three main periods: Palaeo, Archaic and Woodland. Each of these periods comprise a range of discrete sub-periods characterized by identifiable trends in material culture and settlement patterns, which are used to interpret past lifeways. The principal characteristics of these sub-periods are summarized in Table 1.

Table 1: Pre-Contact Settlement History
 (Wright 1972; Ellis and Ferris 1990; Warrick 2000; Munson and Jamieson 2013)

Sub-Period	Timeframe	Characteristics
Early Palaeo	9000–8400 BC	Gainey, Barnes and Crowfield traditions; Small bands; Mobile hunters and gatherers; Utilization of seasonal resources and large territories; Fluted points
Late Palaeo	8400–7500 BC	Holcombe, Hi-Lo and Lanceolate biface traditions; Continuing mobility; Campsite/Way-Station sites; Smaller territories are utilized; Non-fluted points
Early Archaic	7500–6000 BC	Side-notched, Corner-notched (Nettling, Thebes) and Bifurcate traditions; Growing diversity of stone tool types; Heavy woodworking tools appear (e.g., ground stone axes and chisels)
Middle Archaic	6000–2500 BC	Stemmed (Kirk, Stanly/Neville), Brewerton Side- and Corner-Notched traditions; Reliance on local resources; Populations increasing; More ritual activities; Fully ground and polished tools; Net-sinkers common; Earliest copper tools
Late Archaic	2500–900 BC	Narrow Point (Lamoka), Broad Point (Genesee) and Small Point (Crawford Knoll) traditions; Less mobility; Use of fish-weirs; True cemeteries appear; Stone pipes emerge; Long-distance trade (marine shells and galena)
Early Woodland	900–400 BC	Meadowood tradition; Crude cord-roughened ceramics emerge; Meadowood cache blades and side-notched points; Bands of up to 35 people
Middle Woodland	400 BC–AD 600	Local Saugeen-like tradition; Others argue for Point Peninsula tradition; Ceramics continue but many are undecorated; Seasonal settlements and resource utilization; Each watershed may have had a unique tradition; Regional patterns poorly understood at this time
Middle/Late Woodland Transition	AD 600–900	Princess Point tradition; Cord roughening, impressed lines and punctate designs on pottery; Adoption of maize horticulture at the western end of Lake Ontario; Oval houses and ‘incipient’ longhouses; First palisades; Villages with 75 people
Late Woodland (Early)	AD 900–1300	Glen Meyer tradition; Settled village-life based on agriculture; Small villages (0.4 ha) with 75–200 people and 4–5 longhouses; Semi-permanent settlements
Late Woodland (Middle)	AD 1300–1400	Uren and Middleport traditions; Classic longhouses emerge; Larger villages (1.2 ha) with up to 600 people; More permanent settlements (30 years)

Sub-Period	Timeframe	Characteristics
Late Woodland (Late)	AD 1400–1600	Pre-Contact Neutral tradition; Larger villages (1.7 ha); Examples up to 5 ha with 2,500 people; Extensive croplands; Also hamlets, cabins, camps and cemeteries; Potential tribal units; Fur trade begins ca. 1580; European trade goods appear

Although Iroquoian-speaking populations tended to leave a much more obvious mark on the archaeological record and are therefore emphasized in the Late Woodland entries above, it must be understood that Algonquian-speaking populations also represented a significant presence in southern Ontario. Due to the sustainability of their lifeways, archaeological evidence directly associated with the Anishinaabeg remains elusive, particularly when compared to sites associated with the more sedentary agriculturalists. Many artifact scatters in southern Ontario were likely camps, chipping stations or processing areas associated with the more mobile Anishinaabeg, utilized during their travels along the local drainage basins while making use of seasonal resources. This part of southern Ontario represents the ancestral territory of various Indigenous groups, each with their own land use and settlement pattern tendencies.

1.2.1.2 Post-Contact

The arrival of European explorers and traders at the beginning of the 17th century triggered widespread shifts in Indigenous lifeways and set the stage for the ensuing Euro-Canadian settlement process. Documentation for this period is abundant, ranging from the first sketches of Upper Canada and the written accounts of early explorers to detailed township maps and lengthy histories. The Post-Contact period can be effectively discussed in terms of major historical events, and the principal characteristics associated with these events are summarized in Table 2.

Table 2: Post-Contact Settlement History
 (Smith 1846; WTPH 1887; Coyne 1895; Lajeunesse 1960; Ellis and Ferris 1990; Surtees 1994; Hammerburg 2008; AO 2022)

Historical Event	Timeframe	Characteristics
Early Exploration	Early 17 th century	Brûlé explores southern Ontario in 1610/11; Champlain travels through in 1613 and 1615/1616, making contact with a number of Indigenous groups (including the Algonquin, Huron-Wendat and other First Nations); European trade goods become increasingly common and begin to put pressure on traditional industries
Increased Contact and Conflict	Mid- to late 17 th century	Conflicts between various First Nations during the Beaver Wars result in numerous population shifts; European explorers continue to document the area, and many Indigenous groups trade directly with the French and English; ‘The Great Peace of Montreal’ treaty established between roughly 39 different First Nations and New France in 1701
Fur Trade Development	Early to mid-18 th century	Growth and spread of the fur trade; Peace between the French and English with the Treaty of Utrecht in 1713; Ethnogenesis of the Métis; Hostilities between French and British lead to the Seven Years’ War in 1754; French surrender in 1760
British Control	Mid- to late 18 th century	<i>Royal Proclamation</i> of 1763 recognizes the title of the First Nations to the land; Numerous treaties subsequently arranged by the Crown; First land cession under the new protocols is the Seneca surrender of the west side of the Niagara River in 1764; The Niagara Purchase (Treaty 381) in 1781 included this area
Loyalist Influx	Late 18 th century	United Empire Loyalist influx during and after the American Revolutionary War (1775–1783); British develop interior communication routes and acquire additional lands; Between the Lakes Purchase completed with the Mississaugas in 1784 and confirmed in 1792 (Treaty 3); <i>Constitutional Act</i> of 1791 creates Upper and Lower Canada

Historical Event	Timeframe	Characteristics
County Development	Late 18 th to early 19 th century	Became part of Lincoln County’s ‘Fourth Riding’ in 1792; Became part of the Niagara District in 1798; Welland Canal was a major feature, conceived by W.H. Merritt and opened in 1829; Welland County formed from the southeastern part of Lincoln County in 1845; Independent after the abolition of the district system in 1849
Township Formation	Late 18 th to early 19 th century	Settled by United Empire Loyalists; First pioneers were likely Peter and Henry Buchner ca. 1778; Other early settlers included the Youngs, Miseners, Cooks, Yokoms, Benders, Wilsons and Doans; Lands along the Welland River and near Doan’s Ridge were the first to be settled; Rate of settlement was slow, however, and the population was only 216 by 1803; Population reached roughly 600 by 1817; One grist mill and one saw mill in operation at that time
Township Development	Mid-19 th to early 20 th century	Population reached 973 by 1841; 6,159 ha taken up by 1846, with 2,699 ha under cultivation; 2 grist mills and 2 saw mills in operation at that time; Traversed by the Welland Railway (1859), Canada Southern Railway (1873), Canada Southern Railway’s Montrose Branch (1883), Toronto, Hamilton & Buffalo Railway (1896) and Niagara, St. Catharines & Toronto Railway (1908/11); Population reached 1,318 in 1881; Principal communities at Crowland and Welland

1.2.2 Past and Present Land Use

1.2.2.1 Overview

During Pre-Contact and Early Contact times, the vicinity of the study area would have comprised a mixture of coniferous trees, deciduous trees and open areas. Indigenous communities would have managed the landscape to some degree. During the late 18th and early 19th centuries, Euro-Canadian settlers arrived in the area and began to clear the forests for agricultural and settlement purposes. The study area was located southwest of the historical limits of Montrose and east of Port Robinson. The land use at the time of assessment can be classified as a mixture of agricultural, residential, recreational and green space.

1.2.2.2 Mapping and Imagery Analysis

In order to gain a general understanding of the study area’s past land uses, two historical settlement maps, three topographic maps and five aerial images were examined during the research component of the study. Specifically, the following resources were consulted:

- *Tremaines’ Map of the Counties of Lincoln and Welland, Canada West* (1862) (OHCMP 2019);
- *The Illustrated Historical Atlas of the Counties of Lincoln & Welland, Ont.* (1876) (MU 2001);
- Topographic maps from 1906, 1908 and 1938 (OCUL 2022); and
- Aerial images from 1934, 1954, 1960, 1965 and 1968 (BU 2022).

The limits of the study area are shown on georeferenced versions of the consulted historical resources in Map 2–Map 9. The study area traversed various road allowances as well as parts of several larger properties. A summary of the identified historical occupants appears in Table 3.

Table 3: Occupation History

Lot	Concession	1862	1876
1	Broken Front	W.T. Wilkins; Jonathan Dell	T. Wilkins; Harvey Burns; Thomas Dell; Jesse Dell
2	Broken Front	William Binckley; Jonathan Dell	Harvey Burns; Thomas Dell; Jesse Dell
3	Broken Front	A. Simpson	A. Thompson; George Young; Jesse Dell
4	Broken Front	G. Young; Jacob Young	George Young; Jacob Young
5	Broken Front	J. Young; John Stinehoof	Jacob Young; W. Lundy; John Biggar
6	Broken Front	John Stinehoof; William Stinehoof	A. Flenner; F. McPherson; John Biggar
7	Broken Front	William Stinehoof	W. Stienhoff; G. Stienhoff; F. McPherson

Tremaines' Map of the Counties of Lincoln and Welland, Canada West (1862) does not depict any farmhouses within the study area (Map 2). This map depicts relatively few private structures, however, so this is not necessarily an indication that the properties were unimproved. The *Illustrated Historical Atlas of the Counties of Lincoln & Welland, Ont.* (1876), on the other hand, shows numerous farmhouses within the study area (Map 3). These include structures associated with Jacob Young (west of Crowland Avenue), George Young and Jesse Dell (north of Grassy Brook Road) and Harvey Burns (west of Montrose Road). A church is also illustrated at the northeast corner of Biggar Road and Crowland Avenue, but no cemetery is indicated. A previous assessment report indicates that the land for the church was sold by Jacob Young in 1860 to the 'Church of the United Brethren in Christ' (AMICK 2003:18).

The topographic maps from 1906 and 1908 depict four wooden (black) and two stone/brick houses (red) within the study area (Map 4). The Canada Southern Railway's Montrose Branch had been established (operated by the Michigan Central Railroad), and Fraser Station appears to the east. The topographic map from 1938 shows both houses and barns, and although there is continuity in several areas, demolitions as well as new constructions had occurred (Map 4). The aerial images from 1934–1968 show the structures from the 1938 topographic map and demonstrate that a new structure was built south of Grassy Brook Road some time prior to 1954 (Map 5–Map 9). The study area was predominantly used for agriculture, although numerous wooded areas are visible.

1.3 Archaeological Context

The Stage 1 assessment (property inspection) was conducted on November 17, 2021 under PIF #P007-1273-2021. ARA utilized an Apple iPhone 11 with a built-in GPS/GNSS receiver during the investigation (UTM17/NAD83). The limits of the study area were confirmed using project-specific GIS data translated into GPS points for reference in the field, in combination with aerial imagery showing physical features in relation to the subject lands.

The archaeological context of any given study area must be informed by 1) the condition of the property as found (Section 1.3.1), 2) a summary of registered or known archaeological sites located within a minimum 1 km radius (Section 1.3.2) and 3) descriptions of previous archaeological fieldwork carried out within the limits of, or immediately adjacent to the property (Section 1.3.3).

1.3.1 Condition of the Property

The study area lies within the deciduous forest region, which is the southernmost forest region in Ontario and is dominated by agricultural and urban areas. This region generally has the greatest diversity of tree and vegetation species, while at the same time having the lowest proportion of forest. It has most of the tree and shrub species found in the Great Lakes–St. Lawrence forest (e.g., white pine, red pine, hemlock, white cedar, yellow birch, sugar and red maples, basswood and red oak), and also contains black walnut, butternut, tulip, magnolia, black gum, many types of oaks, hickories, sassafras and red bud (MNRF 2022).

In terms of local physiography, the subject lands fall within the Haldimand Clay Plain. This region occupies all of the Niagara Peninsula above the escarpment and covers an area of roughly 3,500 km². The plain itself consists of a series of parallel clay belts deposited during the time of proglacial Lake Warren. Although this area was once completely submerged, the till is not completely buried by stratified clay and it comes to the surface on low morainic ridges in the north (Chapman and Putnam 1984:156–159).

According to the Ontario Soil Survey, the study area consists of a mixture of Alluvium (ALU1 and ALU27), Cashel soils (CSH8), Niagara soils (NGR1, NGR3 and NGR10), Ontario soils (OTI5), Welland soils (WLL1 and WLL2) and areas that were not mapped due to past development (NM). The characteristics of these soil types are summarized in Table 4, and their distribution is shown in Map 10 (Kingston and Presant 1989:Sheet 5).

Table 4: Soil Types

Soil Type	Symbol	Parent Material (Dominant)	Parent Material (Subdominant)	Drainage (Dominant)	Drainage (Subdominant)
Alluvium	ALU 1	Variable floodplain deposits	-	Variable	-
Alluvium	ALU 27	Variable floodplain deposits	Mainly reddish-hued lacustrine heavy clay	Variable	Imperfect
Cashel	CSH 8	40–100 cm reddish-hued lacustrine heavy clay over clay loam till	Variable floodplain deposits	Moderately well	Variable
Miscellaneous	NM	Includes residential, industrial and recreational land areas.	-	Variable	-
Niagara	NGR 1	Mainly reddish-hued lacustrine heavy clay	-	Imperfect	-
Niagara	NGR 10	Mainly reddish-hued lacustrine heavy clay	Variable floodplain deposits	Imperfect	Variable
Niagara	NGR 3	Mainly reddish-hued lacustrine heavy clay	See WLL 1	Imperfect	Poor
Ontario	OTI 5	Mainly reddish-hued lacustrine heavy clay	-	Moderately well	-
Welland	WLL 1	Mainly reddish-hued lacustrine heavy clay	-	Poor	-
Welland	WLL 2	Mainly reddish-hued lacustrine heavy clay	Mainly reddish-hued lacustrine heavy clay	Poor	Imperfect

The subject lands fall within the Welland River East, Grassy Brook and Lyons Creek drainage basins, all of which are under the jurisdiction of the Niagara Peninsula Conservation Authority (NPCA 2022). Specifically, the study area abuts the Welland River and is traversed by Grassy Brook Creek, a tributary of Lyon’s Creek and parts of the Lower Grassy Brook Wetland Provincial Swamp, Lyons Creek North Wetland Provincial Swamp, Upper Grassy Brook Wetland Provincial Swamp and the Welland River East Wetland Provincial Swamp.

At the time of assessment, the study area consisted of agricultural fields, overgrown and wooded areas, residential properties, the railway and part of the Grand Niagara Golf Club. Soil conditions were ideal for the activities conducted. No unusual physical features were encountered that affected the results of the Stage 1 assessment.

1.3.2 Registered or Known Archaeological Sites

The Ontario Archaeological Sites Database and the Ontario Public Register of Archaeological Reports were consulted to determine whether any registered or known archaeological resources occur within a 1 km radius of the study area. In response to a request for assistance, the Archaeological Data Coordinator indicated that there are 51 registered sites located within the specified distance. It should be noted that two of these sites potentially reflect the same deposit (AgGs-4 and AgGs-50). A total of 64 unregistered sites were identified within a 1 km radius of the study area. The sites are summarized in Table 5.

Table 5: Registered or Known Archaeological Sites

Borden No. / ID No.	Site Name / Identifier	Time Period	Affinity	Site Type	Distance from Study Area
AgGs-4	Feren	Archaic, Late; Woodland, Early	Indigenous	Camp/campsite	300 m–1 km
AgGs-14	Marian White 991	Archaic, Late	Indigenous	Camp/campsite	Within
AgGs-15	MIA 8469	Pre-Contact	Indigenous	Findspot	Within
AgGs-16	MIA 8470	Pre-Contact	Indigenous	Findspot	Within
AgGs-17	MIA 8471	Pre-Contact	Indigenous	Scatter	Within
AgGs-18	MIA 8472	Pre-Contact	Indigenous	Findspot	Within
AgGs-19	MIA 8473	Archaic, Late	Indigenous	Camp/campsite	< 50 m
AgGs-20	MIA 8474	Archaic, Late	Indigenous	Camp/campsite	Within
AgGs-21	MIA 8475	Pre-Contact	Indigenous	Scatter	Within
AgGs-22	MIA 8476	Pre-Contact	Indigenous	Findspot	Within
AgGs-23	MIA 8477	Pre-Contact	Indigenous	Findspot	Within
AgGs-24	MIA 8478	Pre-Contact	Indigenous	Scatter	Within
AgGs-25	MIA 8479	Pre-Contact	Indigenous	Findspot	Within
AgGs-26	MIA 8480	Pre-Contact	Indigenous	Findspot	Within
AgGs-27	MIA 8481	Archaic, Late	Indigenous	Camp/campsite	Within
AgGs-28	MIA 8482	Pre-Contact	Indigenous	Findspot	Within
AgGs-33	MIA 8483	Post-Contact	Euro-Canadian	House	Within
AgGs-34	MIA 8484	Woodland, Early	Indigenous	Findspot	50 m–300 m
AgGs-35	MIA 8485	Pre-Contact	Indigenous	Findspot	50 m–300 m
AgGs-50	Feren	Post-Contact; Pre-Contact	Indigenous; Euro-Canadian	Scatter	300 m–1 km
AgGs-51	Thompsons Creek	Palaeo, Late; Woodland, Early	Indigenous	Hunting; hunting	50 m–300 m
AgGs-56	-	Pre-Contact	Indigenous	Findspot	Within

Borden No. / ID No.	Site Name / Identifier	Time Period	Affinity	Site Type	Distance from Study Area
AgGs-84	Stranges	Pre-Contact	Indigenous	Camp/campsite	300 m–1 km
AgGs-85	TCPL 90-5	Pre-Contact	Indigenous	Scatter	Within
AgGs-86	Cebrynski-Kneller	Archaic, Late	Indigenous	Camp/campsite	Within
AgGs-87	TCPL 90-7	Pre-Contact	Indigenous	Scatter	Within
AgGs-88	TCPL 90-8	Archaic, Early	Indigenous	Camp/campsite	Within
AgGs-89	TCPL 90-9	Pre-Contact	Indigenous	Scatter	Within
AgGs-93	TCPL 90-13	Other	Unspecified	Findspot	300 m–1 km
AgGs-95	TCPL 91-3	Other	Unspecified	Findspot	300 m–1 km
AgGs-225	-	Pre-Contact	Indigenous	Scatter	Within
AgGs-226	-	Pre-Contact	Indigenous	Scatter	Within
AgGs-227	-	Pre-Contact	Indigenous	Scatter	Within
AgGs-228	Grassy Brook Camp I	Pre-Contact	Indigenous	Camp/campsite	Within
AgGs-229	James Macklem	Post-Contact; Pre-Contact	Indigenous, Euro-Canadian	Homestead	Within
AgGs-230	Grassy Brook Camp II	Pre-Contact	Indigenous	Camp/campsite	Within
AgGs-231	John Steinhoff	Post-Contact; Pre-Contact	Indigenous, Euro-Canadian	Homestead	Within
AgGs-232	Welland River Camp	Pre-Contact	Indigenous	Camp/campsite	Within
AgGs-233	Alexander Simpson	Post-Contact; Pre-Contact	Indigenous, Euro-Canadian	Homestead	Within
AgGs-234	-	Pre-Contact	Indigenous	Scatter	Within
AgGs-235	Cabeiroi Camp 1	Pre-Contact	Indigenous	Scatter	Within
AgGs-236	Cabeiroi Camp 2	Pre-Contact	Indigenous	Camp/campsite	Within
AgGs-237	Timothy Jefferson	Post-Contact	Euro-Canadian	Scatter	Within
AgGs-238	Welland Drain	Pre-Contact	Indigenous	Camp/campsite	Within
AgGs-251	-	Pre-Contact	Indigenous	Scatter	Within
AgGs-252	-	Pre-Contact	Indigenous	Scatter	Within
AgGs-253	-	Pre-Contact	Indigenous	Scatter	Within
AgGs-375	Wilkins	Post-Contact	Euro-Canadian	Farmstead	50 m–300 m
AgGs-380	14-001:13	Pre-Contact	Indigenous	Unspecified	300 m–1 km
AgGs-381	14-001:14	Pre-Contact	Indigenous	Unspecified	300 m–1 km
AgGt-78	Standard Radio Inc.	Pre-Contact	Indigenous	Findspot	300 m–1 km
Unregistered	FS #1	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #2	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #3	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #4	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #5	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #6	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #7	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #8	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #9	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #10	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #11	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #12	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #13	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #14	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #15	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #16	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #17	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #18	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #19	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #20	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #21	Pre-Contact	Indigenous	Findspot	Within

Borden No. / ID No.	Site Name / Identifier	Time Period	Affinity	Site Type	Distance from Study Area
Unregistered	FS #22	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #23	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #24	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #25	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #26	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #27	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #28	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #29	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #30	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #31	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #32	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #33	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #34	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #35	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #36	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #37	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #38	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #39	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #40	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #41	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #42	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #43	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #44	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #45	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #46	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #47	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #48	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #49	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #50	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #51	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #52	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #53	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #54	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #55	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #56	Pre-Contact	Indigenous	Findspot	Within
Unregistered	FS #57	Pre-Contact	Indigenous	Findspot	Within
Unregistered	Sorokolit	Pre-Contact	Indigenous	Scatter	Within
Unregistered	H1 (Burns)	Post-Contact	Euro-Canadian	Farmstead	50 m–300 m
Unregistered	H2	Post-Contact	Euro-Canadian	Findspot	50 m–300 m
Unregistered	H5	Post-Contact	Euro-Canadian	Scatter	50 m–300 m
Unregistered	H6	Post-Contact	Euro-Canadian	Findspot	50 m–300 m
Unregistered	P1	Pre-Contact	Indigenous	Findspot	50 m–300 m
Unregistered	P2	Pre-Contact	Indigenous	Findspot	50 m–300 m

A total of 96 of these previously identified sites are located within the study area, and one of them falls within 50 m. As relevant archaeological resources that could impact fieldwork strategy decisions and recommendations, these sites are fully discussed in Section 1.3.3. Ten other sites are located within 300 m of the study area and must also be considered as relevant features of archaeological potential. The remaining sites represent more distant archaeological resources.

1.3.3 Previous Archaeological Work

A review of available archaeological management plans and/or other archaeological potential mapping was undertaken to inform the assessment process. Specifically, the Regional Municipality of Niagara’s *Archaeological Management Plan* was examined for information that could influence the choice of fieldwork techniques or recommendations. The associated mapping indicates that the majority of the study area has archaeological potential (Map 11).

Reports documenting assessments conducted within the subject lands and assessments that resulted in the discovery of sites within adjacent lands were sought during the research component of the study. In order to ensure that all relevant past work was identified, an investigation was launched to identify reports involving assessments within 50 m of the study area. The investigation determined that there are multiple available reports documenting previous archaeological fieldwork within the specified distance. The relevant results and recommendations are summarized below as required by Section 7.5.8 Standards 4–5 of the 2011 *S&Gs* (Map 12; SD Map 1).

1.3.3.1 Waste Management Phase 4A (Stage 1-2)

Between August and December 1984, the equivalent of Stage 1 and 2 assessments were carried out as part of the site selection process for waste management facilities under Licence #84-15 (MIA 1985). The assessed area encompassed eight candidate sites, including PI-1N, LF-2N, LF-4N, PI-13N, LF-3C, LF-9C, LF-1E and PI-27E. PI-27E traverses the central and eastern parts of the study area (the remaining candidate sites are not relevant to this study).

Background research demonstrated that several known or reported sites were located within or partly within PI-27E, including ‘AgGs-999’ (an Archaic/Early Woodland camp based on an unconfirmed report of points), MW988 (an Archaic camp) and MW991 (a Late Archaic camp). Five other sites were located in the vicinity of PI-27E, including AgGs-4 (a Late Archaic/Early Woodland camp), AgGs-5 (a Late Archaic/Early Woodland camp), MW987 (an Archaic camp), MW990 (a possible Archaic camp), MW992 (an Archaic camp) and MW993 (an Archaic camp). It was suggested that several Euro-Canadian sites could also exist, including a church along Biggar Road, various residences and the former Misener Road (MIA 1985:80–81). The investigation of PI-27E and adjacent areas containing previously identified sites resulted in the discovery of 18 locations of archaeological materials. The sites are summarized in Table 6 (SD Map 2).

Table 6: PI-27E Site Summary
(MIA 1985:80–)

Site Identifier	Position	Description	Evaluation
Marion White 991 (AgGs-14)	Within study area	279 Indigenous artifacts including six Lamoka points and one Brewerton Side-Notched point	Significant
MIA 8469 (AgGs-15)	Within study area	1 Indigenous artifact	Not significant
MIA 8470 (AgGs-16)	Within study area	1 Indigenous artifact	Not significant
MIA 8471 (AgGs-17)	Within study area	2 Indigenous artifacts	Not significant
MIA 8472 (AgGs-18)	Within study area	1 Indigenous artifact	Not significant

Site Identifier	Position	Description	Evaluation
MIA 8473 (AgGs-19)	Beyond study area	107 Indigenous artifacts, including a Genesee point	Significant
MIA 8474 (AgGs-20)	Within study area	173 Indigenous artifacts, including a Lamoka point	Significant
MIA 8475 (AgGs-21)	Within study area	2 Indigenous artifacts	Not significant
MIA 8476 (AgGs-22)	Within study area	1 Indigenous artifact	Not significant
MIA 8477 (AgGs-23)	Within study area	1 Indigenous artifact	Not significant
MIA 8478 (AgGs-24)	Within study area	12 Indigenous artifacts	Significant
MIA 8479 (AgGs-25)	Within study area	1 Indigenous artifact	Not significant
MIA 8480 (AgGs-26)	Within study area	1 Indigenous artifact	Not significant
MIA 8481 (AgGs-27)	Within study area	125 Indigenous artifacts	Significant
MIA 8482 (AgGs-28)	Within study area	1 Indigenous artifact	Not significant
MIA 8483 (AgGs-33)	Within study area	Euro-Canadian artifact scatter	Not significant
MIA 8483 (AgGs-34)	Beyond study area	2 Indigenous artifacts, both Adena points	Not significant
MIA 8483 (AgGs-35)	Beyond study area	1 Indigenous artifact	Not significant

AgGs-20 and AgGs-27 were determined to represent ‘AgGs-999’. MW988 reportedly comprised three loci, the first of which was 100 m south of the Welland River but north of Grassy Brook Road, while the other two were west of the first. Based on information provided by a local resident, it was concluded that the site does not extend south across Grassy Brook Road. Given the narrow nature of the portion of the study area falling north of this roadway, it seems likely that MW988 falls to the west where the land widens. MW991 reportedly had two loci separated by a small ravine, and this location was confidently correlated with AgGs-14 (SD Map 3).

Recommendations were only provided for the sites located within PI-27E. Specifically, AgGs-19, AgGs-24 (SD Map 4), an unregistered potential dump along the former Misener Road and an unregistered church along Biggar Road were identified as ‘significant’ (MIA 1985:90). It was also noted that “several significant archaeological sites, primarily Late Archaic camps, were also documented in the immediate vicinity” (MIA 1985:97–98). Accordingly, it seems clear that AgGs-14, AgGs-20 and AgGs-27 were also considered to be significant. The investigation involved pedestrian survey at an interval of 10 m (reduced to an interval of 3–5 m where corn had grown in) with intensification at an interval of 1 m (MIA 1985:29). Although the field methods do not meet current provincial standards, the relevant areas were resurveyed using appropriate methods under Contract Information Form (CIF) #2001-016-004 (AMICK 2003).

1.3.3.2 Union Gas NPS 24 Niagara Line (Stage 1–2)

Between Spring 1988 and Summer 1989, the equivalent of Stage 1 and 2 assessments were carried out for the Union Gas NPS 24 Niagara Line under Licence #88-60 (MPA 1989). The assessed area was confined to segments of the preferred route totalling just over 4 km in length, including several sections traversing the western half of the study area. The investigation resulted in the discovery of seven locations of archaeological materials. Only AgGs-56 was identified within the study area, which consisted of three non-diagnostic lithic artifacts northwest of the railway. The site is erroneously labelled ‘AgGs-51’ in the mapping (SD Map 5), which is north of the Welland River. The project was cancelled, and no specific recommendations were made (MPA 1989:15). Based on the information provided, AgGs-56 appears to be a small scatter of no further cultural heritage value or interest (CHVI). The investigation involved pedestrian survey at an interval of 5 m, but it remains unclear whether any intensification was carried out (MPA 1989:5). Although the field methods do not meet current provincial standards, the relevant areas were resurveyed using appropriate methods under CIF #2001-016-004 (AMICK 2003).

1.3.3.3 TransCanada Pipelines Blackhorse Extension (Stage 1–4)

The equivalent of Stage 1, 2, 3 and 4 assessments were carried out for the TransCanada Pipelines Blackhorse Extension between November 1990 and May 1993 under Licence #90-006, #91-10, #92-026 and #93-017 (LMA 1993). The assessed area comprised a 20 m wide corridor and 10 m wide workspace as well as adjacent unmapped areas, a portion of which traverses the western part of the study area. The investigation resulted in the identification of 17 locations of archaeological materials, five of which fall within the study area (SD Map 6). These include TCPL 90-5 (AgGs-85), the Cebrynski-Kneller site (AgGs-86), TCPL 90-7 (AgGs-87), TCPL 90-8 (AgGs-88) and TCPL 90-9 (AgGs-89). The sites are summarized in Table 6.

**Table 7: Blackhorse Extension Site Summary
 (LMA 1993)**

Site Identifier	Position	Description	Evaluation
TCPL 90-5 (AgGs-85)	Within study area	2 Indigenous artifacts	Not significant
Cebrynski-Kneller (AgGs-86)	Within study area	150 Indigenous artifacts, including an Innes point from the Late Archaic period	Significant
TCPL 90-7 (AgGs-87)	Within study area	3 Indigenous artifacts	Not significant
TCPL 90-8 (AgGs-88)	Within study area	4 Indigenous artifacts, including a Nettling point from the Early Archaic period	Significant
TCPL 90-9 (AgGs-89)	Within study area	2 Indigenous artifacts	Not significant

The area of previously identified site AgGs-56 was also investigated, but no additional artifacts were found, and the deposit was determined to be not significant (LMA 1993:29). Only the Cebrynski-Kneller site (AgGs-86) and TCPL 90-8 (AgGs-88) were found to be significant, and the latter was located beyond the area of impact and did not require any further work as part of the extension project. Block excavation was carried out to mitigate the Cebrynski-Kneller site, which resulted in the discovery of an additional 960 artifacts (SD Map 7). The majority of the finds

comprised chipping detritus (n=938), and the site was interpreted as a small tool maintenance camp. This site was not recommended for additional assessment (LMA 1993:33–34). The investigation involved pedestrian survey at an interval of 1 to 5 m and test pit survey at an interval of 5 to 10 m, but it remains unclear whether any intensification was carried out (LMA 1993:6–7). Although the utilized field methods do not meet current provincial standards, the relevant areas were resurveyed using appropriate methods under CIF #2001-016-004 (AMICK 2003).

1.3.3.4 Grand Niagara Resort (Stage 1–4)

Between April 2001 and Summer 2002, Stage 1, 2 and 3 assessments were carried out for the Phase 1 and 2 portions of the Grand Niagara Resort under CIF #2001-016-004, #2001-012-018 and #2001-012-090 (AMICK 2003). The assessed area traverses the majority of the study area (only the lands west of Morris Road, three residential properties, the road allowances for Morris Road and Crowland Avenue/Grand Niagara Drive and the railway corridor were not surveyed). The investigation resulted in the discovery of 75 locations of archaeological materials. These included 10 registered sites and 19 isolated finds (FS #28 to FS #46) within the Phase 1 lands and 8 registered sites and 38 isolated finds within the Phase 2 lands (FS #1 to FS #27 and FS #47 to FS #57). All of the isolated finds comprised Indigenous sites that were found to be of further CHVI. The registered sites are summarized in Table 8 (SD Map 8–SD Map 11).

Table 8: Grand Niagara Resort Site Summary (Stage 2)
 (AMICK 2003:20–56)

Site Identifier	Position	Description	Evaluation
Marion White (AgGs-14)	Within study area (Phase 2)	300 x 25 m scatter of 51 Indigenous artifacts	Significant
AgGs-225	Within study area (Phase 2)	65 x 35 m scatter of 28 Indigenous artifacts	Significant
AgGs-226	Within study area (Phase 2)	20 x 20 m scatter of 10 Indigenous artifacts	Significant
AgGs-227	Within study area (Phase 2)	40 x 25 m scatter of 42 Indigenous artifacts	Significant
Grassy Brook Camp 1 (AgGs-228)	Within study area (Phase 1)	20 x 20 m scatter of 37 Indigenous artifacts	Significant
James Macklem (AgGs-229)	Within study area (Phase 1)	30 x 30 m scatter of 13 Indigenous artifacts and 11 Euro-Canadian artifacts	Significant
Grassy Brook Camp 2 (AgGs-230)	Within study area (Phase 1)	30 x 10 m scatter of 25 Indigenous artifacts	Significant
John Steinoff (AgGs-231)	Within study area (Phase 1)	30 x 30 m scatter of 32 Indigenous artifacts and 82 Euro-Canadian artifacts	Significant
Welland River Camp (AgGs-232)	Within study area (Phase 1)	110 x 30 m scatter of 56 Indigenous artifacts	Significant
Alexander Simpson (AgGs-233)	Within study area (Phase 1)	215 x 30 m scatter of 203 Indigenous artifacts and 59 Euro-Canadian artifacts	Significant
AgGs-234	Within study area (Phase 2)	20 x 20 m scatter of 11 Indigenous artifacts	Significant
Cabeiroi Camp 1 (AgGs-235)	Within study area (Phase 1)	90 x 30 m scatter of 15 Indigenous artifacts	Not significant
Cabeiroi Camp 2 (AgGs-236)	Within study area (Phase 1)	30 x 20 m scatter of 9 Indigenous artifacts	Not significant
Timothy Jefferson (AgGs-237)	Within study area (Phase 1)	30 x 20 m scatter of 163 Euro-Canadian artifacts from the late 19 th and early 20 th century	Not significant
Welland Drain (AgGs-238)	Within study area (Phase 1)	7.5 x 5 m scatter of 4 Indigenous artifacts	Not significant

Site Identifier	Position	Description	Evaluation
AgGs-251	Within study area (Phase 2)	30 x 30 m scatter of 31 Indigenous artifacts	Significant
AgGs-252	Within study area (Phase 2)	40 x 30 m scatter of 35 Indigenous artifacts	Significant
AgGs-253	Within study area (Phase 2)	30 x 30 m scatter of 19 Indigenous artifacts	Significant

FS #29 was correlated with AgGs-25, FS #31 was linked with AgGs-26 and FS #32 to FS #33 were correlated with AgGs-22. No additional artifacts were found in the vicinity of MIA 8474 (AgGs-20), MIA 8476 (AgGs-22), MIA 8477 (AgGs-23), MIA 8479 (AgGs-25), MIA 8479 (AgGs-25), MIA 8480 (AgGs-26), MIA 8481 (AgGs-27) or MIA 8482 (AgGs-28) from the 1984 investigation. Similarly, there were no additional finds near AgGs-56 from the 1988–1989 investigation or TCPL 90-8 (AgGs-88) and TCPL 90-9 (AgGs-89) from the 1990–1993 investigation. The lack of finds in the vicinity of AgGs-20 and AgGs-27 led the consultants to suggest that they were improperly mapped and that they should correlate with the newly-identified AgGs-235 and AgGs-236 (cf. SD Map 2). No trace of the church along Bigger Road was encountered, and it was suggested that the construction of the railway capped or destroyed the site. The investigation involved pedestrian survey at an interval of 5 m and test pit survey at an interval of 5 m, both with intensification at an interval of 1 m (AMICK 2003:20). These methods meet current provincial standards, and reassessment is not warranted.

Stage 3 assessments were reportedly carried out at the six significant sites within the Phase 1 lands and eight of the significant sites within the Phase 2 lands. The Marion White site was not discussed in the Stage 3 section of the associated report, but it contains mapping showing test units as well as an artifact catalogue listing test unit finds; accordingly, it appears as though this site was subject to a Stage 3 assessment. The results are summarized in Table 9 (SD Map 12–SD Map 25).

Table 9: Grand Niagara Resort Site Summary (Stage 3)
(AMICK 2003:57–77)

Site Identifier	Position	Description	Evaluation
Marion White (AgGs-14)	Within study area (Phase 2)	96 test units yielded 574 Indigenous artifacts	Significant
AgGs-225	Within study area (Phase 2)	10 test units yielded 7 Indigenous artifacts	Not significant
AgGs-226	Within study area (Phase 2)	5 test units yielded 4 Indigenous artifacts	Not significant
AgGs-227	Within study area (Phase 2)	18 test units yielded 59 Indigenous artifacts	Not significant
Grassy Brook Camp 1 (AgGs-228)	Within study area (Phase 1)	9 units yielded 22 Indigenous artifacts	Not significant
James Macklem (AgGs-229)	Within study area (Phase 1)	17 units yielded 3 Indigenous artifacts and 207 Euro-Canadian artifacts	Significant (Euro-Canadian only)
Grassy Brook Camp 2 (AgGs-230)	Within study area (Phase 1)	11 test units yielded 19 Indigenous artifacts	Not significant
John Steinoff (AgGs-231)	Within study area (Phase 1)	15 test units yielded 14 Indigenous artifacts and 142 Euro-Canadian artifacts	Significant (Euro-Canadian only)
Welland River Camp (AgGs-232)	Within study area (Phase 1)	27 test units yielded 391 Indigenous artifacts	Significant
Alexander Simpson (AgGs-233)	Within study area (Phase 1)	77 test units yielded 1,097 Indigenous artifacts and 467 Euro-Canadian artifacts	Significant

Site Identifier	Position	Description	Evaluation
AgGs-234	Within study area (Phase 2)	5 test units yielded 7 Indigenous artifacts	Not significant
AgGs-251	Within study area (Phase 2)	13 test units yielded 391 Indigenous artifacts	Not significant
AgGs-252	Within study area (Phase 2)	12 test units yielded 51 Indigenous artifacts	Not significant
AgGs-253	Within study area (Phase 2)	13 test units yielded 46 Indigenous artifacts	Not significant

It was recommended that further excavations be conducted within the two clusters at the Marion White site (AgGs-14) and that the James Macklem (AgGs-229) and John Steinoff (AgGs-231) sites be subject to mechanical topsoil removal. The Welland River Camp (AgGs-232) and Alexander Simpson (AgGs-233) sites were determined to be significant, but further excavation was not recommended. Instead, the consultants stated that both sites “will be largely avoided as they will be subsumed within the 30 metre Welland River conservation setback ... the peripheral areas of these sites which will not be protected within this setback are not considered to be of such significance as to warrant further work” (AMICK 2003:82). General guidance pertaining to capping was also provided, although it was stated that this method was not preferable.

A report entitled *Stage 4 Mitigative Capping of the Welland River Camp (AgGs-232) and Alexander Simpson (AgGs-233) Sites* suggests that the deposits were capped in 2003 under Licence #P038-028. A copy of this report could not be obtained from the MCM or the consultant, and site update forms do not appear to have been submitted. A letter from N. Ferris at the former Ministry of Culture (MCL) dated August 12, 2003 provides comment on the strategy, which entailed 1) a capping layer about 50 cm in depth over the portion of each site beyond the 30 m setback plus a 10 m buffer and 2) geotextile fabric under the caps. No alterations were to occur within the restrictive setback, and it was requested that a long-term provision be adopted to “ensure the sites are not impacted in the future by changes in the golf course design or change in land use”. The associated fairway seems to traverse the 30 m setback. A letter to J. MacDonald at the former MCL dated April 22, 2005 states that “the client wishes to cap [the Marion White site]” and that “we will forward the capping strategy as soon as the plans are available”. Given the current condition of that site (i.e., within a field), it remains unclear whether capping occurred.

Additional Stage 1, 2 and 3 assessments were carried out for the western part of the Grand Niagara Resort between December 2003 and May 2004 under CIF #P038-066 (AMICK 2005). The assessed area traverses the western part of the study area (the woodlot was not surveyed). The investigation resulted in the discovery of two locations of archaeological materials: the Sorokolit site and the previously identified TCPL 90-7 site (AgGs-87). The former was reportedly registered as AgGs-358, but that Borden number is currently associated with a site located further away. The sites comprised adjacent scatters of Indigenous artifacts along Morris Road. The investigation involved pedestrian survey at an interval of 5 m with intensification at an interval of 1 m (AMICK 2005:9). These methods meet current provincial standards, and reassessment is not warranted. The Stage 3 assessments demonstrated that both sites were small and low yielding, and it was suggested that they were short-term campsites possibly dating to the Archaic period (SD Map 26–SD Map 27). Neither site was recommended for any additional assessment (AMICK 2005:14).

An addendum report was subsequently issued for the 2003/2004 investigation, which addressed concerns raised by the former MCL regarding the lack of finds in the vicinity of previously identified sites TCPL 90-5 (AgGs-85) and Cebrynski-Kneller (AgGs-86) under CIF #P038-066 (AMICK 2010). It was suggested that no artifacts were observed at these sites because they were not actually situated within the property. It seems more likely that TCPL 90-5 was simply ephemeral and that the mitigation of the Cebrynski-Kneller site in 1992 reduced its density to a degree that made it extremely difficult to locate via pedestrian survey.

In July 2004, Stage 4 excavations of the John Steinhoff site (AgGs-231) and James Macklem site (AgGs-229) were carried out under CIF #P058-021 (AMICK 2004). Both deposits were subject to mechanical topsoil removal, and no additional artifacts or subsurface cultural features were identified (SD Map 28–SD Map 29). The sites were fully excavated and were not recommended for any additional assessment (AMICK 2004:17).

1.3.3.5 Niagara Potential Development Sites (Stage 1)

In August 2012, a Stage 1 assessment was carried out for nine potential development sites under PIF #P018-405-2012 (NDA 2012). The assessed area abuts the southern edge of the study area and is located within 50 m of the eastern edge of the study area. The investigation resulted in the identification of areas of archaeological potential within all nine sites, and it was recommended that a Stage 2 assessment be required for the preferred location (NDA 2012:7).

1.3.3.6 Hospital Development (Stage 2–3)

In March 2013, a Stage 2 assessment was carried out for a proposed hospital development under PIF #P017-260-2012 (DCL 2016a). The assessed area abuts the southeastern part of the study area. The investigation resulted in the discovery of seven locations of archaeological materials: P1–P2 and H1–H3 and H5. H1 and H3 were reportedly designated as the Burns site (AgGs-376) and Wilkins site (AgGs-375), respectively, although the former is not currently registered. No acknowledgements or site correlations were made with the results of the 1984 investigation, and no trace of AgGs-19 was observed (which comprised 107 Indigenous artifacts). Only H1 and H3 were found to be of further CHVI and required additional assessment (DCL 2016a:17).

The Stage 3 assessments were conducted in June 2013 under PIF #P017-270-2013. H1 was interpreted as the remains of the Burns occupation from ca. 1866–1887 and was found to have no further CHVI. H3 was determined to date from ca. 1821–1881 and was linked with the Wilkins occupation. This site was found to have further CHVI. Small Indigenous components were also encountered at both sites. It was recommended that H1 required no additional assessment and that H3 (AgGs-375) be subject to Stage 4 excavation (DCL 2016a:30–31). The site was mitigated in May 2016 under PIF #P017-0478-2016 (DCL 2016b).

2.0 STAGE 1 BACKGROUND STUDY

2.1 Background

The Stage 1 assessment involved background research to document the geography, history, previous archaeological fieldwork and current land condition of the study area. This desktop examination included research from archival sources, archaeological publications and online databases. It also included the analysis of a variety of historical maps and aerial imagery. The results of the research conducted for the background study are summarized below.

With occupation beginning approximately 11,000 years ago, the greater vicinity of the study area comprises a complex chronology of Pre-Contact and Post-Contact histories (Section 1.2.1). Artifacts associated with Palaeo, Archaic, Woodland and Early Contact traditions are well-attested in the City of Niagara Falls, and Euro-Canadian archaeological sites dating to pre-1900 and post-1900 contexts are likewise common. The presence of 115 previously identified sites in the surrounding area demonstrates the desirability of this locality for early settlement (Section 1.3.2). The investigation confirmed that 96 of these sites fall within the subject lands. Background research identified multiple areas of previous assessment within the study area (Section 1.3.3).

The natural environment of the study area would have been attractive to both Indigenous and Euro-Canadian populations as a result of proximity to the Welland River, Grassy Brook Creek and a tributary of Lyons Creek. The areas of Cashel, Niagara and Ontario soils would have been ideal for agriculture, and the diverse local vegetation would also have encouraged settlement throughout Ontario's lengthy history. Euro-Canadian populations would have been particularly drawn to the adjacent historical thoroughfares and the Canada Southern Railway.

In summary, the background study included an up-to-date listing of sites from the Ontario Archaeological Sites Database (within at least a 1 km radius), the consideration of previous local archaeological fieldwork (within at least a 50 m radius), the analysis of historical maps (at the most detailed scale available) and the study of aerial imagery. A review of an archaeological management plan was also carried out. ARA therefore confirms that the standards for background research set out in Section 1.1 of the 2011 *S&Gs* were met.

2.2 Field Methods (Property Inspection)

In order to gain first-hand knowledge of the geography, topography and current condition of the study area, a property inspection was conducted on November 17, 2021. Environmental conditions were ideal during the inspection, with partly cloudy skies, moderate lighting and a temperature of 15 °C. ARA therefore confirms that fieldwork was carried out under weather and lighting conditions that met the requirements set out in Section 1.2 Standard 2 of the 2011 *S&Gs*.

The study area was subjected to random spot-checking. Specifically, the inspection began in the west and continued to the east in a counter-clockwise manner. The inspection confirmed that all surficial features of archaeological potential were present where they were previously identified and did not result in the identification of any additional features of archaeological potential not visible on mapping (e.g., relic water channels, patches of well-drained soils, etc.).

The inspection determined that parts of the study area were disturbed by past construction activities. No natural features (e.g., permanently wet lands, sloped lands, overgrown vegetation, heavier soils than expected, etc.) or significant built features (e.g., heritage structures, landscapes, plaques, monuments, cemeteries, etc.) that would affect assessment strategies were identified.

2.3 Analysis and Conclusions

In addition to relevant historical sources and the results of past archaeological assessments, the archaeological potential of a property can be assessed using its soils, hydrology and landforms as considerations. Section 1.3.1 of the 2011 *S&Gs* recognizes the following features or characteristics as indicators of archaeological potential: previously identified sites, water sources (past and present), elevated topography, pockets of well-drained sandy soil, distinctive land formations, resource areas, areas of Euro-Canadian settlement, early transportation routes, listed or designated properties, historic landmarks or sites, and areas that local histories or informants have identified with possible sites, events, activities or occupations.

The Stage 1 assessment resulted in the identification of numerous features of archaeological potential in the vicinity of the study area (Map 13; SD Map 30–SD Map 32). The closest and most relevant indicators of archaeological potential (i.e., those that would affect survey interval requirements) include multiple previously identified sites (e.g., AgGs-14, AgGs-233, AgGs-235 and AgGs-236), three primary water sources (the Welland River, Grassy Brook Creek and a tributary of Lyons Creek), multiple secondary water sources (e.g., parts of the Lower Grassy Brook Wetland Provincial Swamp, Lyons Creek North Wetland Provincial Swamp and Welland River East Wetland Provincial Swamp), one historical railway (Canada Southern Railway), multiple historical roadways (e.g., Biggar Road and Crowland Avenue) and multiple historical structure localities (late 19th-century farmhouses and one church).

Background research did not identify any features indicating that the study area has potential for deeply buried archaeological resources. According to the historical settlement map from 1878, the Church of the United Brethren in Christ was not associated with a cemetery. A previous assessment determined that “it seems very likely that the construction of the existing CPR embankment has either capped or obliterated this site” (AMICK 2003:19). This area was not recommended for further assessment using either surficial or deeply buried survey methods, and ARA concurs.

Although proximity to a feature of archaeological potential is a significant factor in the potential modelling process, current land conditions must also be considered. Section 1.3.2 of the 2011 *S&Gs* emphasizes that 1) quarrying, 2) major landscaping involving grading below topsoil, 3) building footprints and 4) sewage/infrastructure development can result in the removal of archaeological potential, and Section 2.1 states that 1) permanently wet areas, 2) exposed bedrock and 3) steep slopes (> 20°) in areas unlikely to contain pictographs or petroglyphs can also be evaluated as having no or low archaeological potential. Areas previously assessed and not recommended for further work also require no further assessment.

The Regional Municipality of Niagara’s *Archaeological Management Plan* indicates that the majority of the study area has archaeological potential (Map 11). However, this modelling was not the result of a property-specific assessment and therefore does not fully account for land-use history and current conditions.

A total of 96 known locations of archaeological materials were identified within the study area, the majority of which were found to be of no further CHVI. Seven sites that were recommended for additional assessment or capping fall within the subject lands, all of which must be considered to have further CHVI until they can be empirically evaluated. These include AgGs-14, AgGs-20, AgGs-24, AgGs-27, AgGs-88, AgGs-232 and AgGs-233. Although AgGs-19 was previously reported within adjacent lands and found to be of further CHVI, no trace of this deposit was identified during the survey of the area in 2013 (DCL 2016a). The lack of finds is not specifically addressed in the report, but the areas beyond H3 (AgGs-375) were not recommended for additional assessment and the parcel appears to have been cleared for development (DCL 2016b). The test pit survey of the adjacent lands along the tributary of Lyons Creek (a physical constraint) in 2001/02 did not result in the discovery of any associated archaeological resources (AMICK 2003). AgGs-19 therefore does not represent a concern for the project.

Multiple previously assessed areas of no further concern were also identified within the study area, the majority of which do not warrant additional assessment. All of the areas subject to earlier surveys were re-surveyed in 2001/02 or 2003/04 using current field methods, including pedestrian and test pit survey at an interval of 5 m with intensification at an interval of 1 m (AMICK 2003, 2005, 2010). The environs of the seven sites of further CHVI must be reinvestigated.

ARA's visual inspection, coupled with the analysis of historical sources and digital environmental data, resulted in the identification of multiple areas of no archaeological potential within the portions of the study area not previously assessed. Specifically, deep land alterations have resulted in the removal of archaeological potential from residential building footprints and driveways along Grassy Brook Road and Crowland Avenue/Grand Niagara Drive, the raised roadway platforms for Morris Road and Crowland Avenue/Grand Niagara Drive as well as the railway bed for the former Canada Southern Railway (Image 1–Image 12). These areas have clearly been impacted by past earth-moving/construction activities, resulting in the disturbance of the original soils to a significant depth and severe damage to the integrity of any archaeological resources.

The remaining unassessed lands have potential for Indigenous and Euro-Canadian archaeological materials or require test pit survey to confirm that they have no archaeological potential. The areas of archaeological potential include lawns and/or old pasture around the documented residences and a variety of overgrown and wooded areas (Image 13–Image 22). It seems likely that the lands adjacent to the railway bed and along a path north of Grassy Brook Road were previously impacted, but this could not be verified based on the inspection alone. Similarly, lands within the Morris Road Environmental Protection Area in the southwest and along Grassy Brook Creek within a residential property in the northeast could be permanently wet. These lands have been categorized as areas of archaeological potential and must be empirically tested to confirm that they have no archaeological potential. All of the agricultural lands within the study area have been previously surveyed using appropriate methods (i.e., pedestrian survey at an interval of 5 m).

In summary, the Stage 1 assessment determined that the study area comprises a mixture of areas of archaeological potential, areas of no archaeological potential, previously assessed lands of further concern and previously assessed lands of no further concern. The potential modelling results are presented in Map 14–Map 16. The limits of the study area, application boundary and additional lands are depicted as layers in these maps.

3.0 RECOMMENDATIONS

The Stage 1 assessment determined that the study area comprises a mixture of areas of archaeological potential, areas of no archaeological potential, previously assessed lands of further concern and previously assessed lands of no further concern. A total of 96 known locations of archaeological materials were identified within the study area, the majority of which were found to be of no further CHVI. Seven sites that were recommended for additional assessment or capping fall within the study area, all of which must be considered to have further CHVI until they can be empirically evaluated. The recommendations for the application boundary and the additional lands are outlined below (SD Map 33–SD Map 34).

Application Boundary

Regarding the area to be subdivided, it is recommended that the identified areas of archaeological potential be subject to a Stage 2 assessment in accordance with Section 2.1 of the 2011 *S&Gs*. These include a narrow corridor north of Grassy Brook Road, part of a residential property south of Grassy Brook Road and part of the railway crossing. The application boundary also contains five sites of further CHVI: AgGs-20, AgGs-24, AgGs-27, AgGs-232 and AgGs-233. Given that the environs of AgGs-20, AgGs-27, AgGs-232 and AgGs-233 were developed into a golf course ca. 2005, their level of preservation remains unclear. It is recommended that these sites be subject to an additional Stage 2 assessment to confirm that they still have CHVI. AgGs-24 falls within agricultural lands and must be subject to a Stage 3 assessment in accordance with the requirements set out in Section 3.2, Section 3.2.2 and Section 3.2.3 of the 2011 *S&Gs*. A controlled surface pick-up (CSP) is required in advance of test unit excavation. Further work is therefore required within the application boundary.

The areas of archaeological potential must be assessed using the test pit survey method. A survey interval of 5 m will be required due to the proximity of the lands to the identified features of archaeological potential. Given the likelihood that the lands around the railway crossing and the pathway north of Grassy Brook Road were previously impacted, a combination of visual inspection and test pit survey should be utilized to confirm the extent of disturbance in accordance with Section 2.1.8 of the 2011 *S&Gs*. This will allow for the empirical evaluation of the integrity of the soils and the depth of any impacts. Judgemental test pit survey should similarly be carried out to confirm the extents of possible permanently wet areas in the southern part of the residential property south of Grassy Brook Road. If these areas are determined to have archaeological potential, then a test pit survey interval of 5 m must be maintained.

Each test pit must be excavated into at least the first 5 cm of subsoil, and the resultant pits must be examined for stratigraphy, potential features and/or evidence of fill. The soil from each test pit must be screened through mesh with an aperture of no greater than 6 mm and examined for archaeological materials. If archaeological materials are encountered, all positive test pits must be documented, and intensification may be required.

Regarding AgGs-20, AgGs-27, AgGs-232 and AgGs-233, it is recommended that the previously reported locations plus a 20 m buffer be subject to test pit survey at an interval of 5 m to determine their current extents. A small number of one-metre test units should then be excavated across each deposit to confirm the subsurface conditions (i.e., capped, disturbed, intact, etc.). Specific Stage 3 strategies for these sites must await the results of the additional Stage 2 assessment, as it remains unclear whether they would require some form of deeply buried assessment.

An appropriate assessment method for AgGs-24 would comprise test unit excavation using the strategy set out in Table 3.1, Numbers 1 and 2 of the 2011 *S&Gs*. This would involve the excavation of grid test units at a 5 m interval across the site extent and additional test units amounting to at least 20% of the grid unit total in areas of interest.

All test units must be excavated stratigraphically into at least the first 5 cm of subsoil, and all soils must be screened through mesh with an aperture of no greater than 6 mm. If a potential cultural feature is uncovered, the exposed plan of the feature must be recorded, and geotextile fabric must be placed over the unit floor prior to backfilling. Section 3.2.2 Guideline 3 of the 2011 *S&Gs* states that exposed cultural features may be excavated during a Stage 3 assessment if the information is required to inform a recommendation for or against Stage 4 mitigation of development impacts.

Additional Lands

Multiple areas of archaeological potential were identified within the lands west of Crowland Avenue owned by another party (per agreement with the landowner, Empire is permitted to complete the restoration works on those lands in the future) and the remaining parts of the pipeline easement, utility corridor and railway corridor. These include part of a residential property south of Grassy Brook Road, part of another residential property west of Crowland Avenue, parts of the railway corridor and a wooded area in the southwest. The additional lands also contain two sites of further CHVI: AgGs-14 and AgGs-88. These areas of further archaeological concern will not be impacted by the subdivision development and do not require further assessment as part of that application. Since the ecological restoration areas within the additional lands do not traverse any areas of further archaeological concern, further assessment is not required at this time.

Although these lands do not require additional assessment as part of the Grand Niagara Project, appropriate next steps must be articulated so that assessment can occur in advance of any future ground alterations or development. If impacts are contemplated, the identified areas of archaeological potential would require a Stage 2 assessment in accordance with Section 2.1 of the 2011 *S&Gs*. AgGs-88 would require a Stage 3 assessment in accordance with the requirements set out in Section 3.2, Section 3.2.2 and Section 3.2.3 of the 2011 *S&Gs*, and a CSP would be needed in advance of test unit excavation. AgGs-14 would need to be subject to Stage 4 excavation in accordance with the requirements set out in Section 4.2.1, Section 4.2.2 and Section 4.3 of the 2011 *S&Gs*. For planning purposes, a 20 m protective buffer should be observed around each site.

The areas of archaeological potential would need to be assessed using the test pit survey method. A survey interval of 5 m would be required due to the proximity of the lands to the identified features of archaeological potential. Given the likelihood that the remainder of the railway corridor was previously impacted, a combination of visual inspection and test pit survey should be utilized

to confirm the extent of disturbance in accordance with Section 2.1.8 of the 2011 *S&Gs*. Judgemental test pit survey should similarly be carried out to confirm the extents of a possible permanently wet area in the southwest. If these areas are determined to have archaeological potential, then a test pit survey interval of 5 m must be maintained.

An appropriate assessment method for AgGs-88 would comprise test unit excavation using the strategy set out in Table 3.1, Numbers 1 and 2 of the 2011 *S&Gs*. This would involve the excavation of grid test units at a 5 m interval across the site extent and additional test units amounting to at least 20% of the grid unit total in areas of interest. As an Early Archaic site in heavy soils, the entire contents of at least 10% of the total number of units at AgGs-88 must be screened through mesh with an aperture of no greater than 3 mm.

The Stage 4 excavation of AgGs-14 would require hand excavation within the core of the site. This must consist of block excavation around all high yielding units, which are defined as those with yields of 10 or more Indigenous artifacts and those that contain at least 2 formal tools, diagnostics artifacts, fire-cracked rock, bone or burnt artifacts. Block excavation must be continued until all high yielding units have been documented. The excavation must also include additional testing in a 5 m buffer zone beyond the limit of block excavation, if not already tested during the Stage 3 assessment, and must extend at least 2 m beyond any Indigenous cultural features.

Cultural features must be documented in accordance with Section 4.2.1 Standard 7, Section 4.2.1 Standard 9 and Section 4.2.2 Standard 7 of the 2011 *S&Gs*. Specifically, 1) the exposed subsoil surfaces must be shovel shined to aid in identifying any subsurface remains, 2) features must be completely exposed prior to excavation, 3) features must be excavated by hand, 4) ghost features must be documented through piece-plotting of artifact concentrations and 5) features must be documented with photographs and drawings, including plans and profiles with scales and north orientation. All units and features must be stratigraphically excavated into at least the first 5 cm of subsoil, and all soils must be screened through mesh with an aperture of no greater than 6 mm.

4.0 ADVICE ON COMPLIANCE WITH LEGISLATION

Section 7.5.9 of the 2011 *S&Gs* requires that the following information be provided for the benefit of the proponent and approval authority in the land use planning and development process:

- This report is submitted to the Minister of Citizenship and Multiculturalism 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 MCM, 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 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 Section 48 (1) of the *Ontario Heritage Act*.
- 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.
- 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 at the Ministry of Public and Business Service Delivery.

5.0 IMAGES



Image 1: Disturbed Lands
(November 17, 2021; Facing Southwest)



Image 2: Disturbed Lands
(November 17, 2021; Facing Southeast)



Image 3: Disturbed Lands
(November 17, 2021; Facing South)



Image 4: Disturbed Lands
(November 17, 2021; Facing Northeast)



Image 5: Disturbed Lands
(November 17, 2021; Facing South)



Image 6: Disturbed Lands
(November 17, 2021; Facing Southwest)



Image 7: Disturbed Lands
(November 17, 2021; Facing Southwest)



Image 8: Disturbed Lands
(November 17, 2021; Facing Southwest)



Image 9: Disturbed Lands
(November 17, 2021; Facing Southeast)



Image 10: Disturbed Lands
(November 17, 2021; Facing Southeast)



Image 11: Disturbed Lands
(November 17, 2021; Facing East)



Image 12: Disturbed Lands
(November 17, 2021; Facing South)



Image 13: Area of Potential
(November 17, 2021; Facing Southeast)



Image 14: Area of Potential
(November 17, 2021; Facing Southwest)



Image 15: Area of Potential
(November 17, 2021; Facing Northeast)



Image 16: Area of Potential
(November 17, 2021; Facing North)



Image 17: Area of Potential
(November 17, 2021; Facing West)



Image 18: Area of Potential
(November 17, 2021; Facing West)



Image 19: Area of Potential
(November 17, 2021; Facing Southwest)



Image 20: Area of Potential
(November 17, 2021; Facing Southeast)

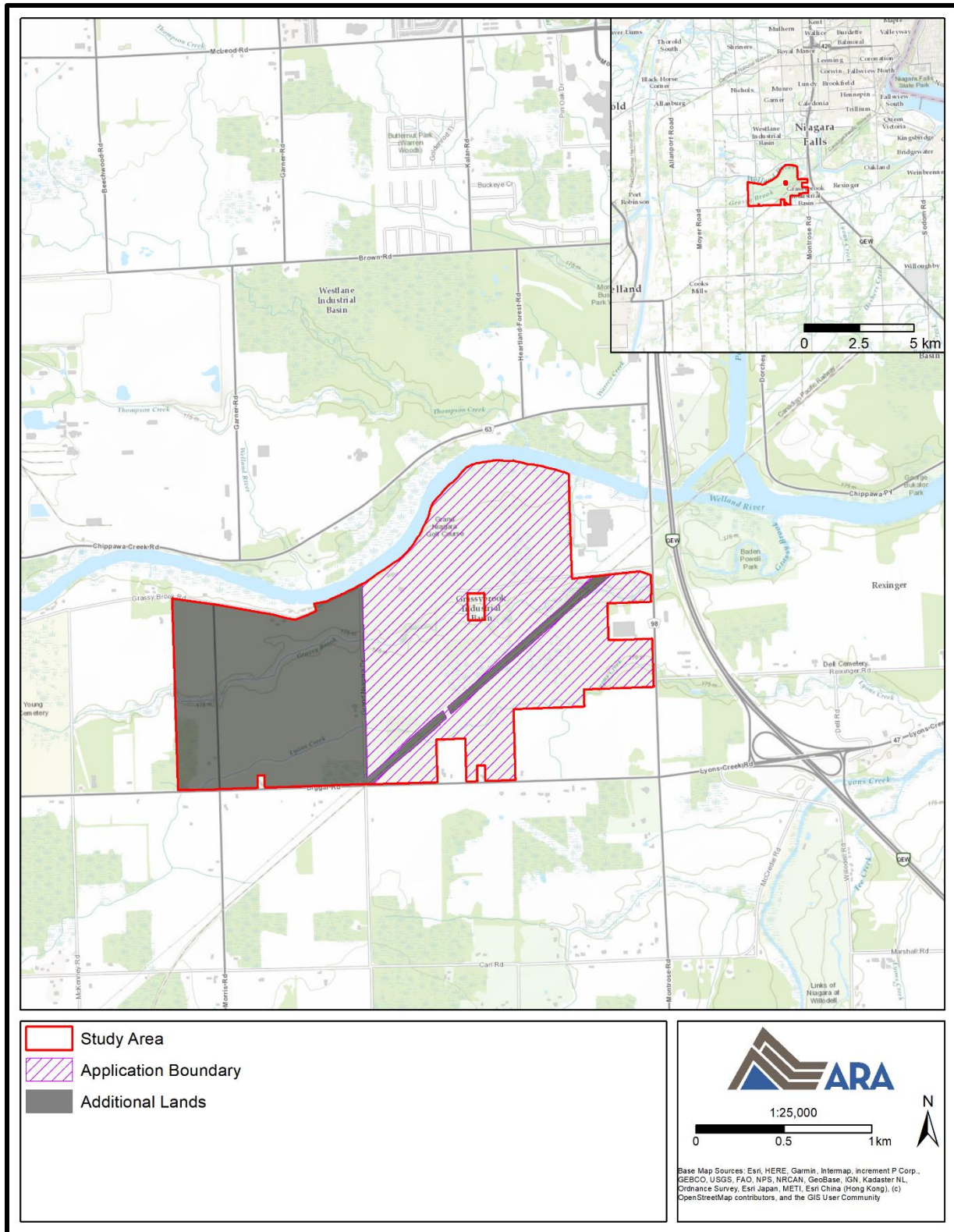


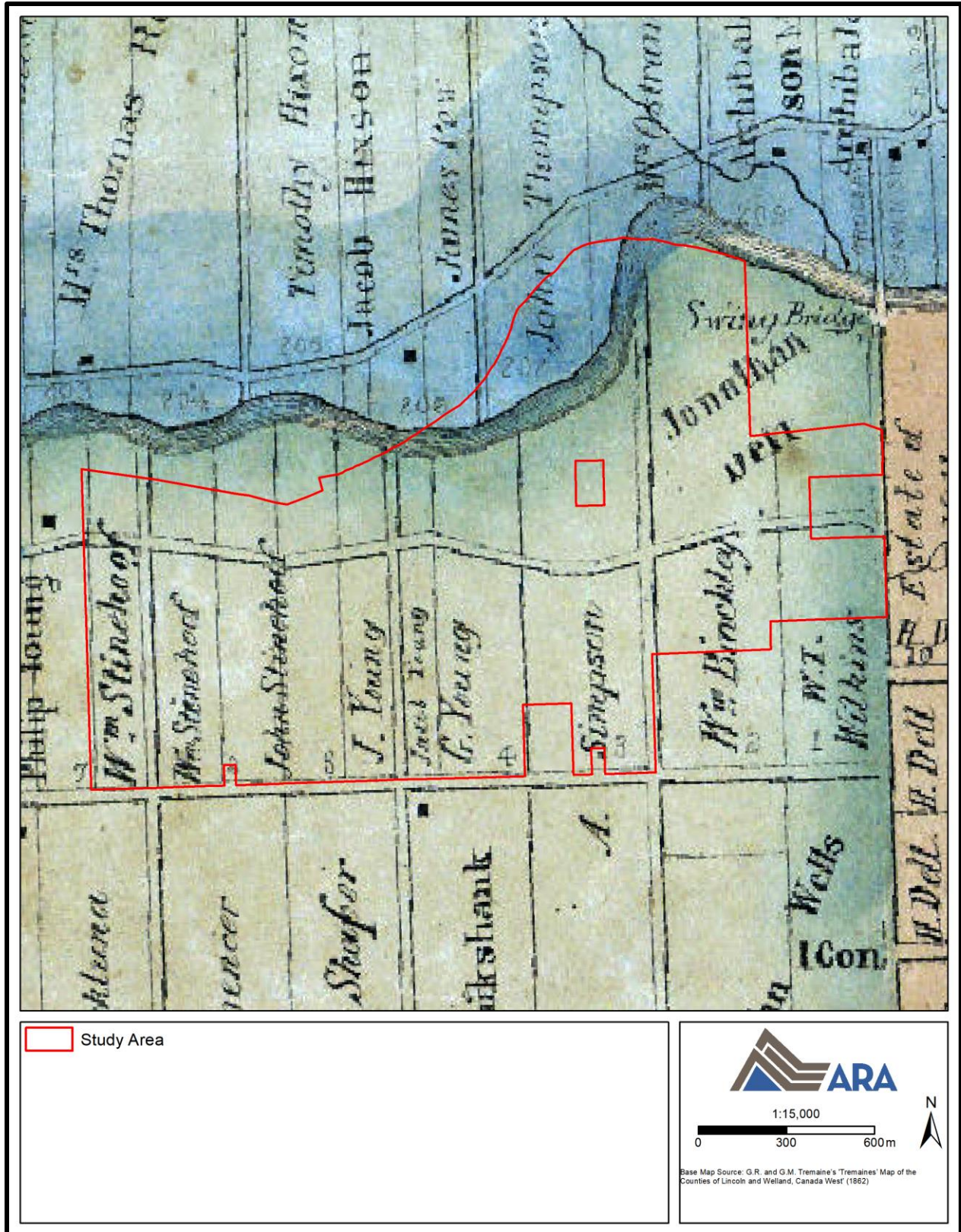
Image 21: Area of Potential
(November 17, 2021; Facing North)



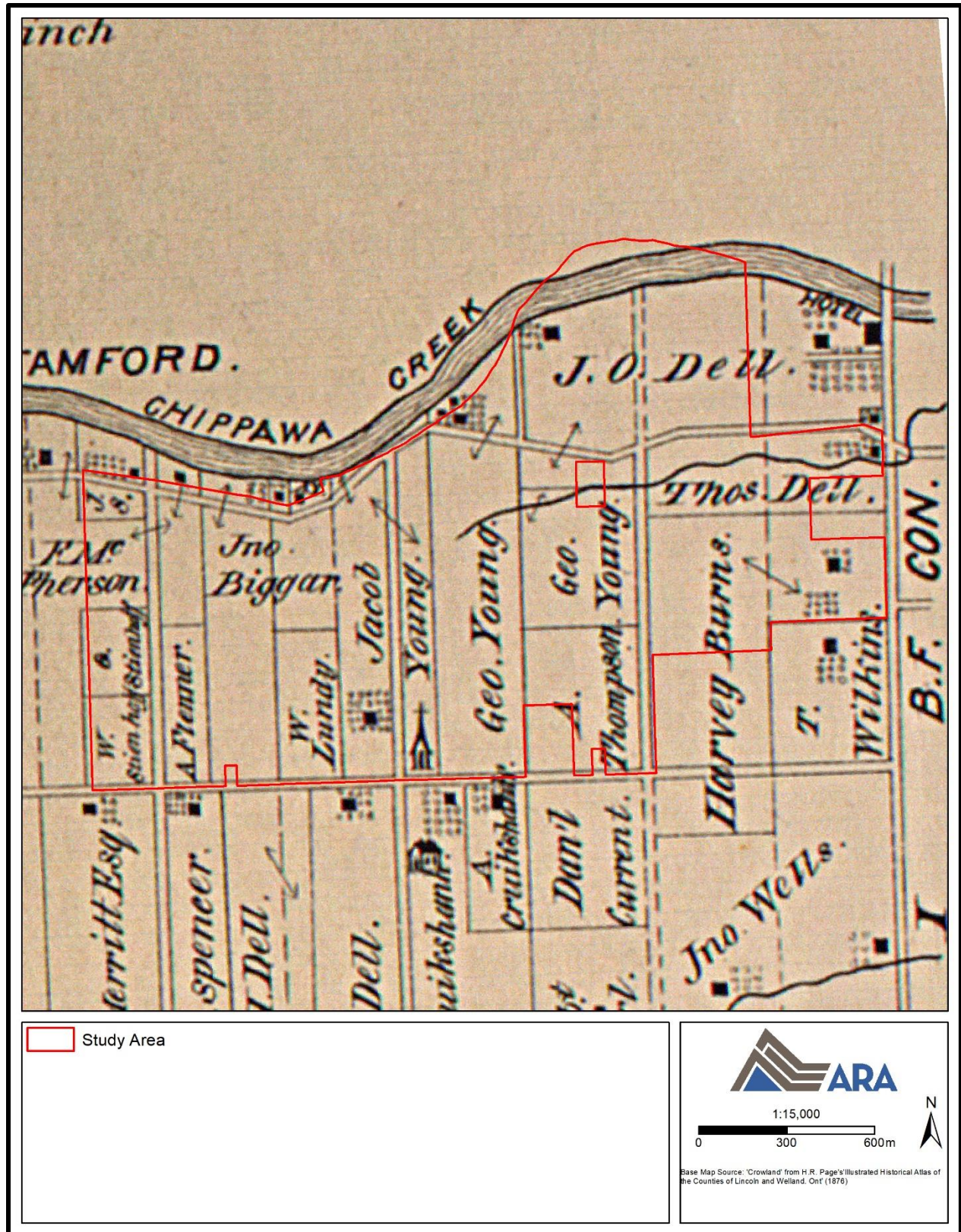
Image 22: Area of Potential
(November 17, 2021; Facing South)

6.0 MAPS

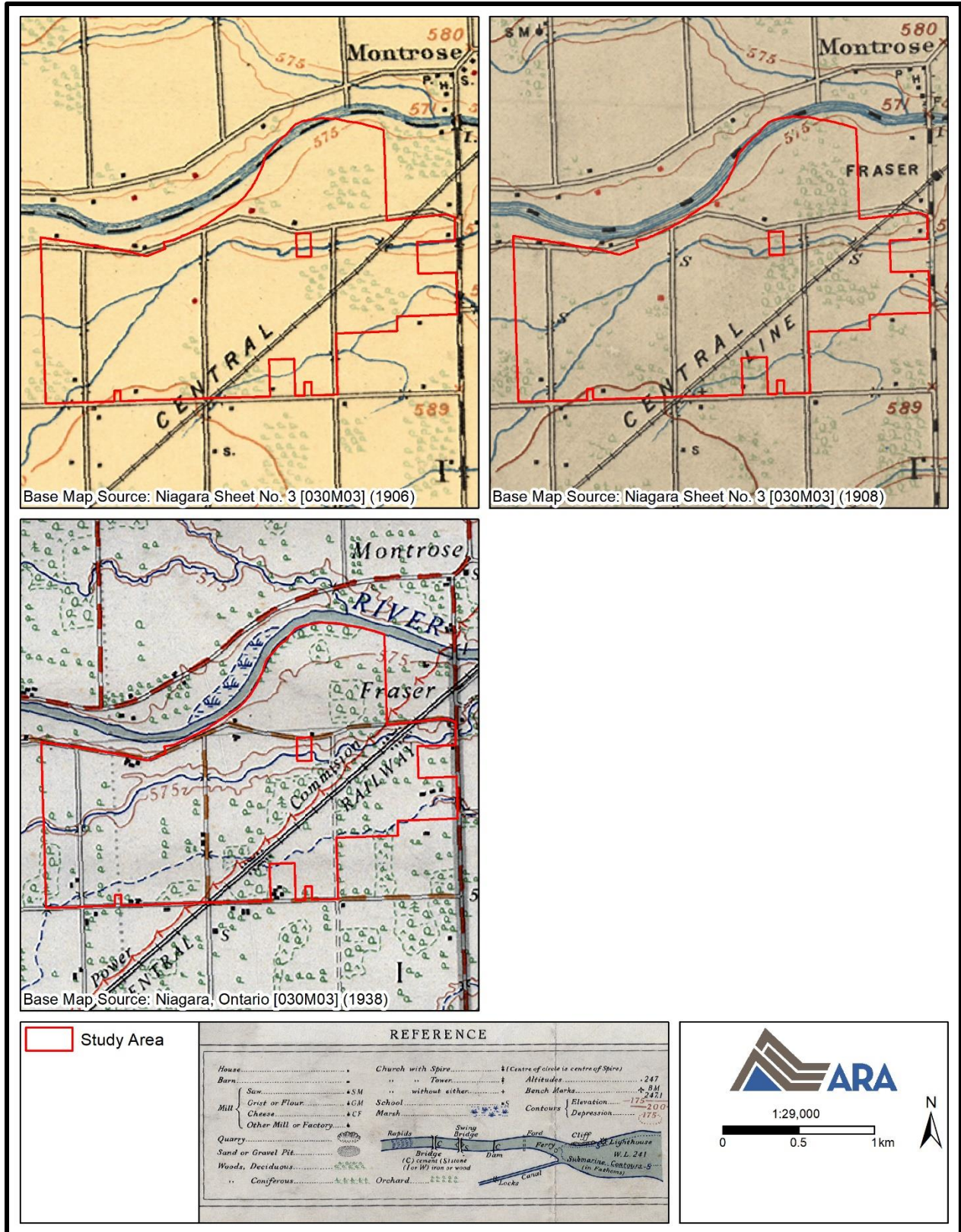




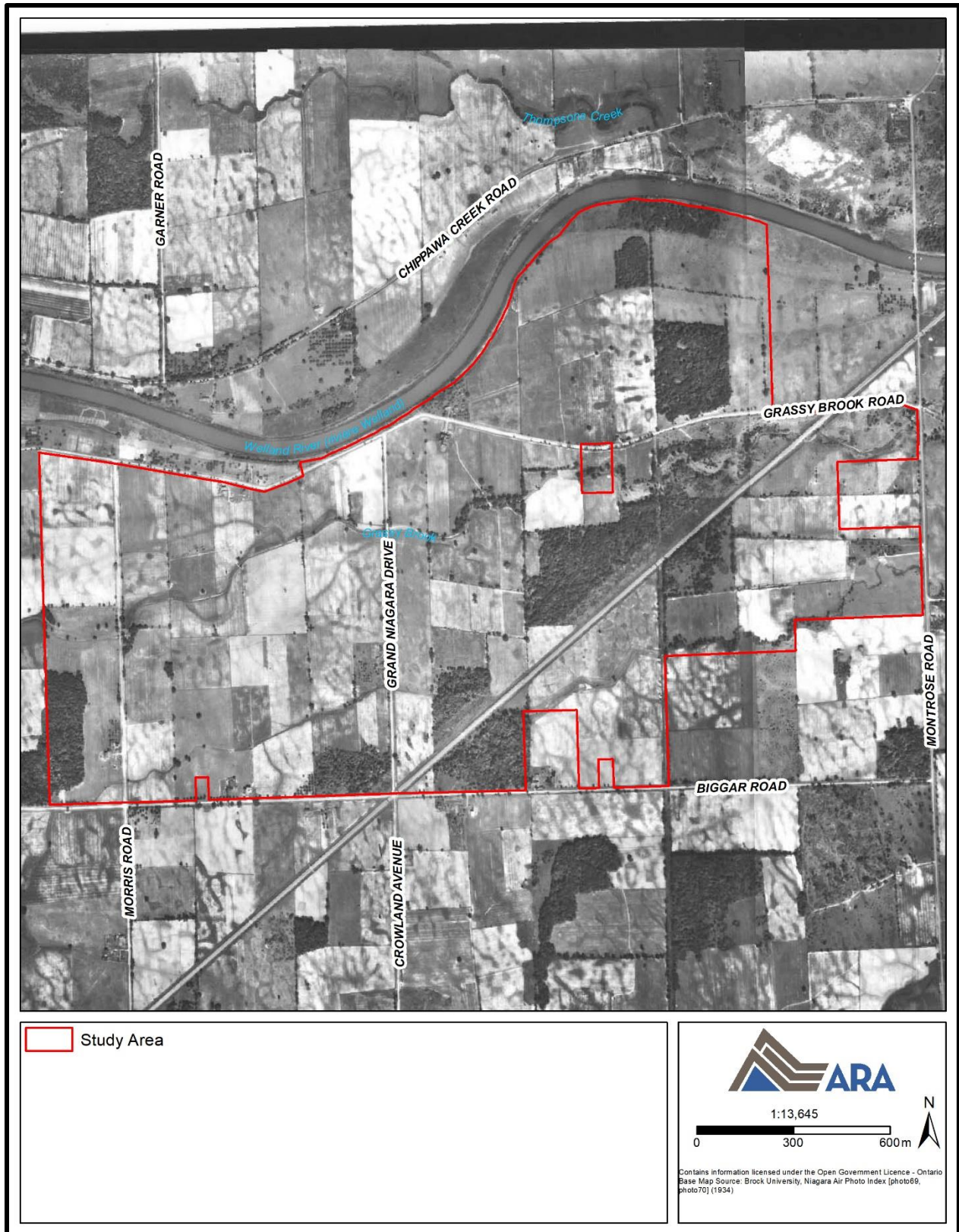
Map 2: Tremaines' Map of the Counties of Lincoln and Welland, Canada West (1862)
(Produced under licence using ArcGIS® software by Esri, © Esri; OHCMP 2019)



Map 3: Illustrated Historical Atlas of the Counties of Lincoln & Welland, Ont. (1876)
(Produced under licence using ArcGIS® software by Esri, © Esri; MU 2001)



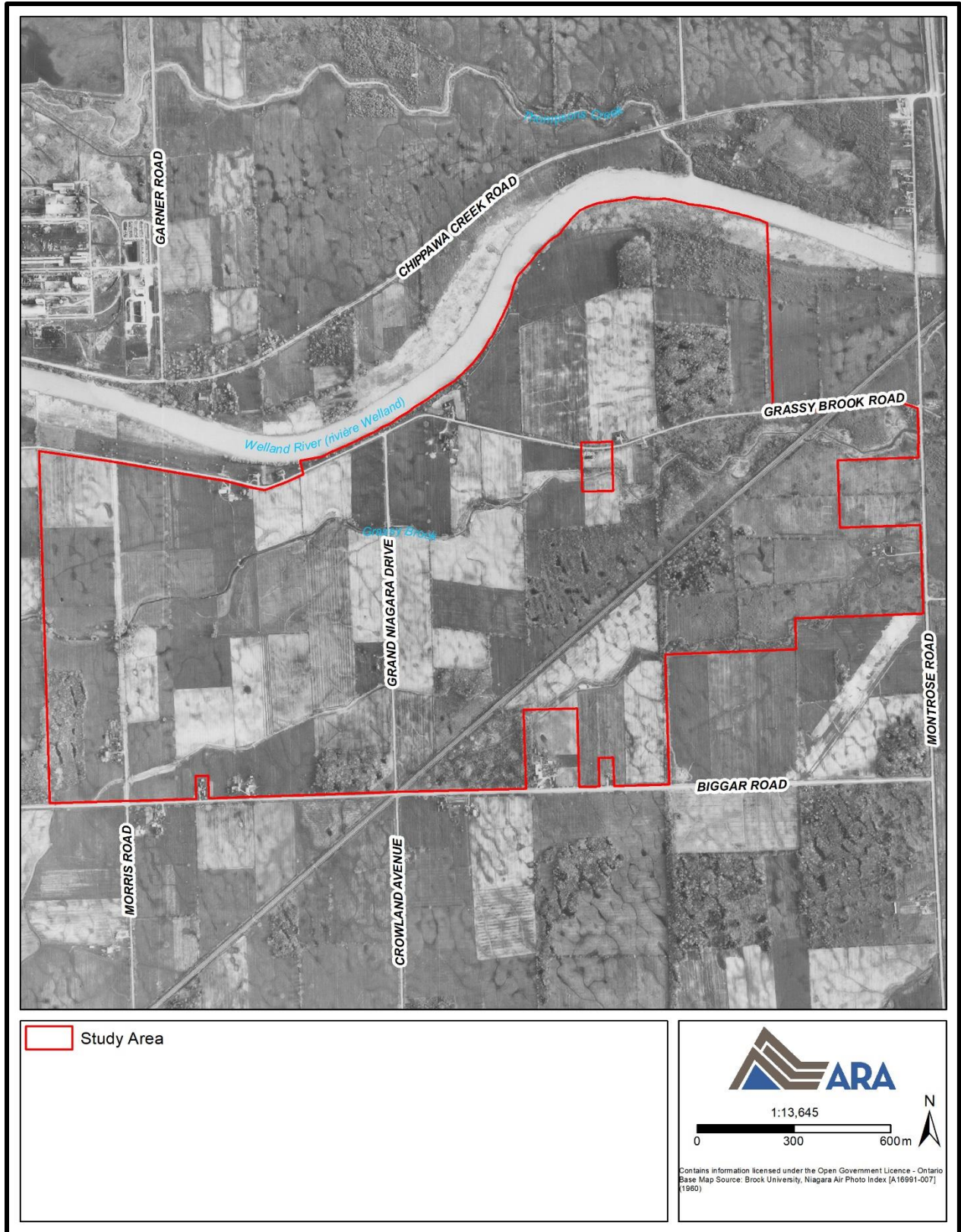
Map 4: Topographic Maps (1906, 1908 and 1938)
 (Produced under licence using ArcGIS® software by Esri, © Esri; OCUL 2022)

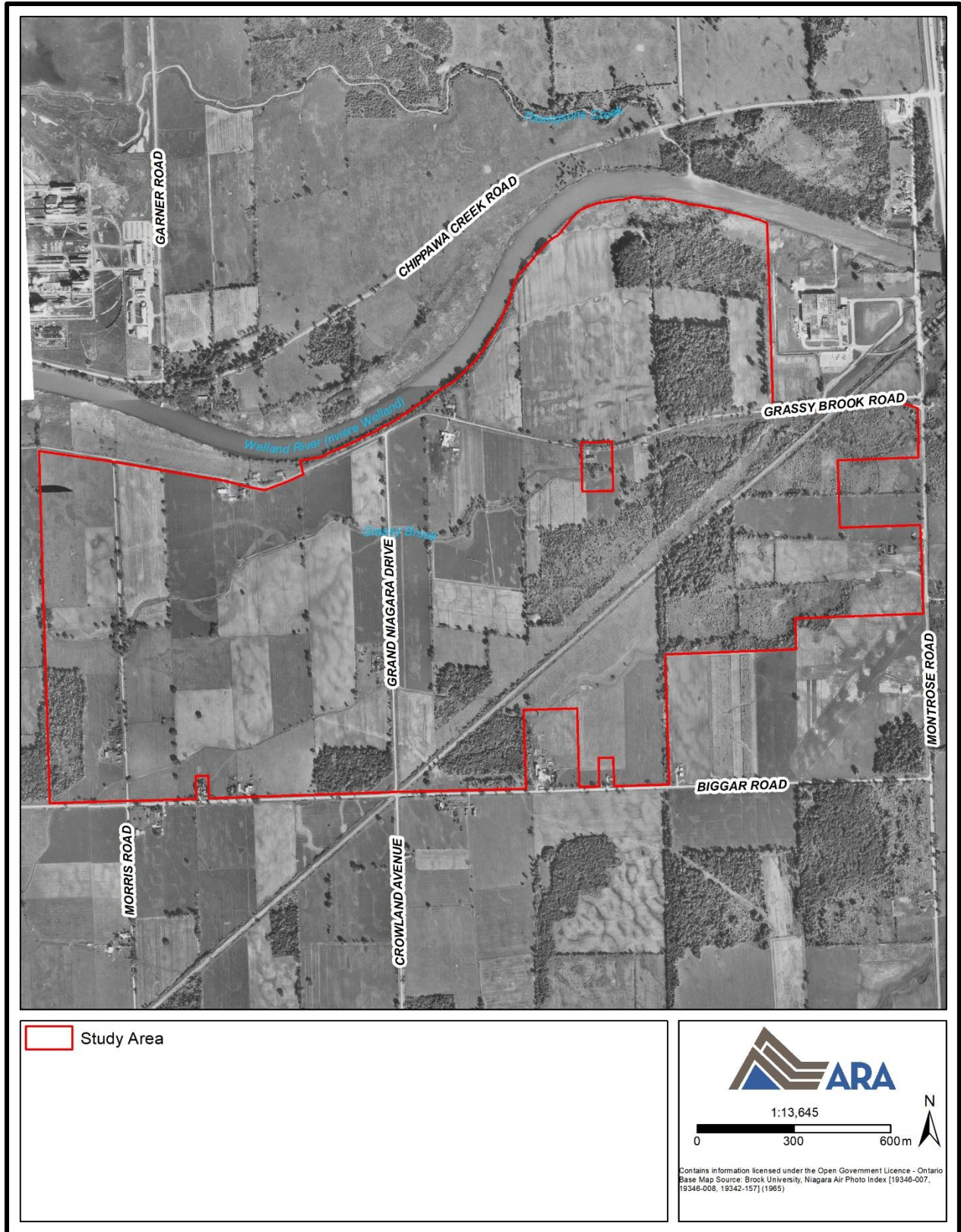


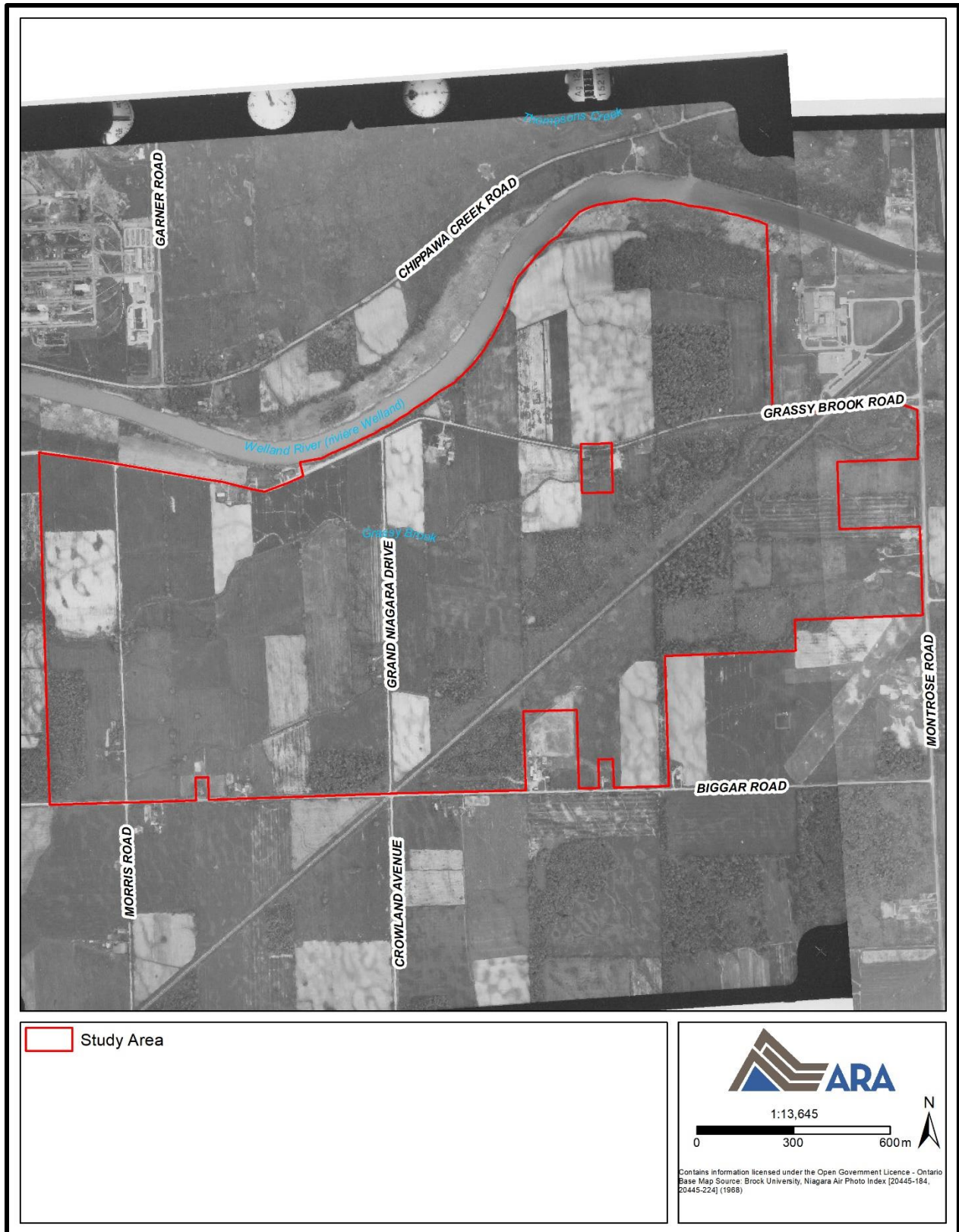
Map 5: Aerial Image (1934)
(Produced under licence using ArcGIS® software by Esri, © Esri; BU 2022)

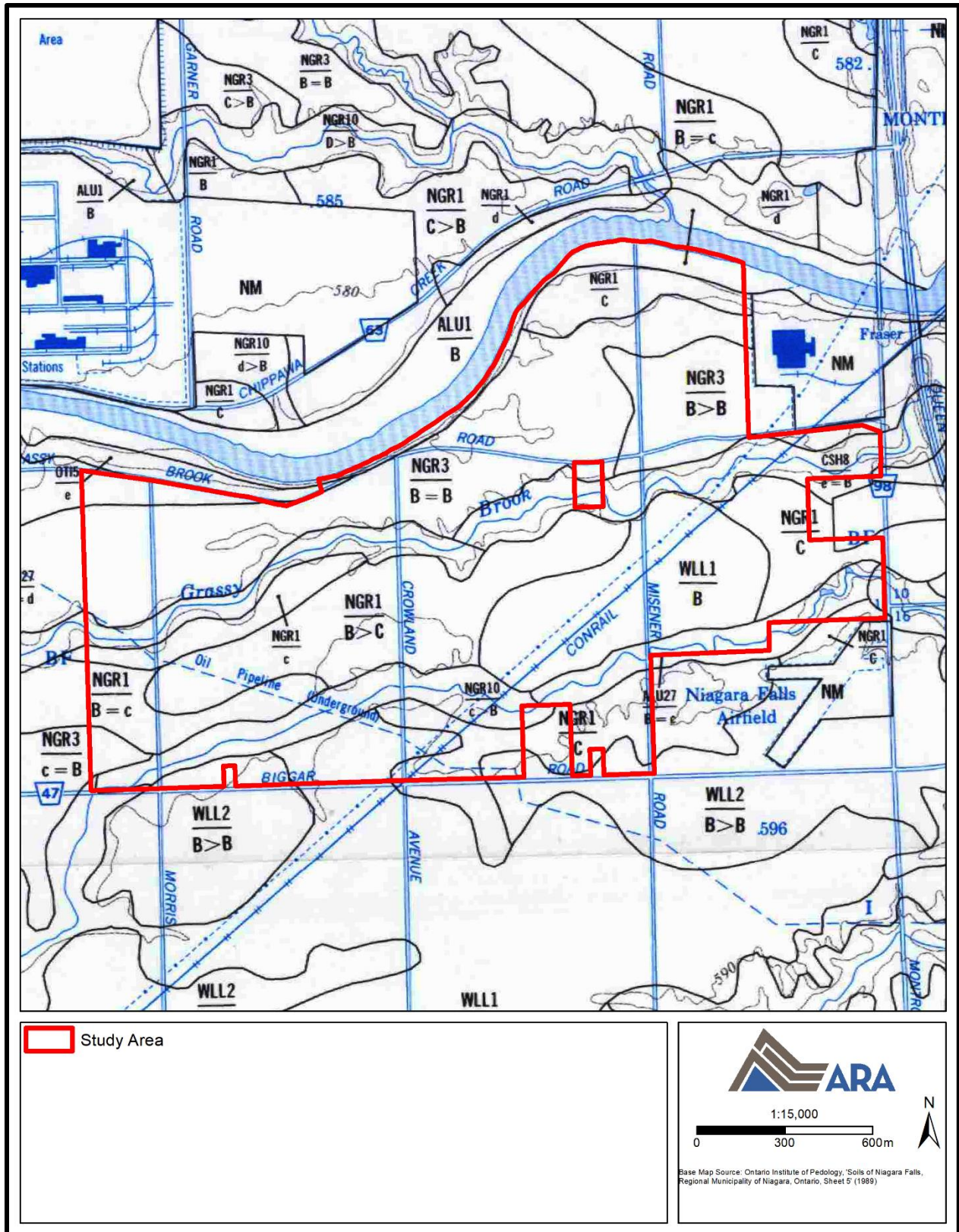


Map 6: Aerial Image (1954)
(Produced under licence using ArcGIS® software by Esri, © Esri; BU 2022)



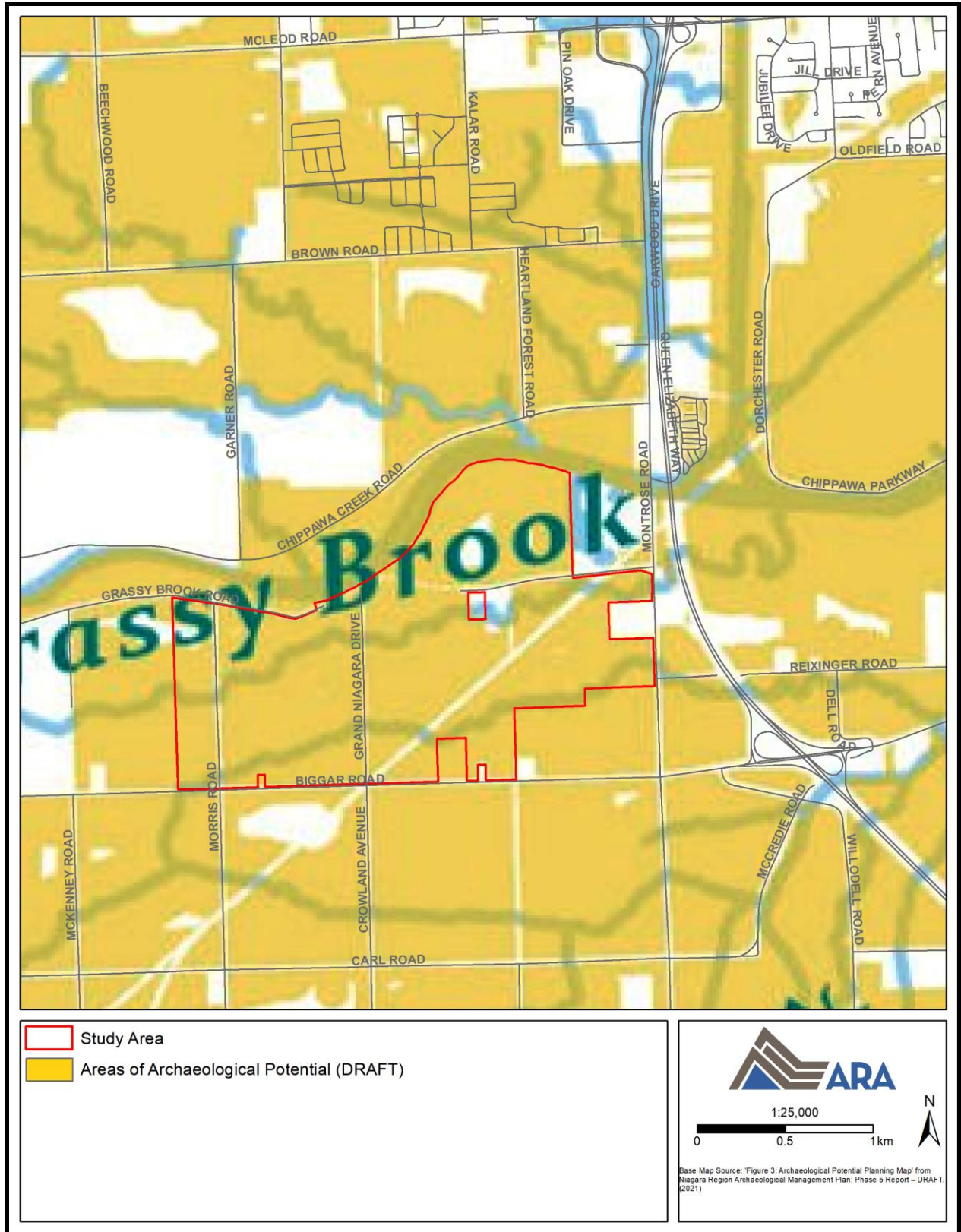




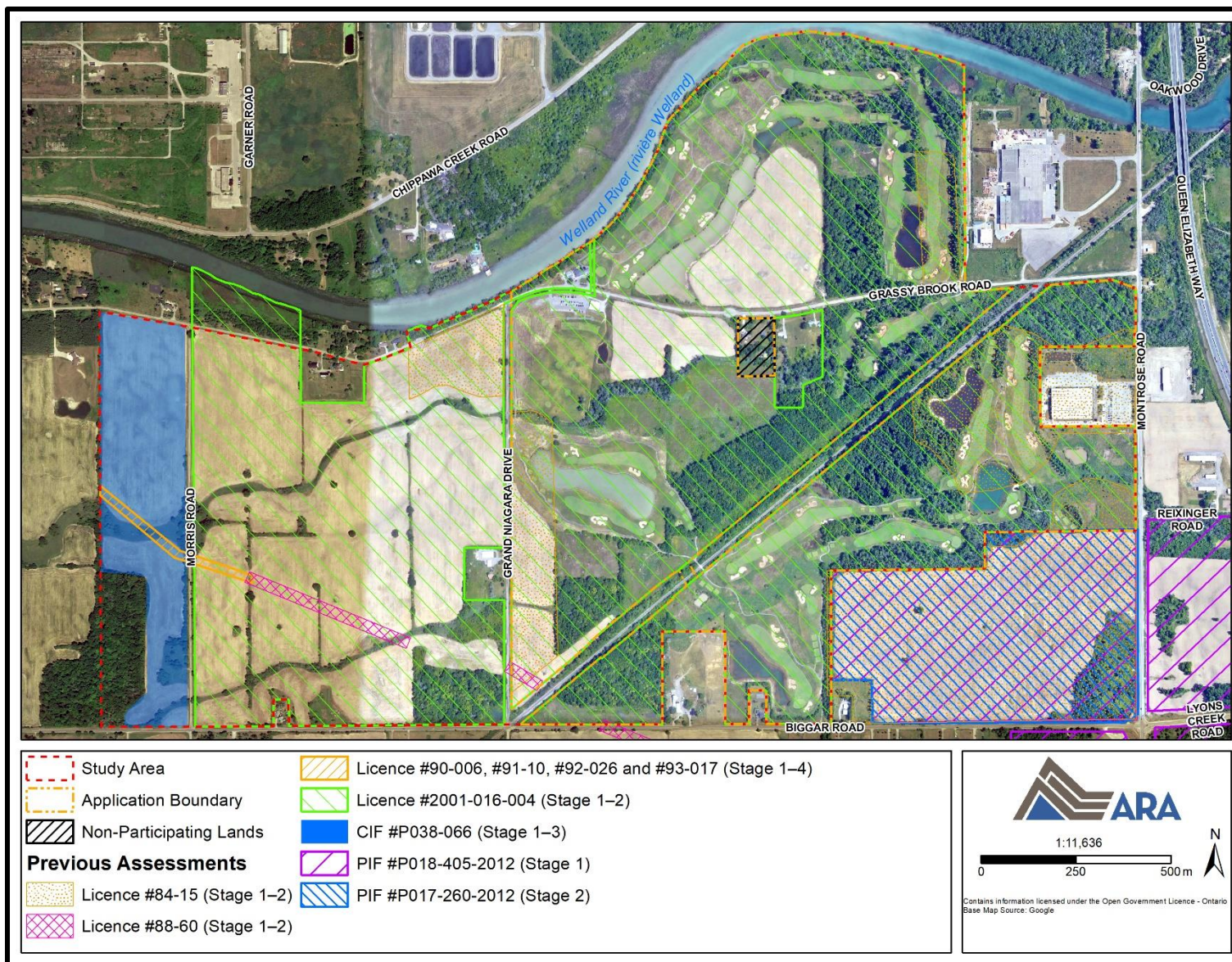


Map 10: Soil Map

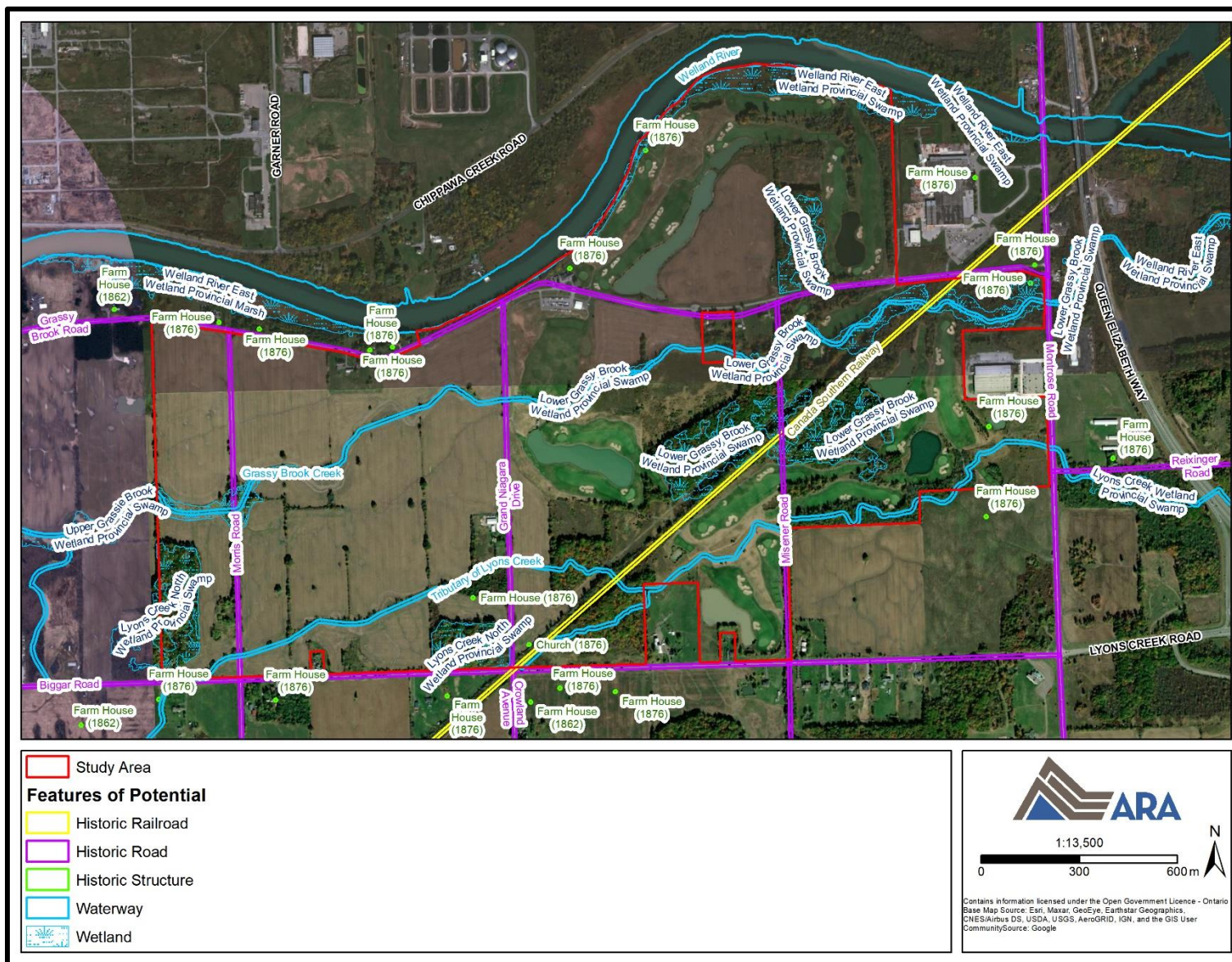
(Produced under licence using ArcGIS® software by Esri, © Esri; Kingston and Presant 1989; Sheet 5)



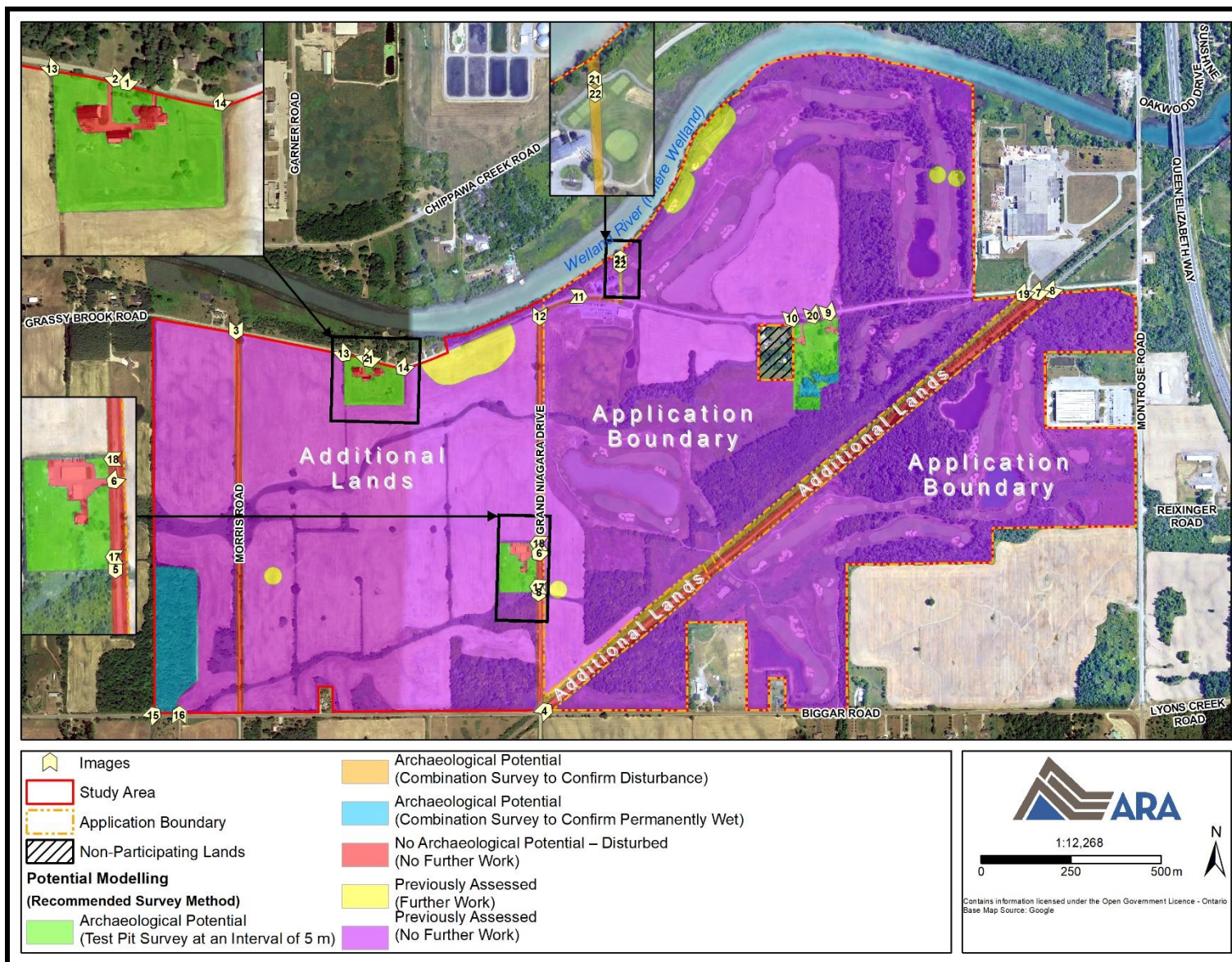
Map 11: Regional Municipality of Niagara's Archaeological Management Plan
(Produced under licence using ArcGIS® software by Esri, © Esri; Niagara Region 2022)



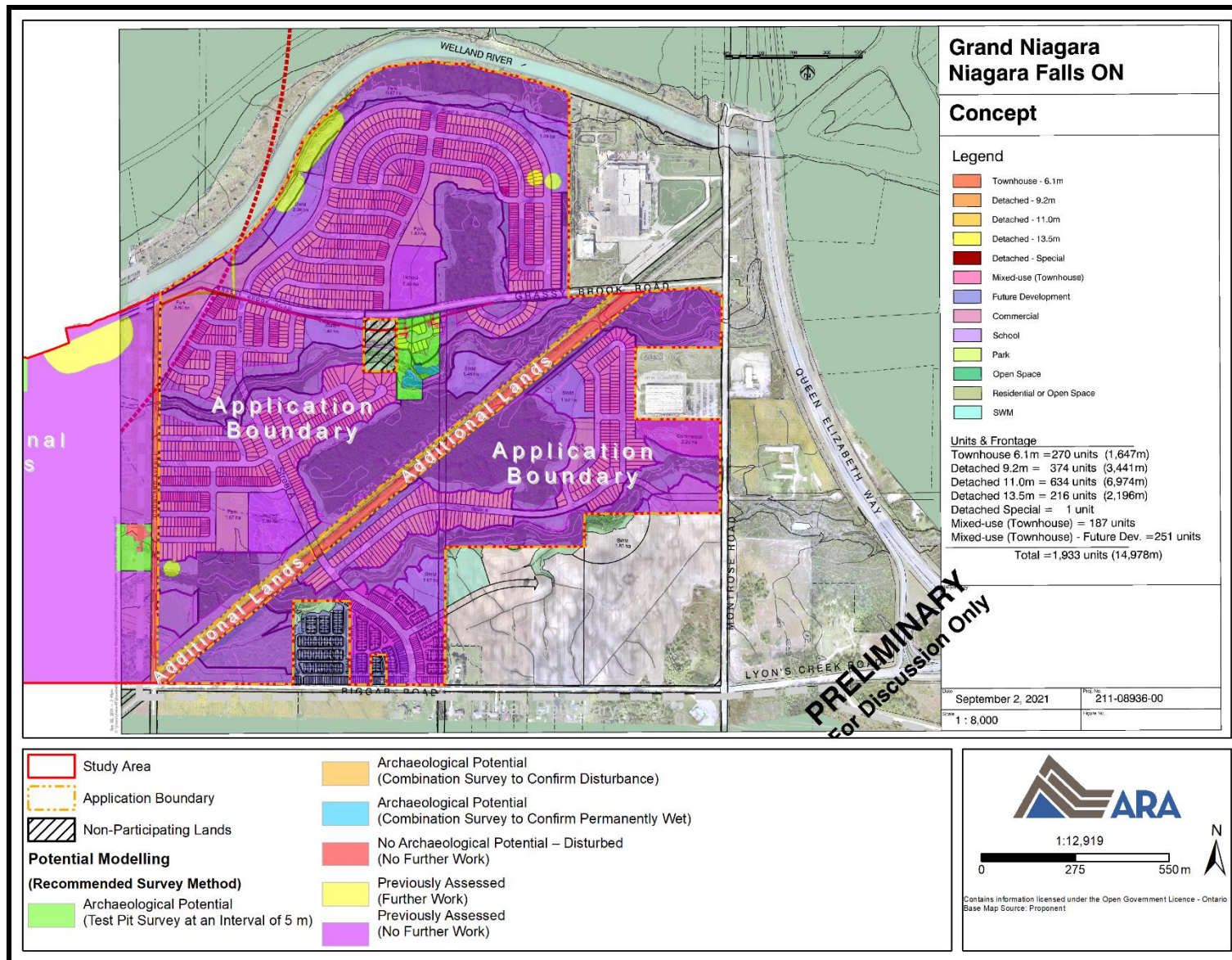
Map 12: Previous Assessments (Stage 1-2)
 (Produced under licence using ArcGIS® software by Esri, © Esri)

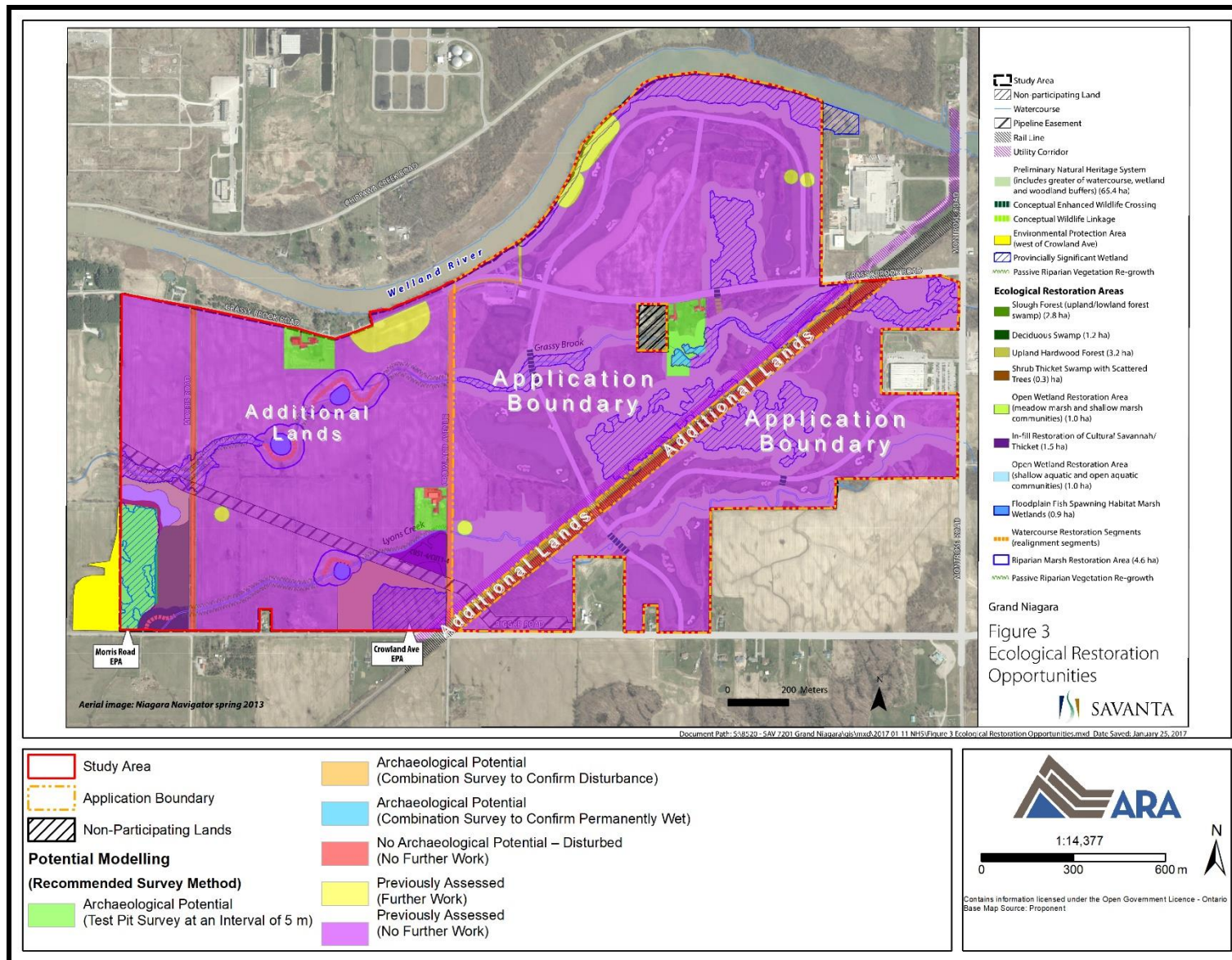


Map 13: Features of Potential
 (Produced under licence using ArcGIS® software by Esri, © Esri)



Map 14: Potential Modelling and Recommendations (Aerial Image)
(Produced under licence using ArcGIS® software by Esri, © Esri)





Map 16: Potential Modelling and Recommendations (Ecological Restoration Areas)
(Produced under licence using ArcGIS® software by Esri, © Esri)

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**Stage 1 Archaeological Assessment
Grand Niagara Project
City of Niagara Falls
Regional Municipality of Niagara
Part of Lots 1–7, Broken Front Concession
Geographic Township of Crowland
Former Welland County, Ontario**

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09/12/2022

Revised Supplementary Documentation

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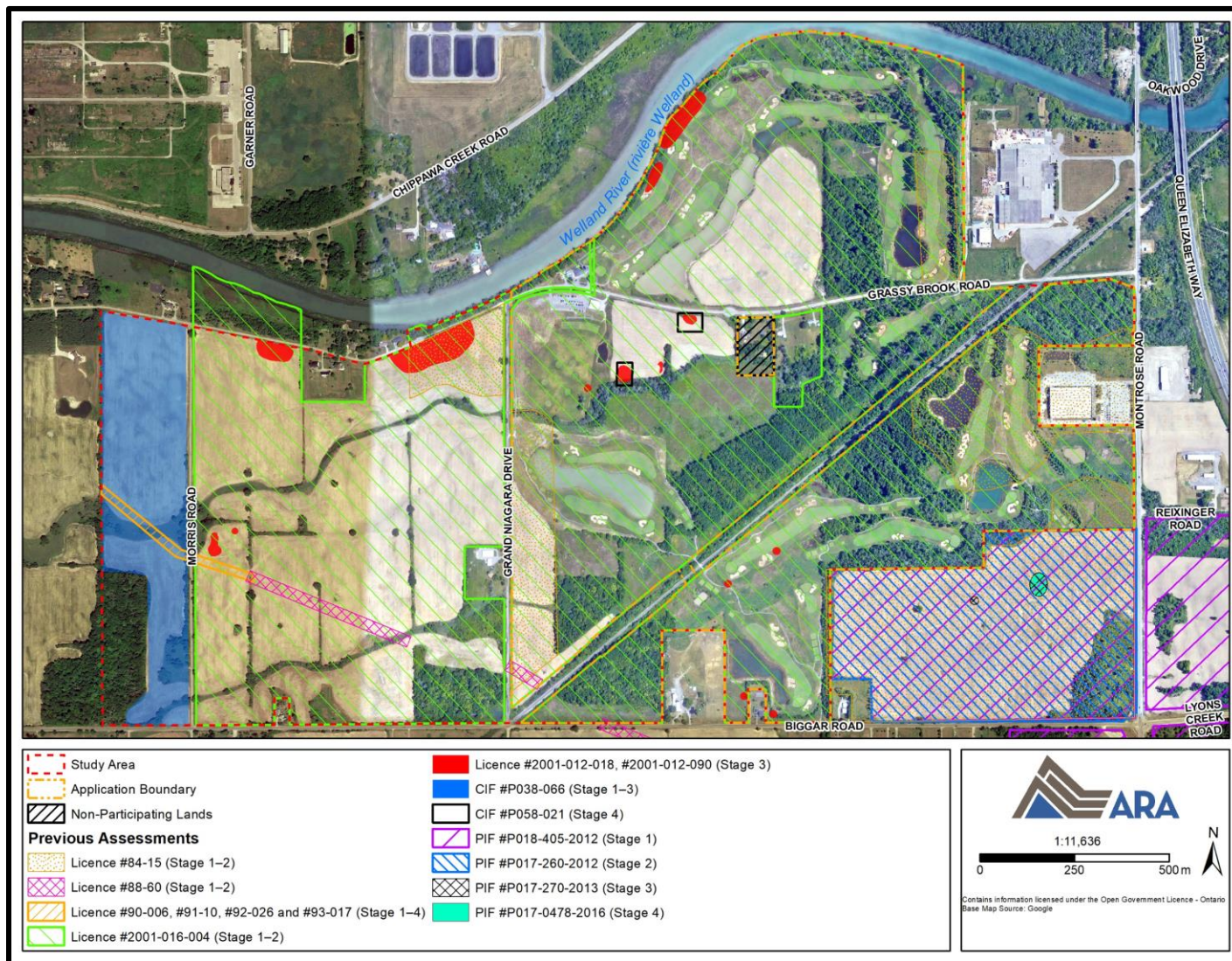
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1.0 SUPPLEMENTARY DOCUMENTATION

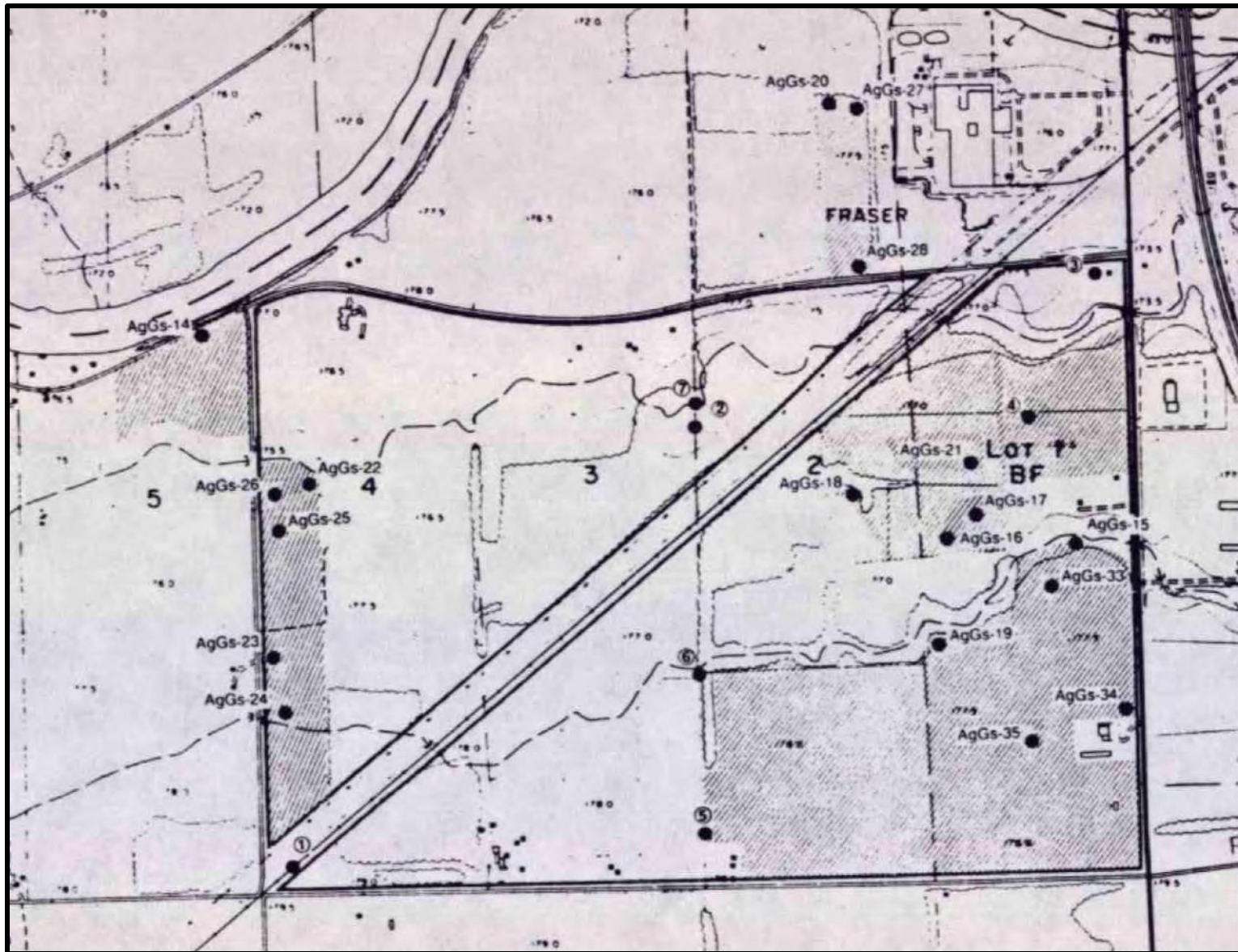
1.1 Detailed Site Location Information

In keeping with Section 7.6.1 of the 2011 *Standards and Guidelines for Consultant Archaeologists*, detailed site location information was not included within the project report. The Stage 3 and 4 investigations conducted in the vicinity of the study area have been added to SD Map 1, and the relevant past results are reproduced in SD Map 2–SD Map 29. The previously identified archaeological sites falling within 300 m of the study area are shown in SD Map 30–SD Map 32. The areas recommended for further work are outlined in SD Map 33–SD Map 34.

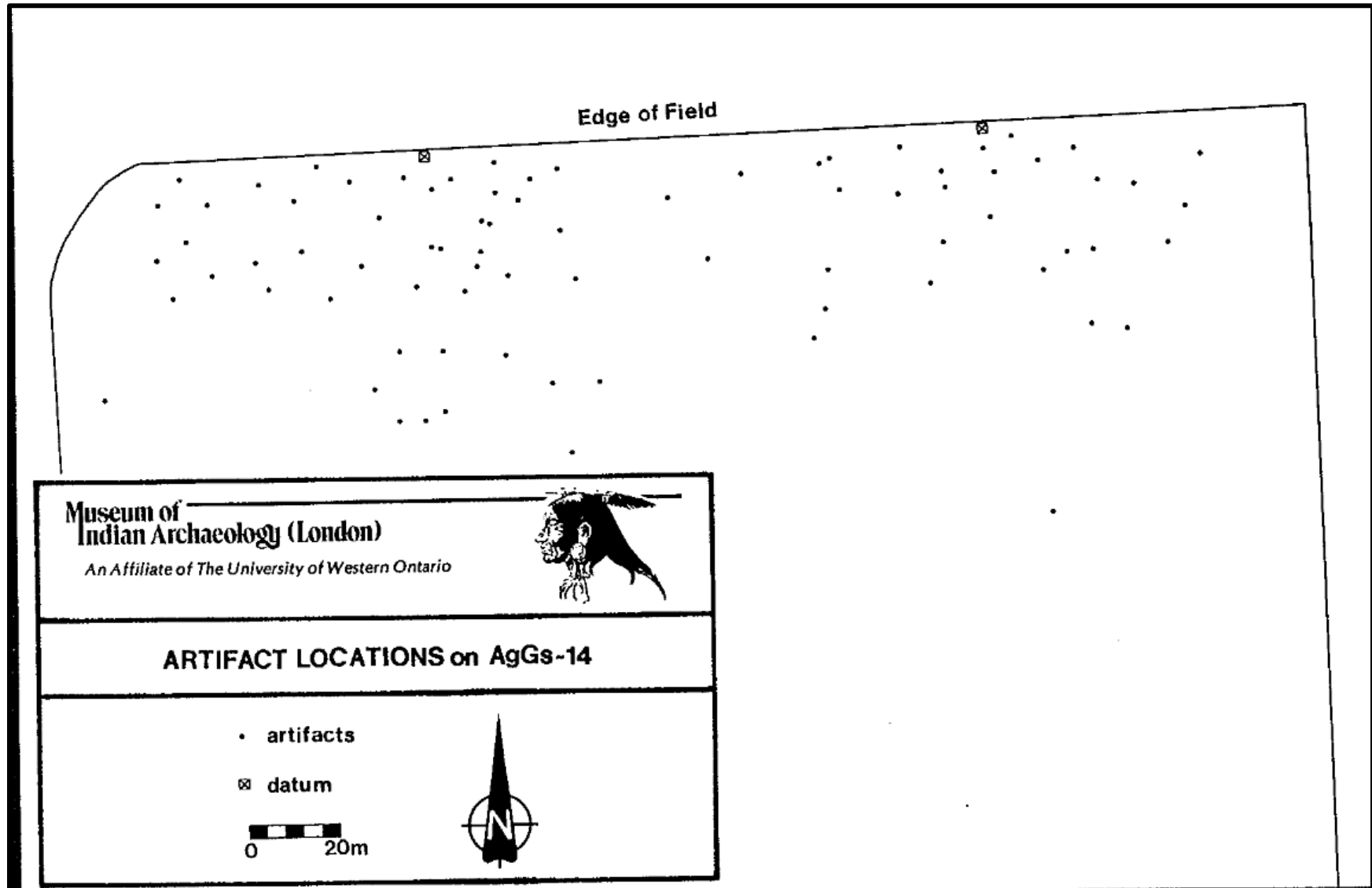
2.0 SD MAPS



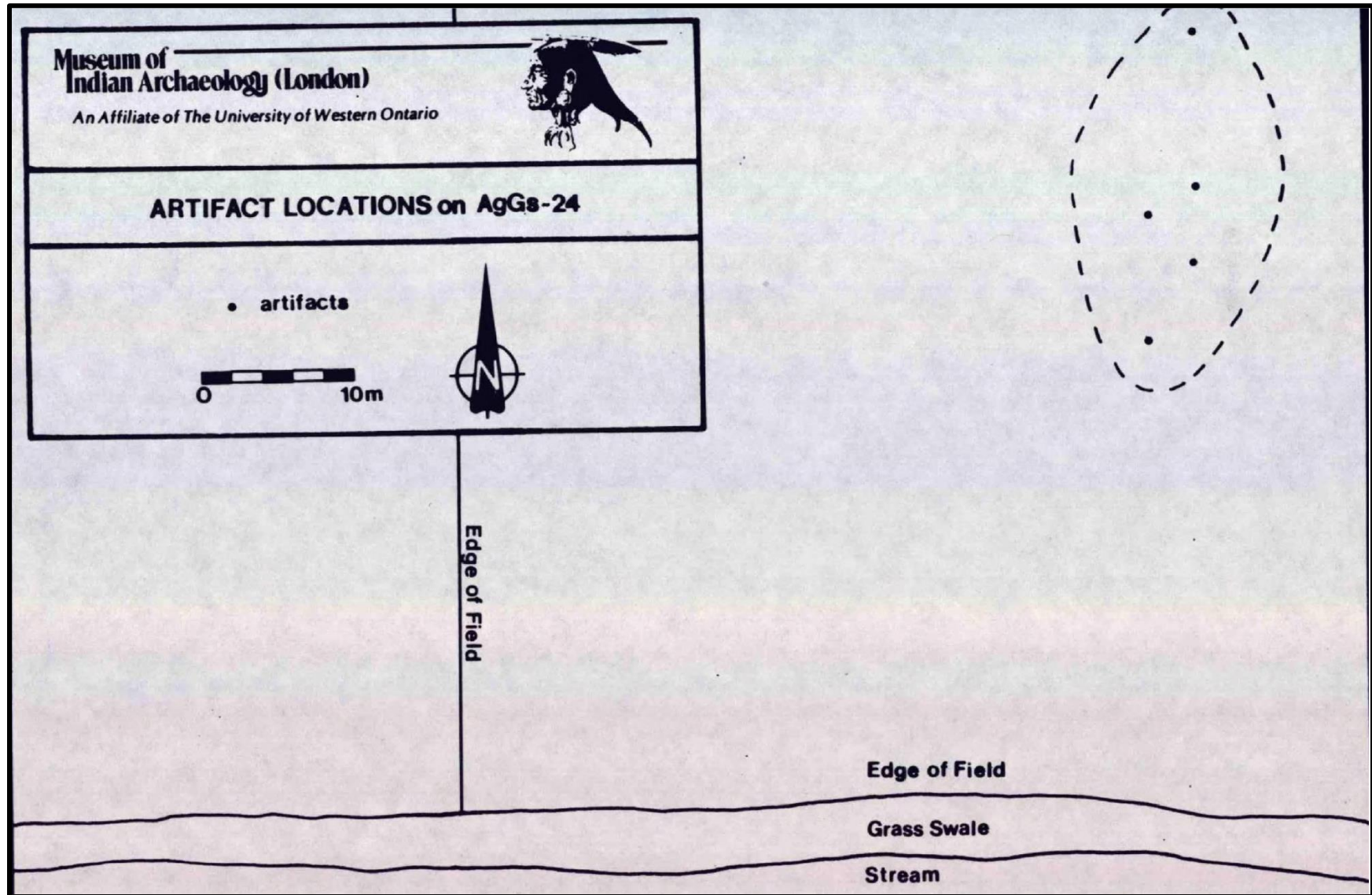
SD Map 1: Previous Assessments (Stage 1-4)
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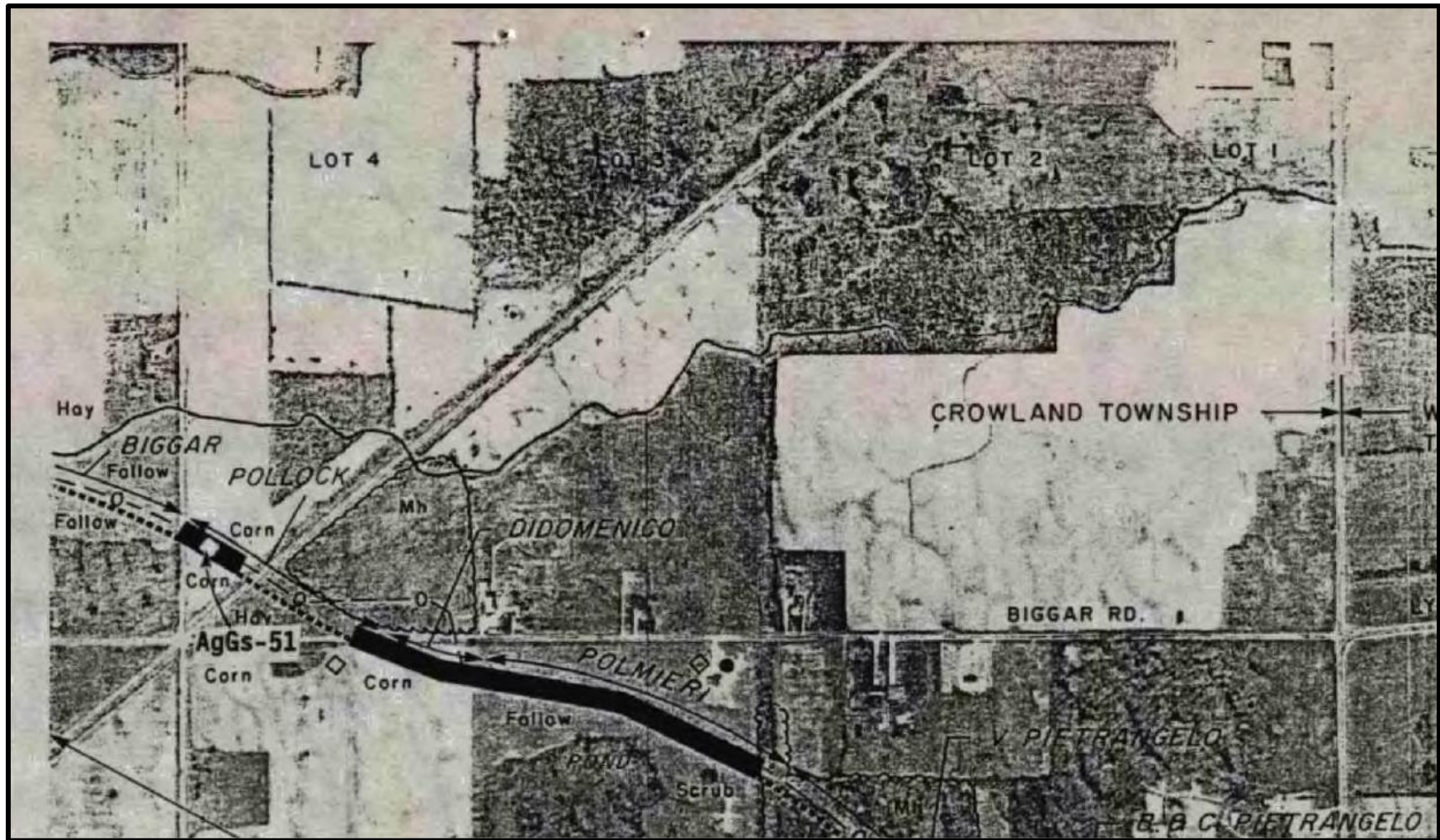
SD Map 2: 1984 Investigation
(MIA 1985:Appendix I)



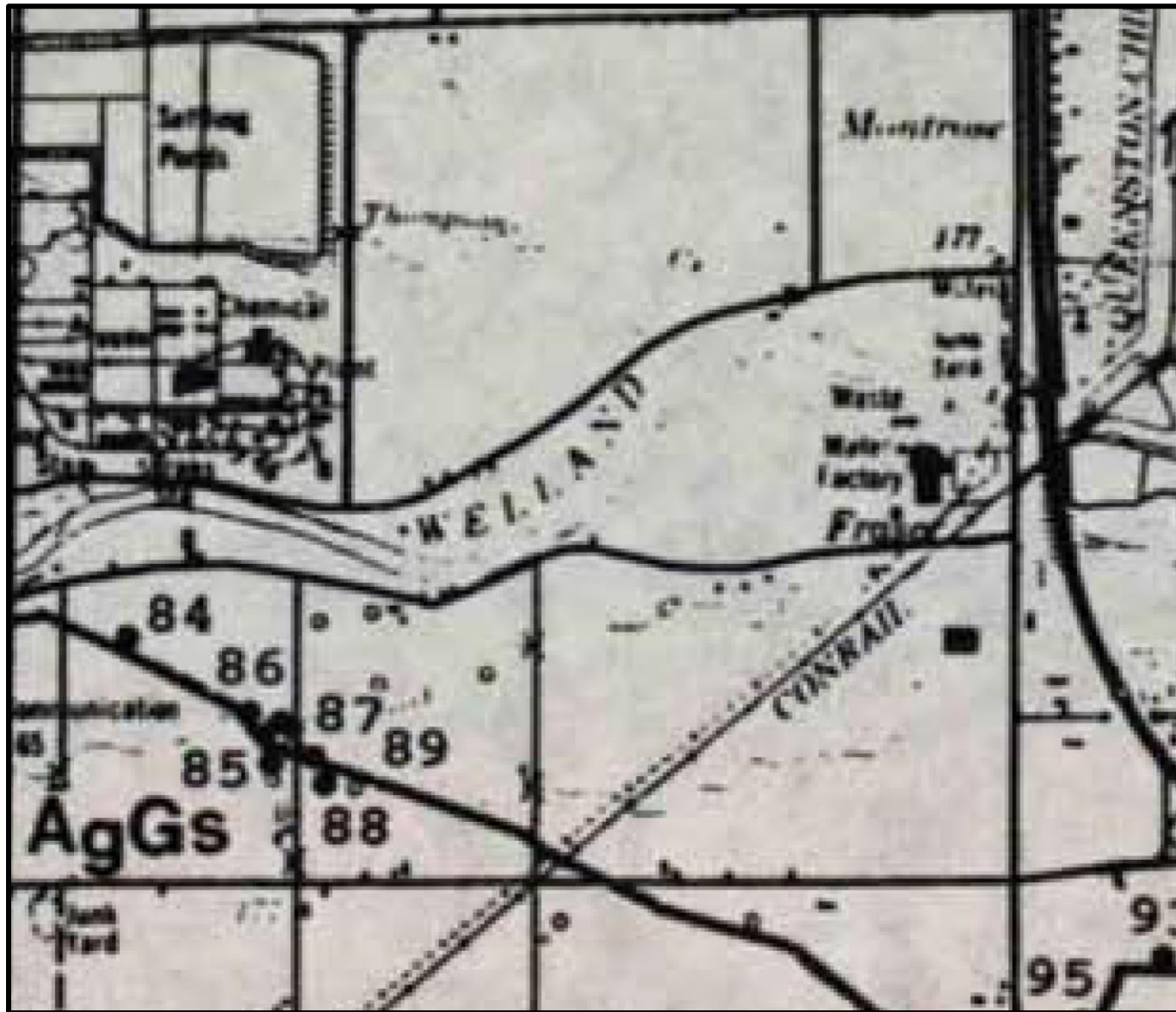
SD Map 3: 1984 Investigation (Marion White)
(Site Record Form)



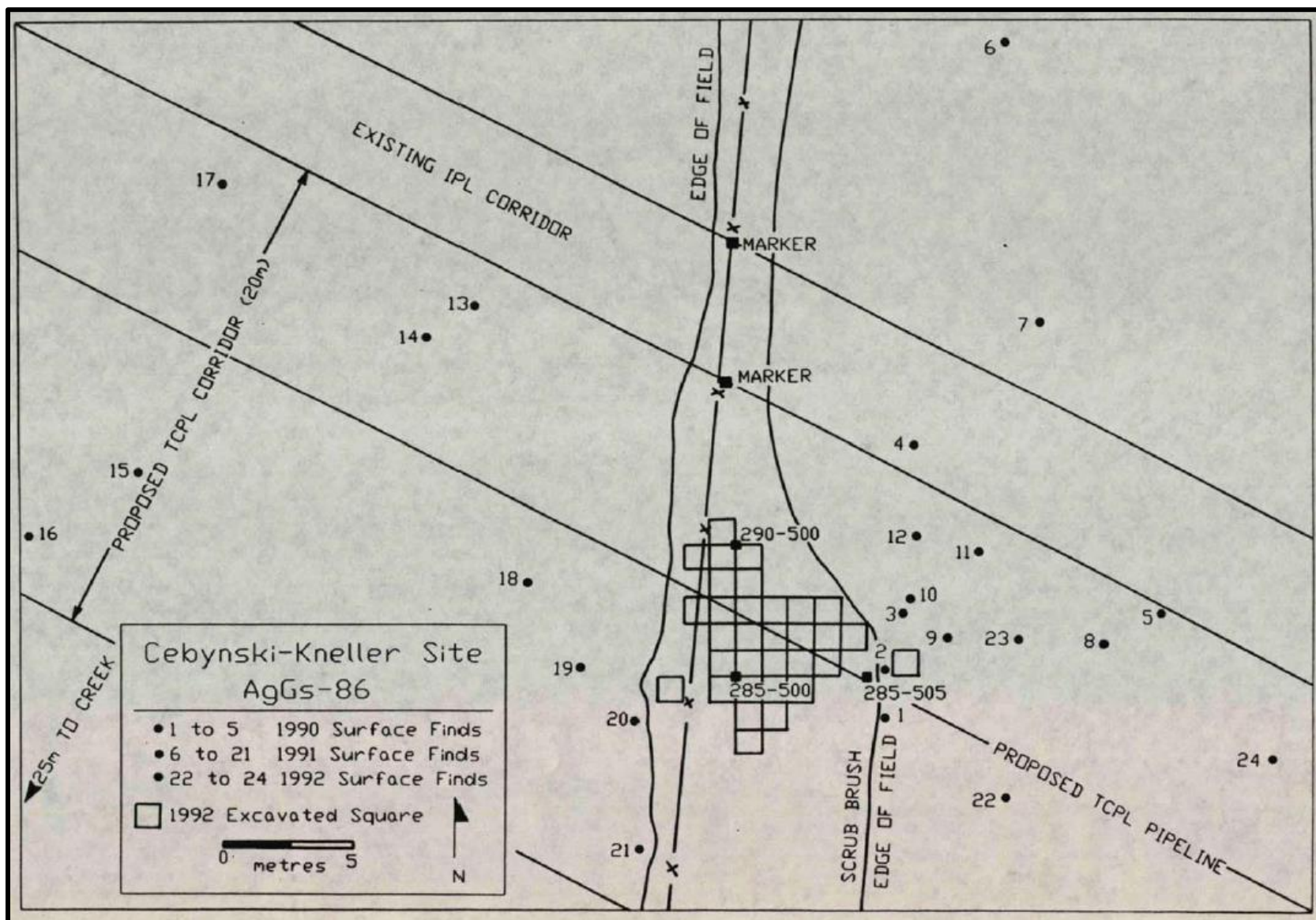
SD Map 4: 1984 Investigation (AgGs-24)
(MIA 1985:Map E-19)



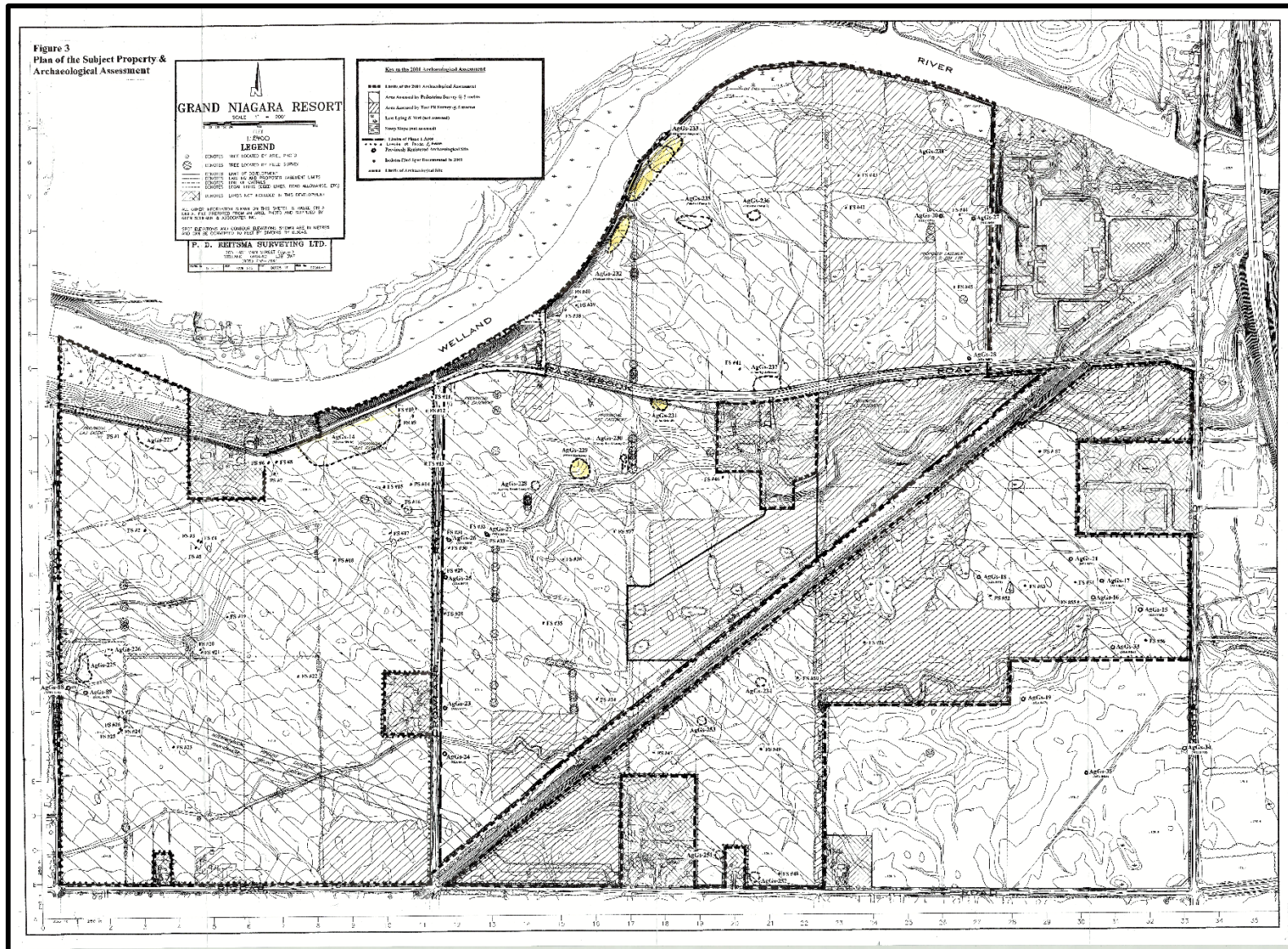
SD Map 5: 1988–1989 Investigation (AgGs-56)
(MPA 1989:Figure 7c; AgGs-56 is erroneous labelled as AgGs-51)



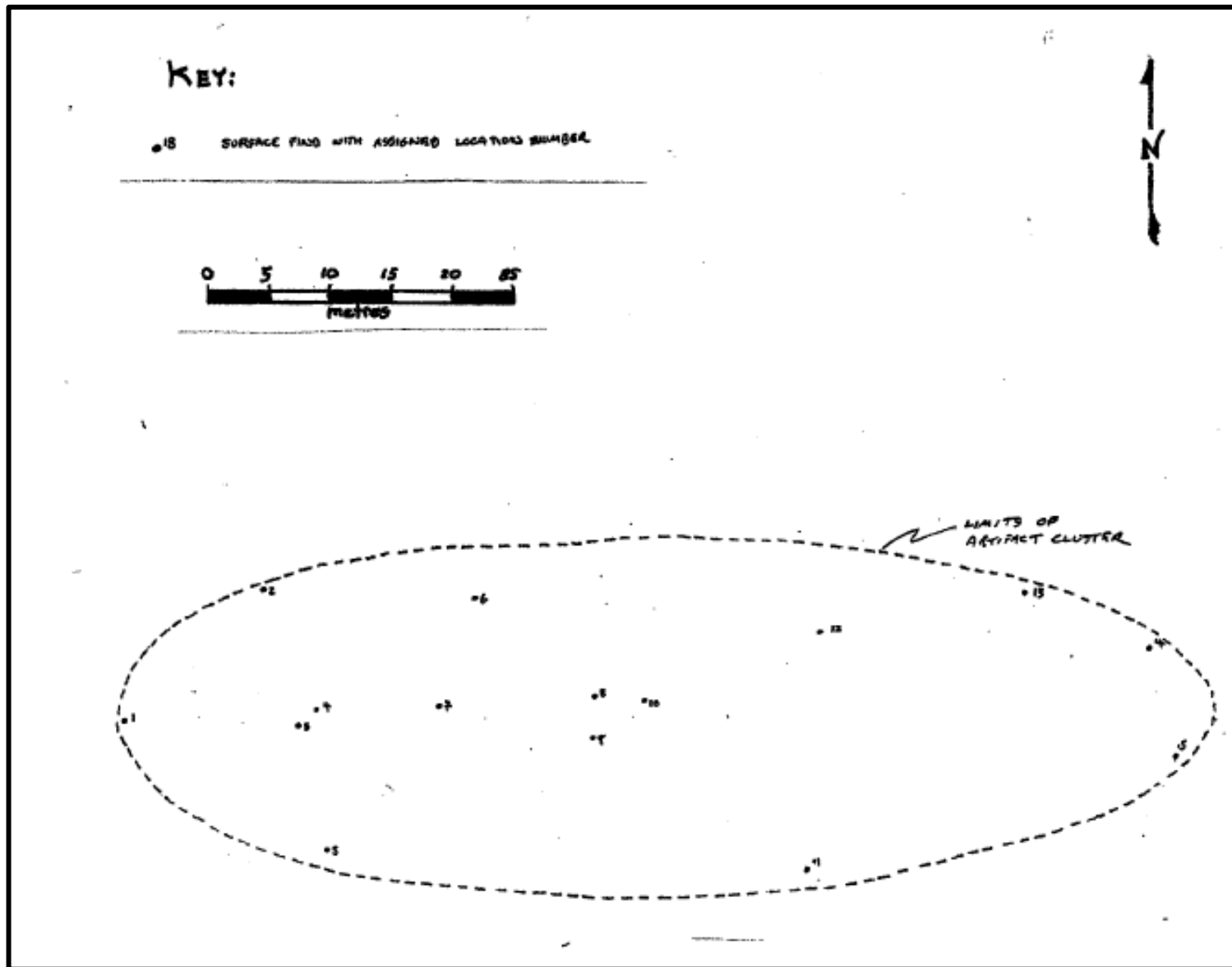
SD Map 6: 1990-1993 Investigation (Relevant Sites)
(LMA 1993:Figure 1)



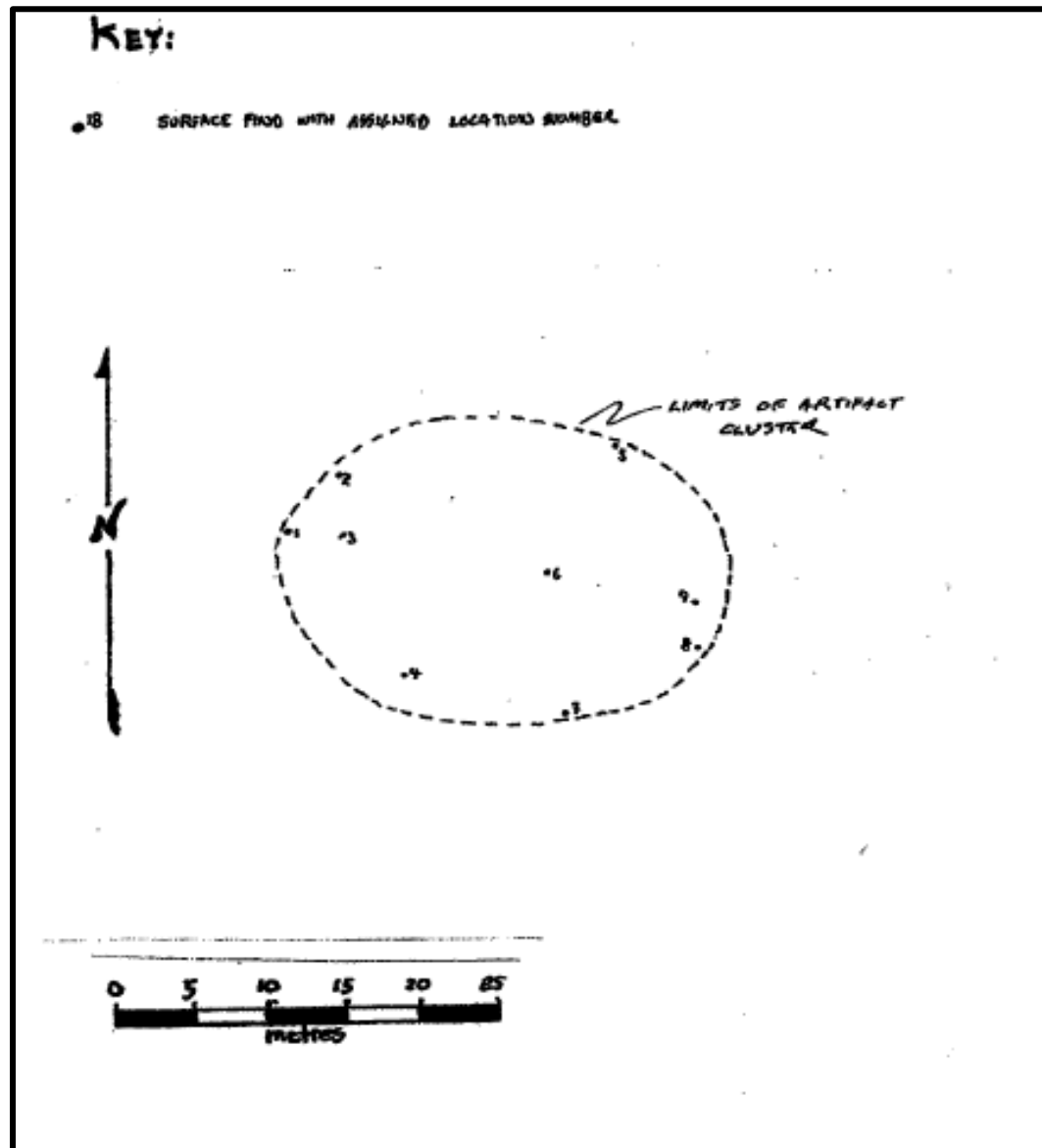
SD Map 7: 1990-1993 Investigation (Cebrynski-Keller)
(LMA 1993:Figure 7)



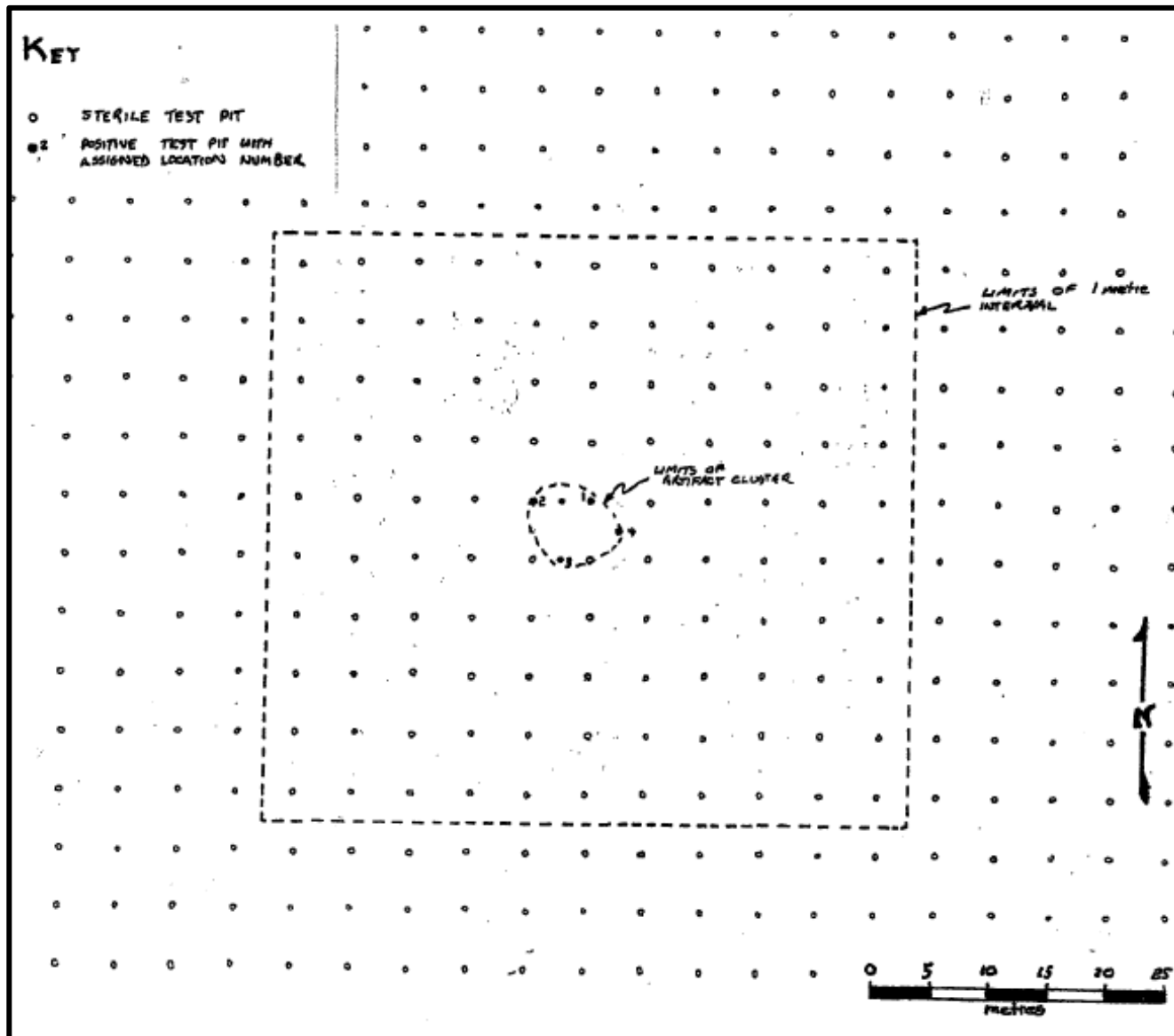
SD Map 8: 2001–2002 Investigation
(AMICK 2003:Figure 3)



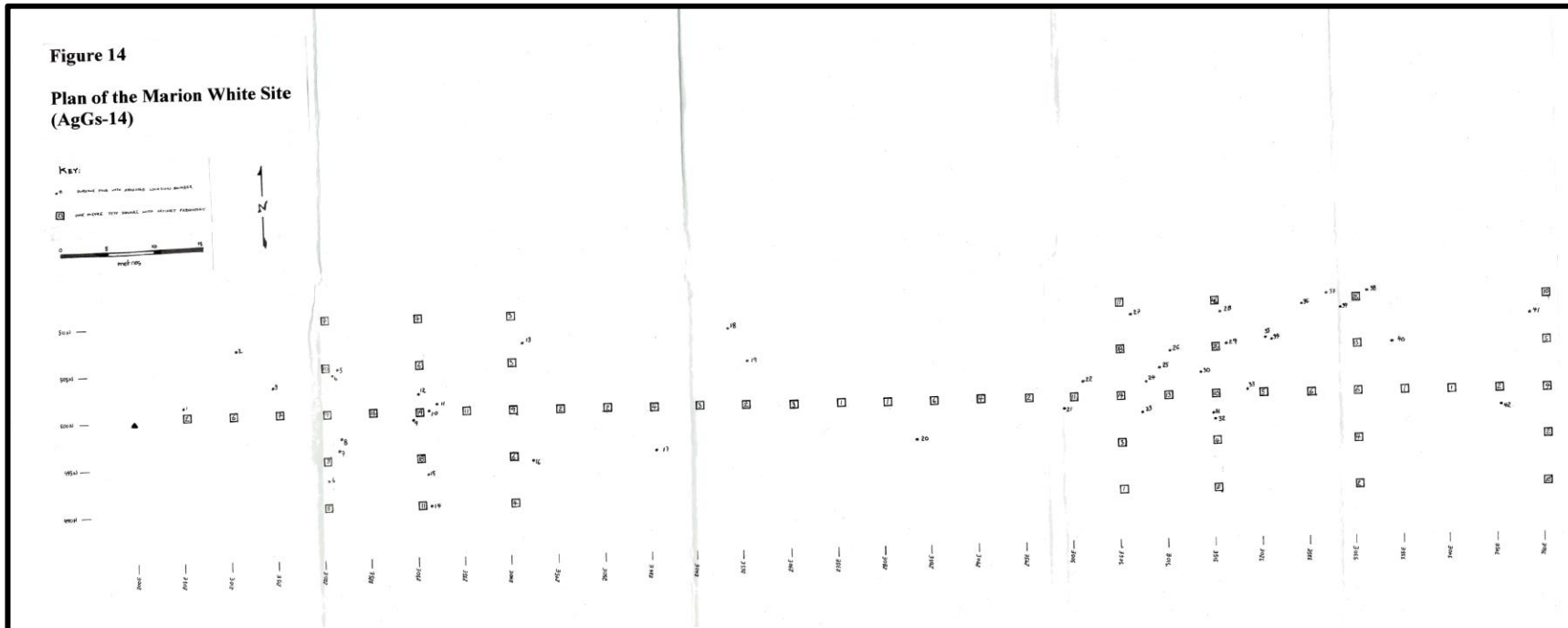
SD Map 9: 2001-2002 Investigation (Cabeiroi Camp 1)
(AMICK 2003:Figure 11)



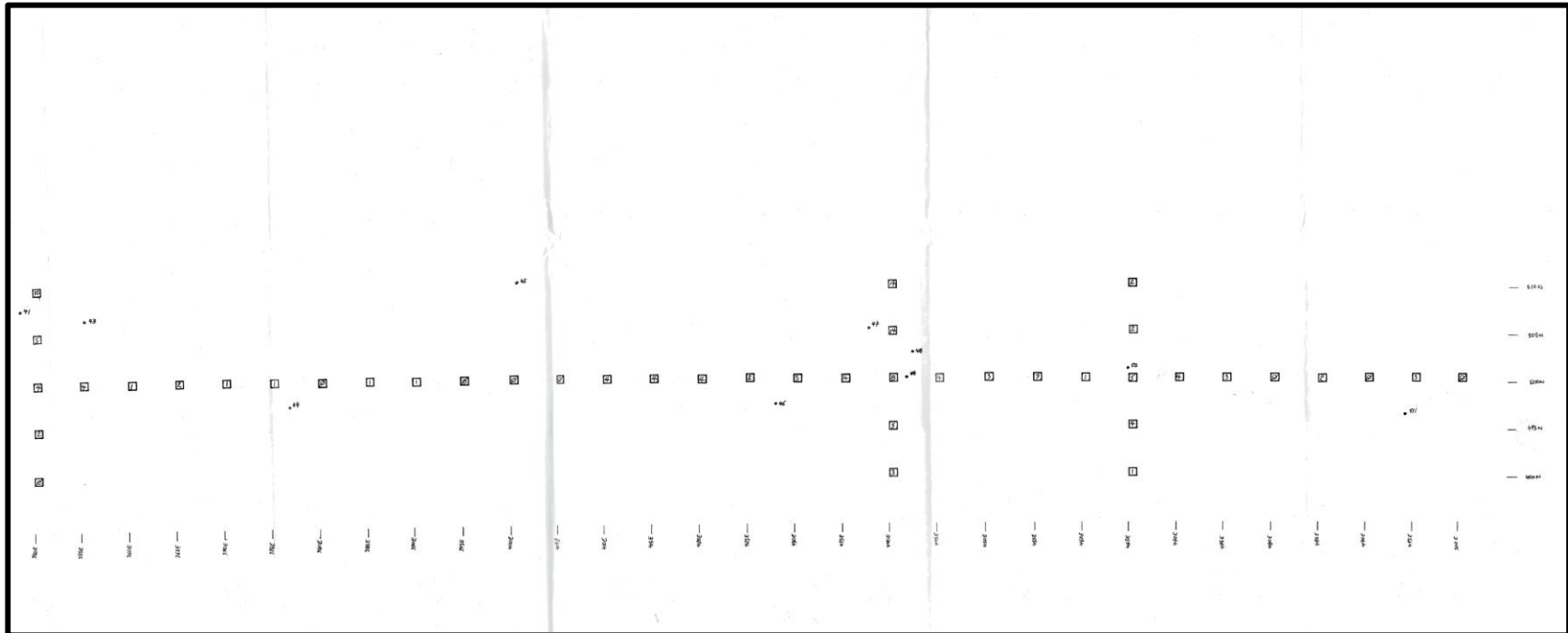
SD Map 10: 2001–2002 Investigation (Cabeiroi Camp 2)
(AMICK 2003:Figure 12)



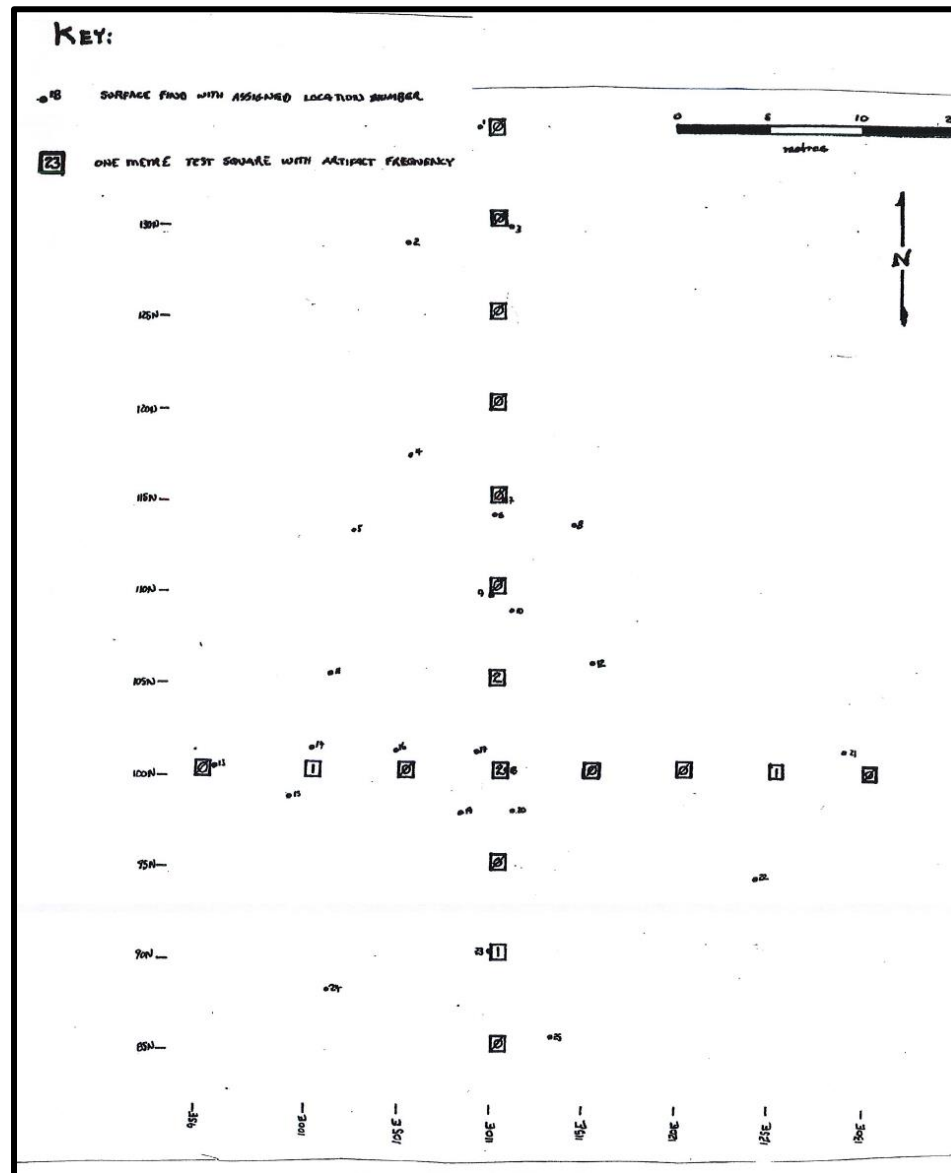
SD Map 11: 2001-2002 Investigation (Welland Drain Camp)
(AMICK 2003:Figure 13)



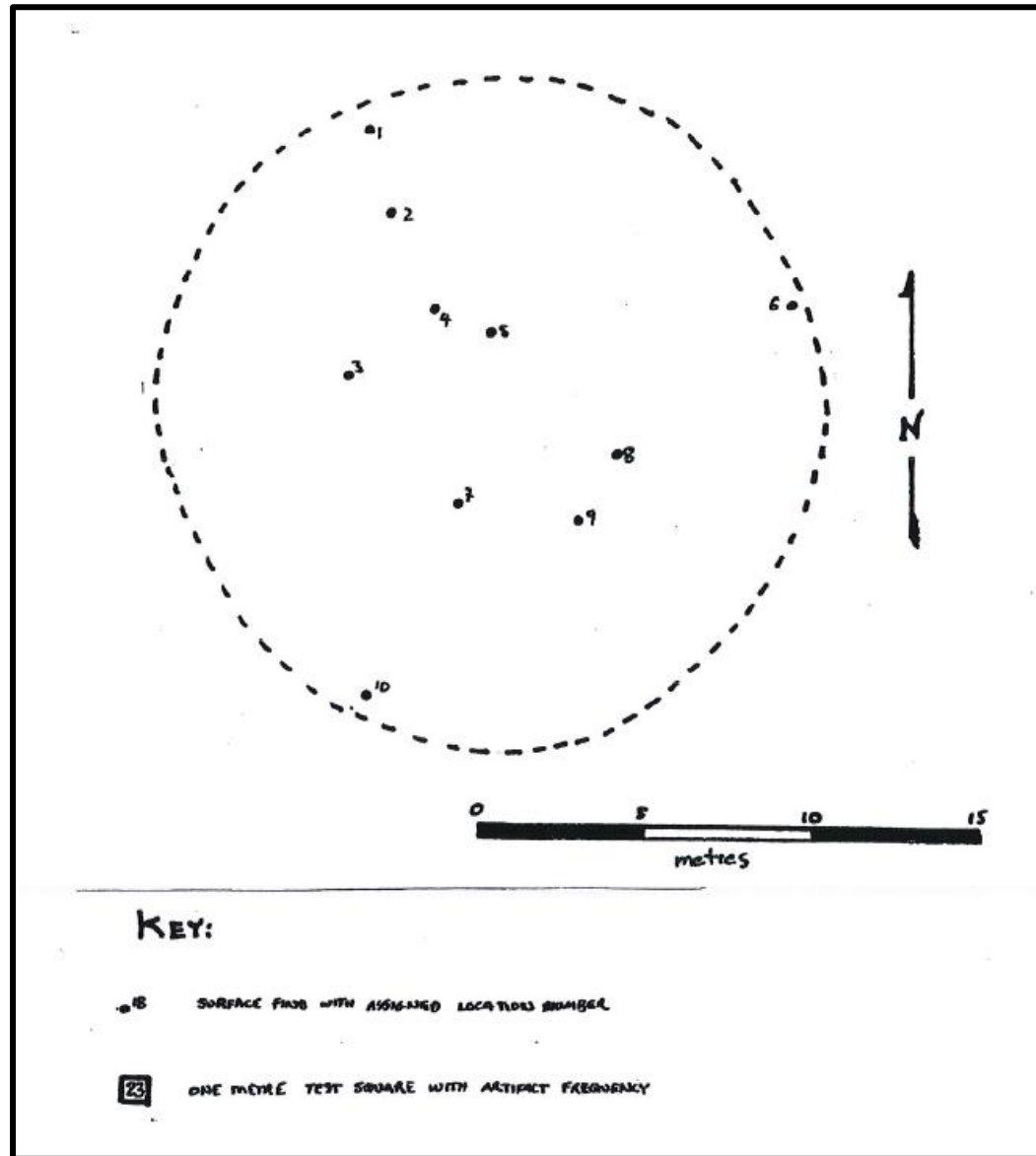
SD Map 12: 2001–2002 Investigation (Marion White – West Half)
(AMICK 2003:Figure 14)



SD Map 13: 2001–2002 Investigation (Marion White – East Half)
(AMICK 2003:Figure 14)



SD Map 14: 2001-2002 Investigation (AgGs-225)
(AMICK 2003:Figure 15)



SD Map 15: 2001-2002 Investigation (AgGs-226)
(AMICK 2003:Figure 16)

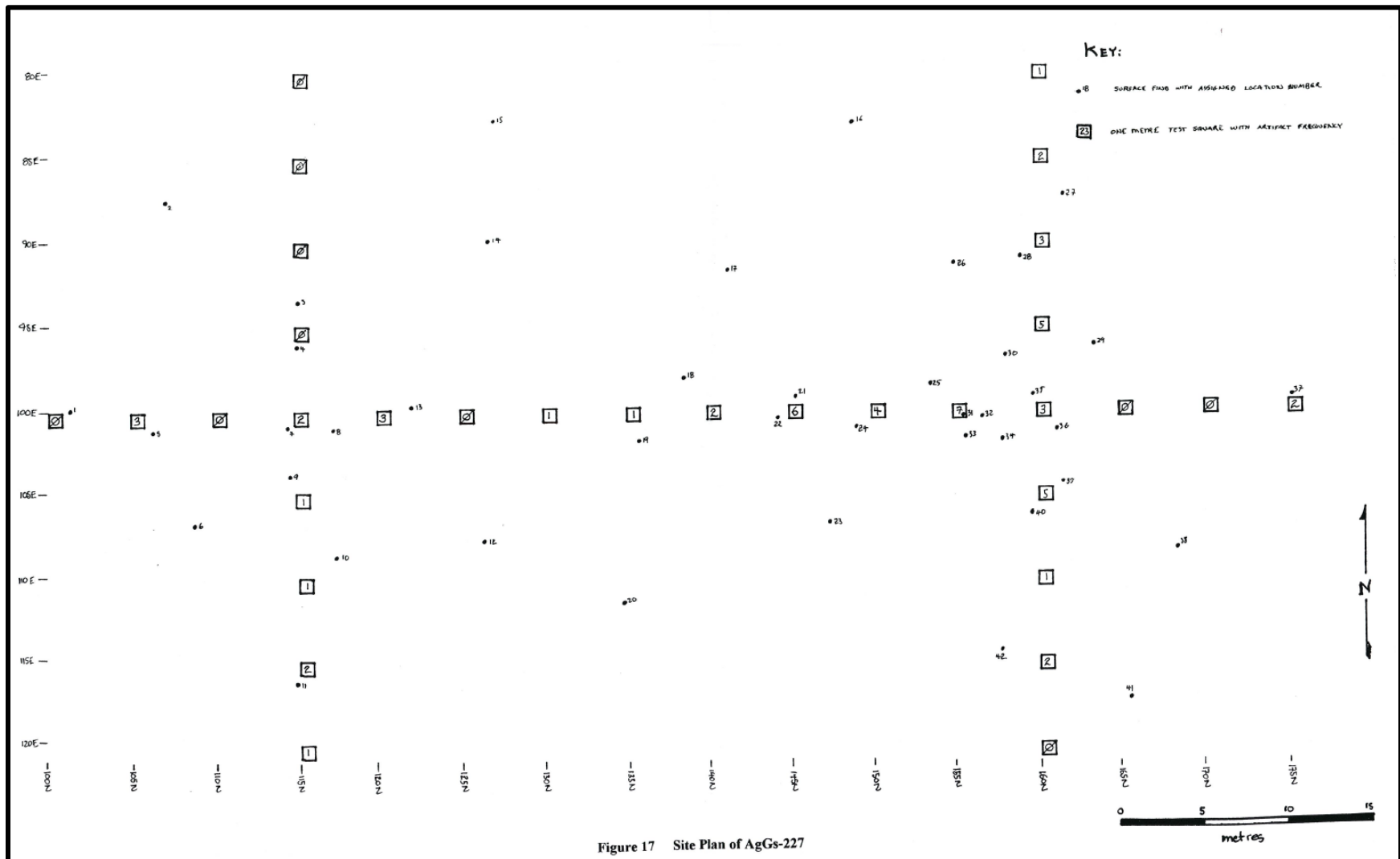
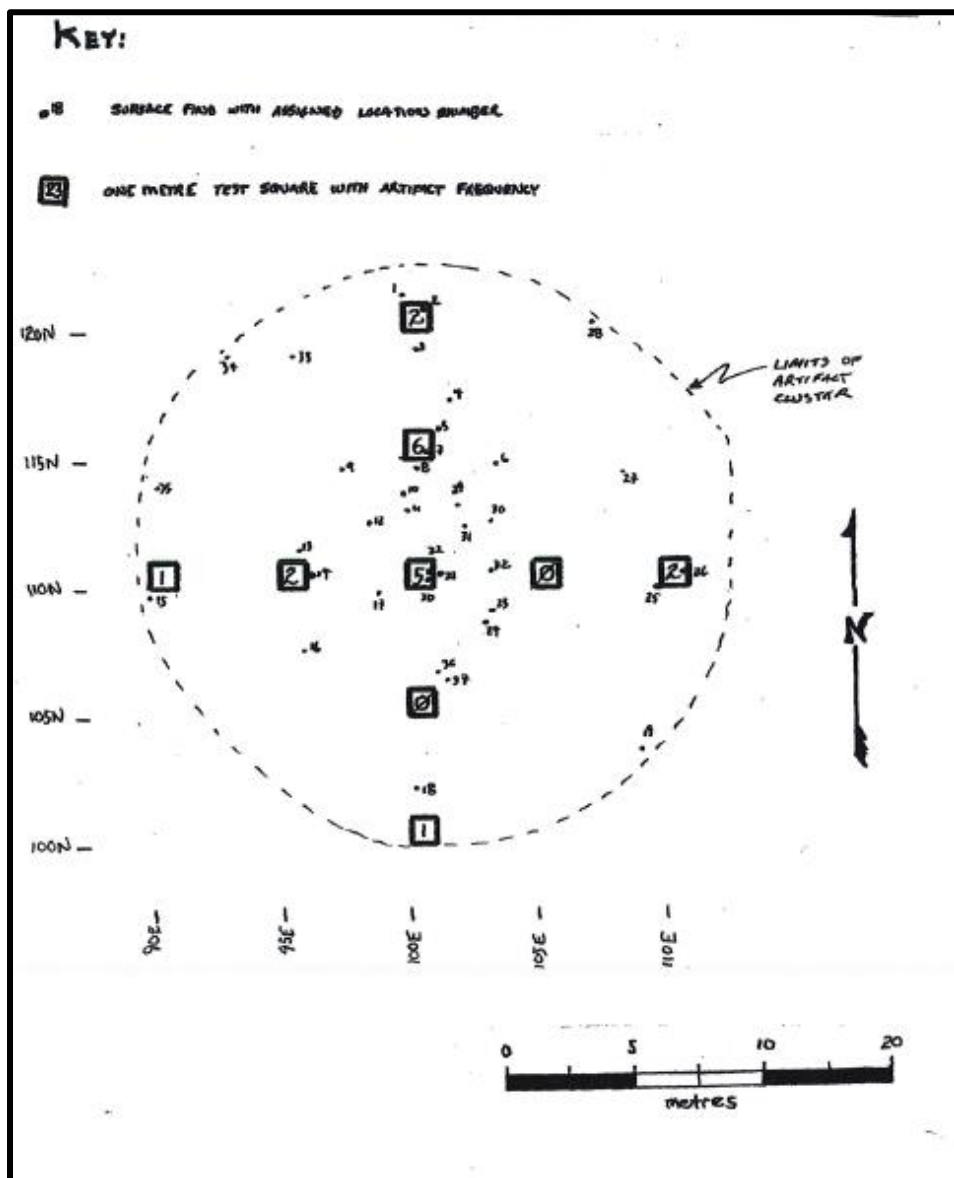
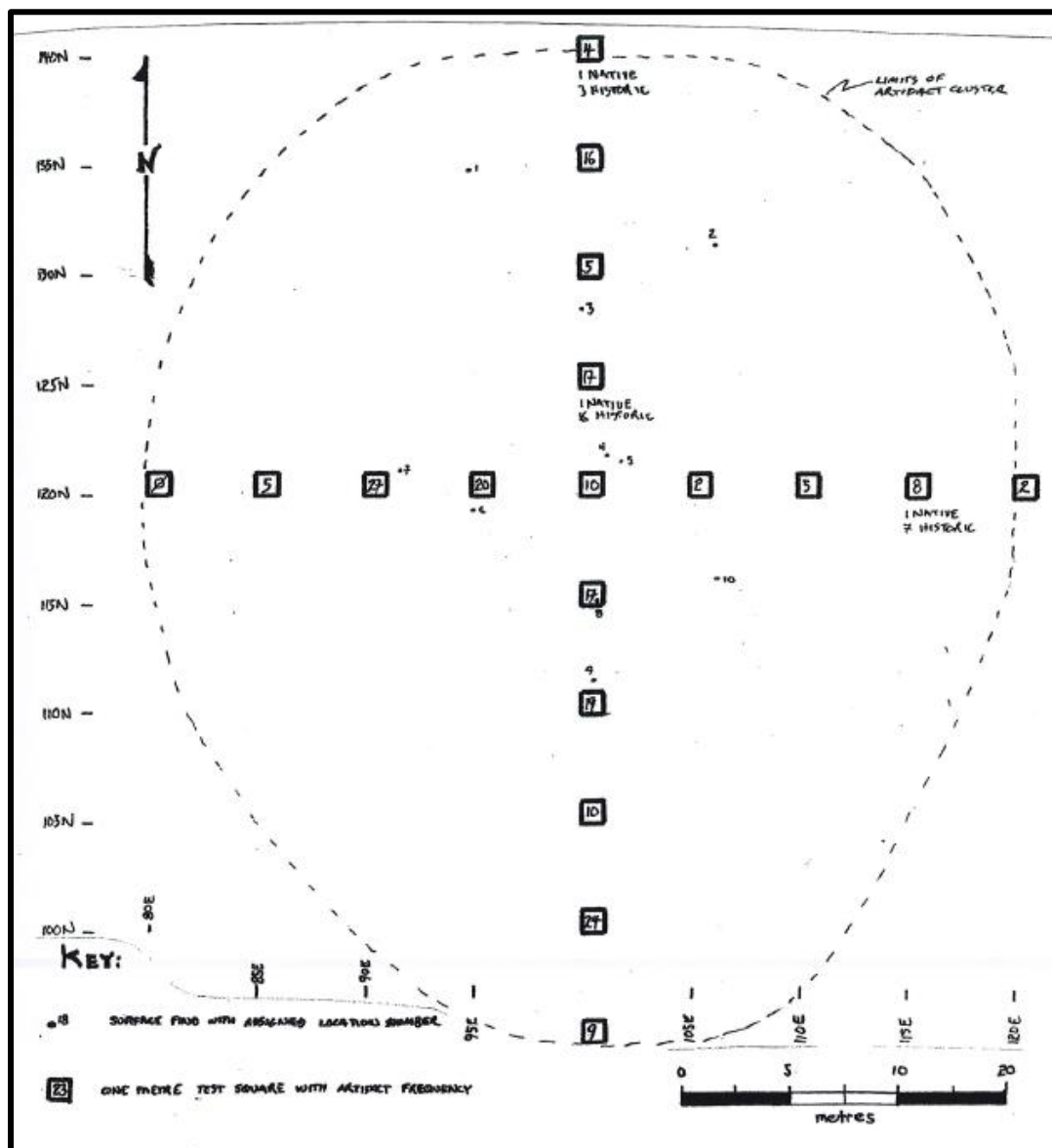


Figure 17 Site Plan of AgGs-227

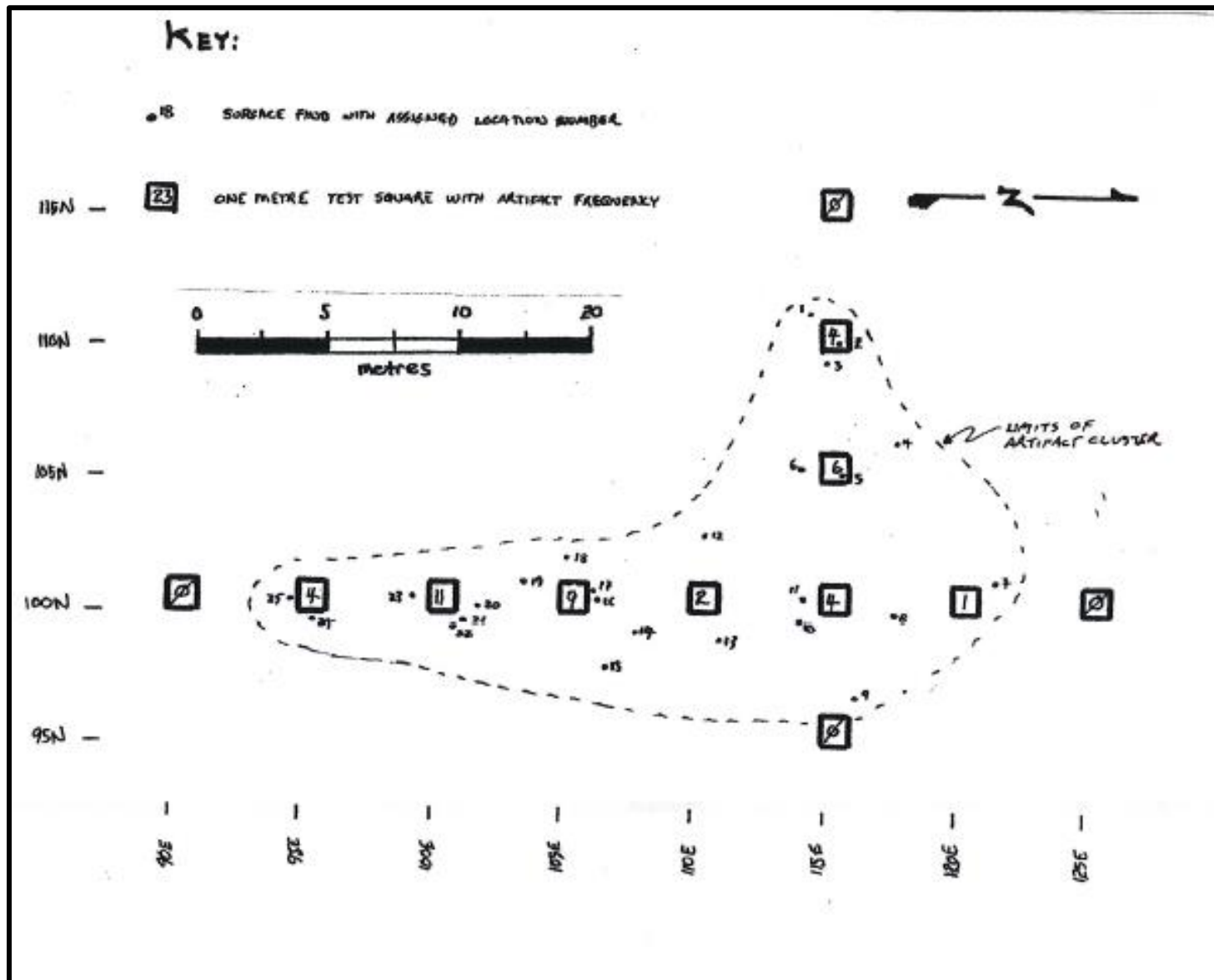
SD Map 16: 2001–2002 Investigation (AgGs-227)
(AMICK 2003:Figure 17)



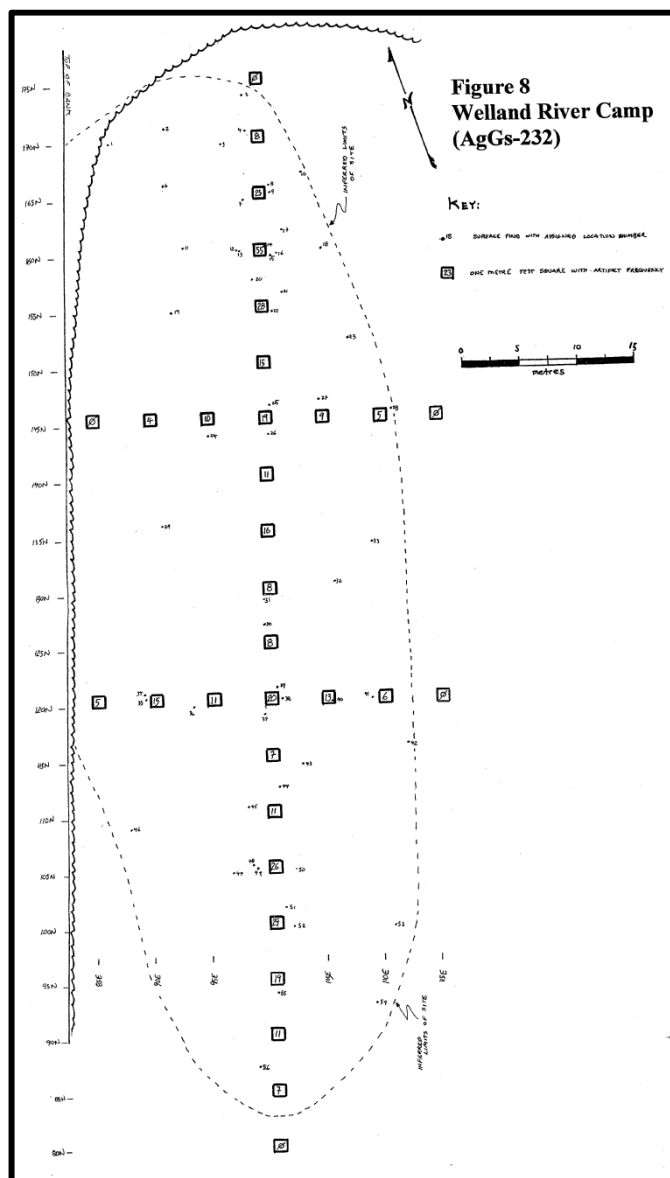
SD Map 17: 2001–2002 Investigation (Grassy Brook Camp 1)
(AMICK 2003:Figure 4)



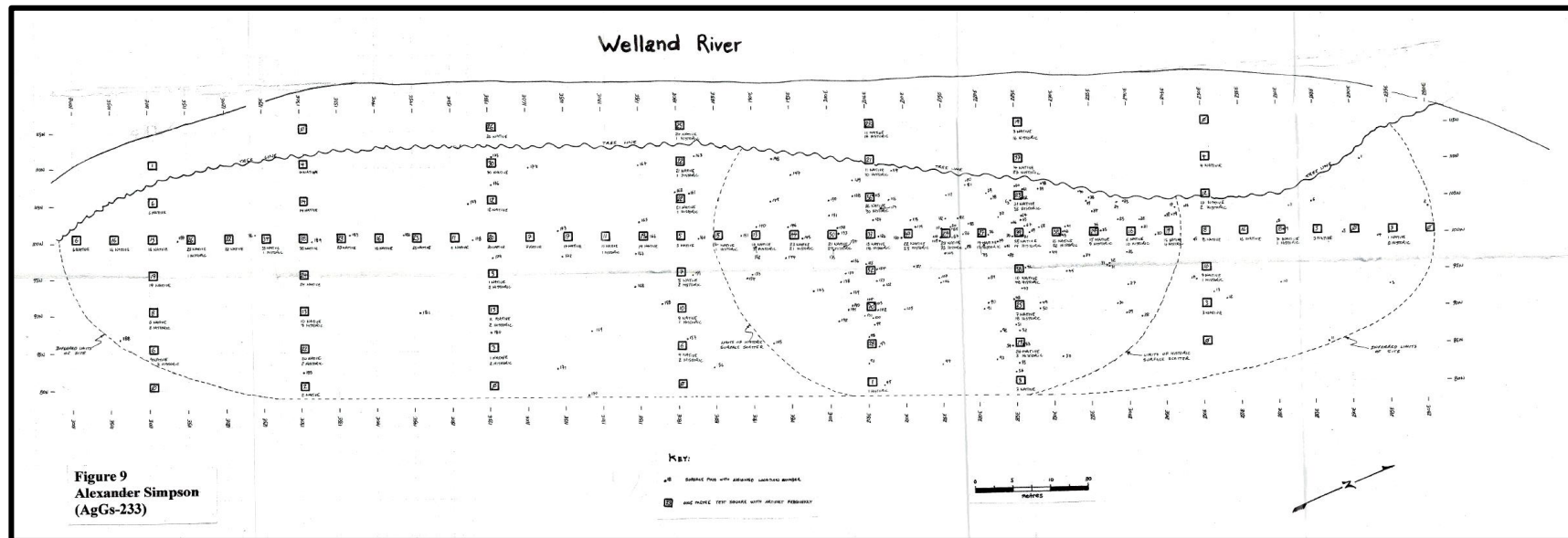
SD Map 18: 2001-2002 Investigation (James Macklem)
(AMICK 2003:Figure 5)



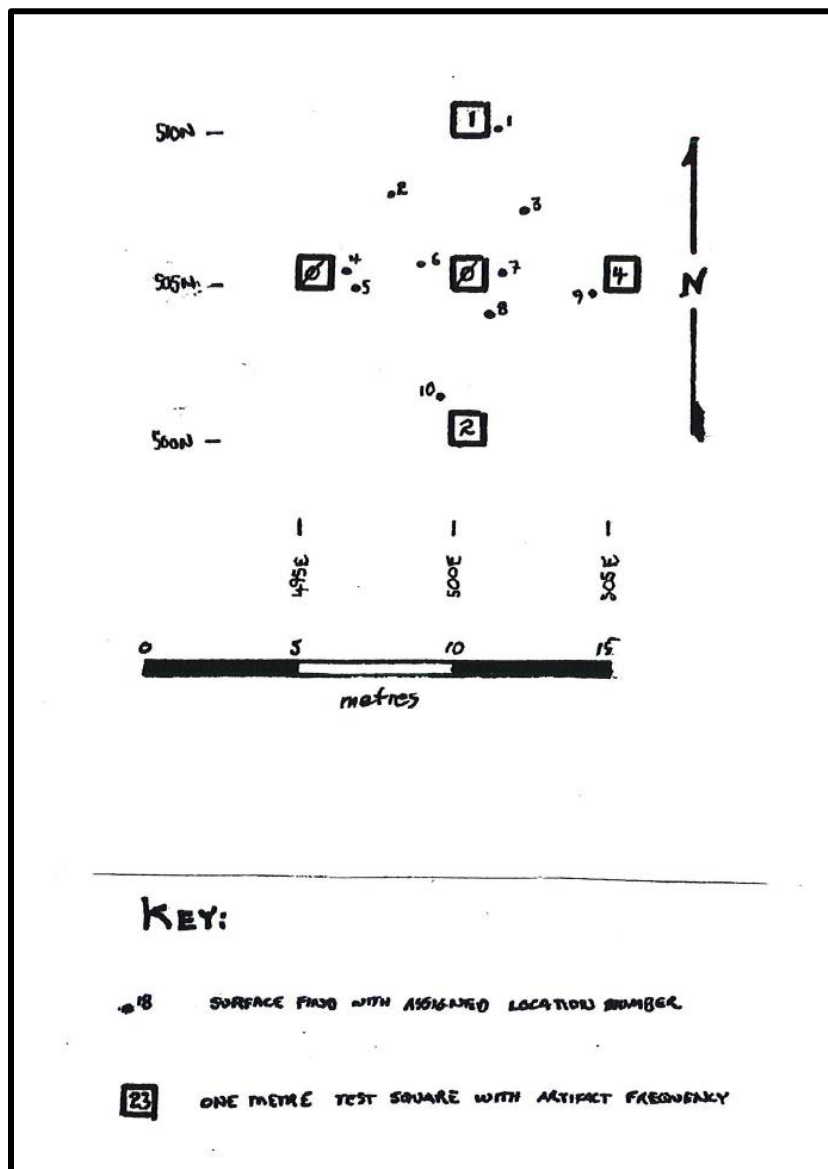
SD Map 19: 2001–2002 Investigation (Grassy Brook Camp 2)
(AMICK 2003:Figure 6)

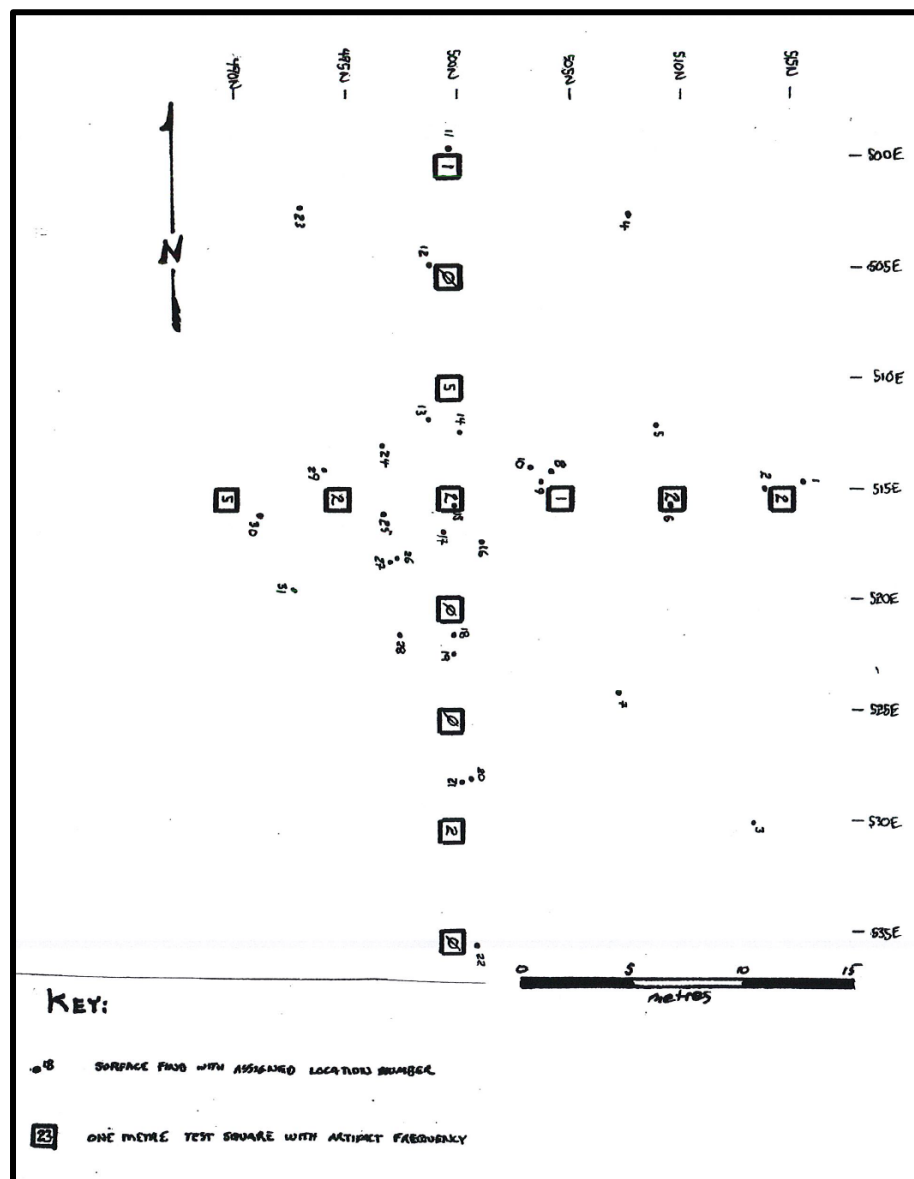


**SD Map 20: 2001–2002 Investigation (Welland River Camp)
(AMICK 2003:Figure 8)**

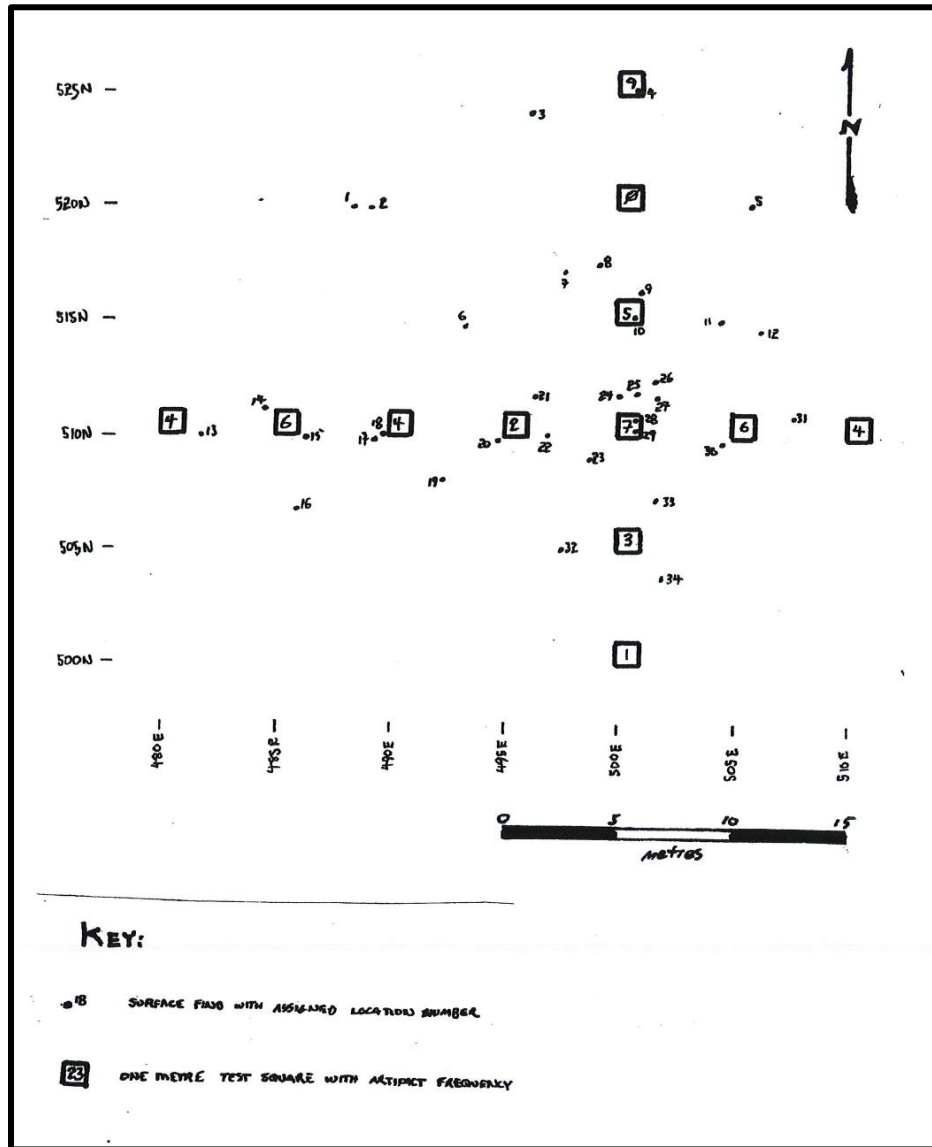


**SD Map 21: 2001–2002 Investigation (Alexander Simpson)
(AMICK 2003:Figure 9)**

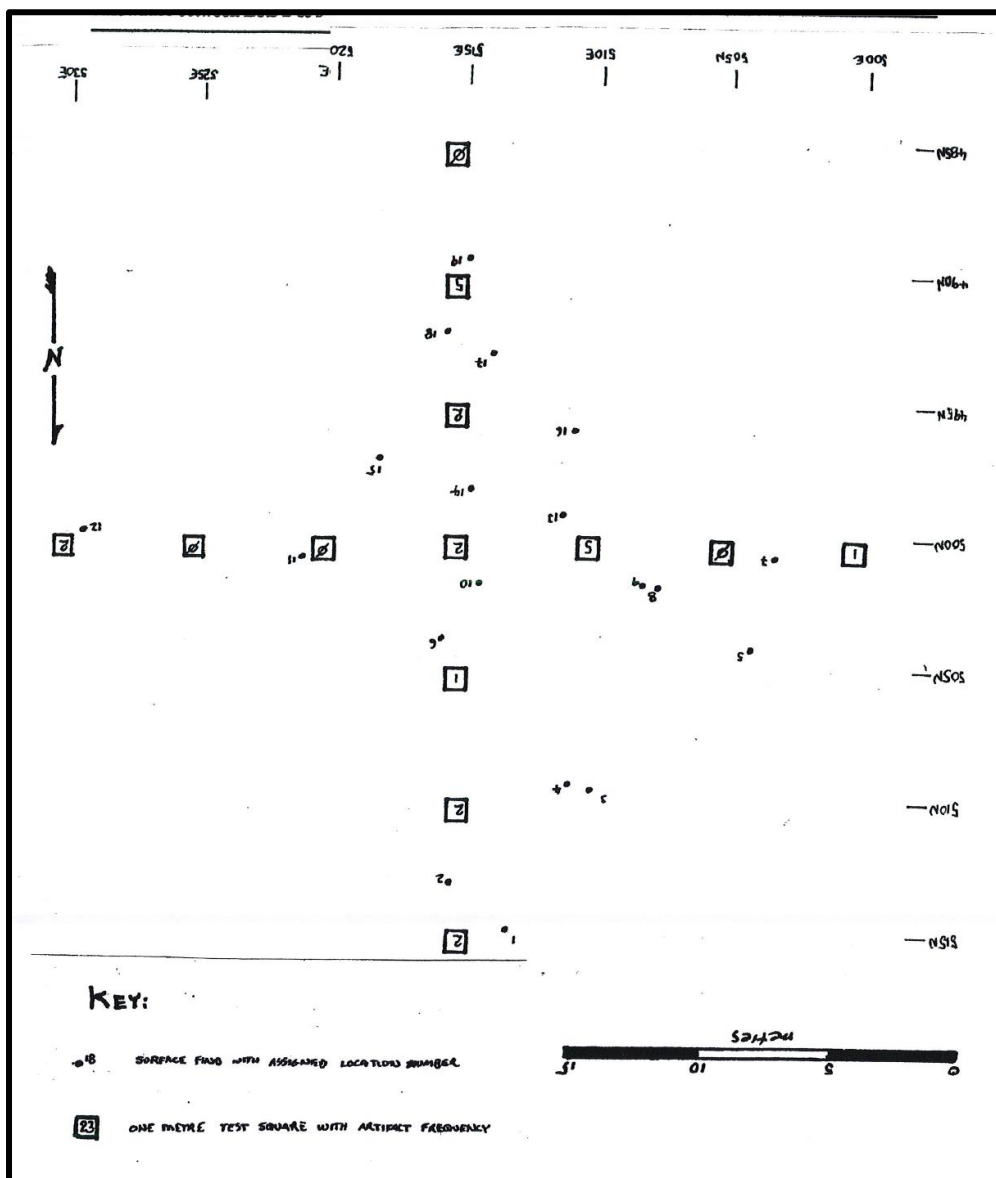




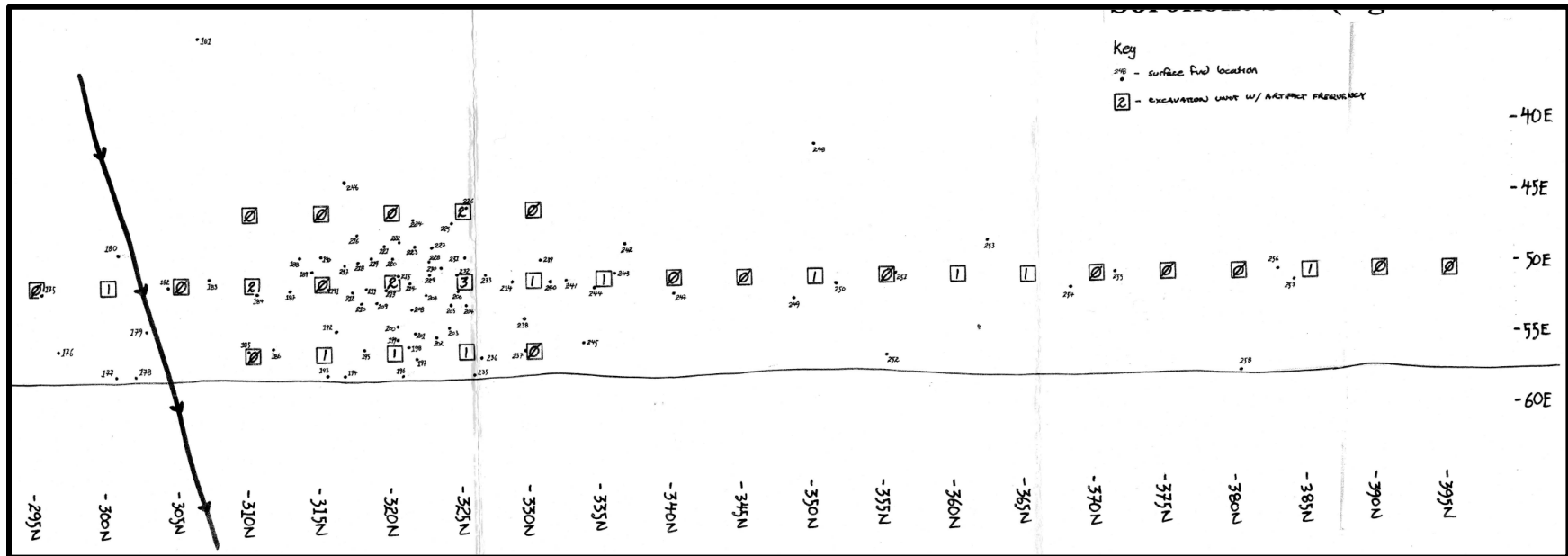
SD Map 23: 2001–2002 Investigation (AgGs-251)
(AMICK 2003:Figure 19)



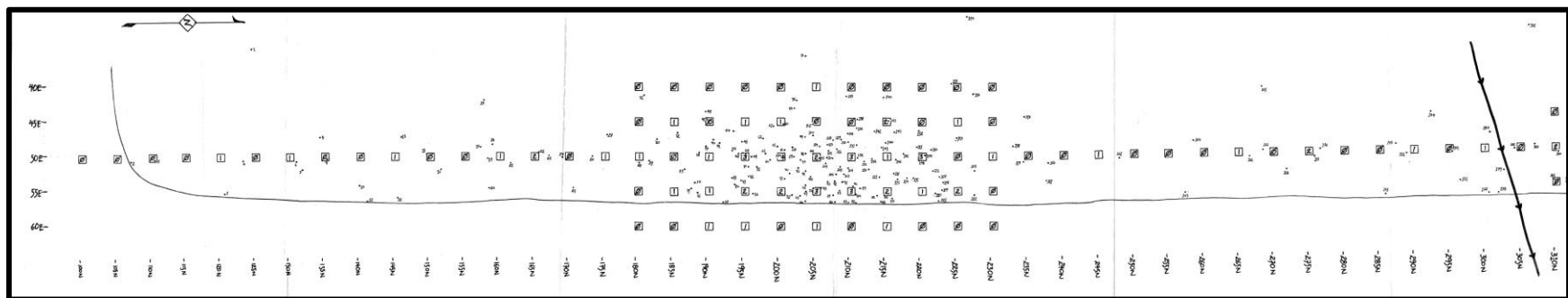
SD Map 24: 2001-2002 Investigation (AgGs-252)
(AMICK 2003:Figure 20)



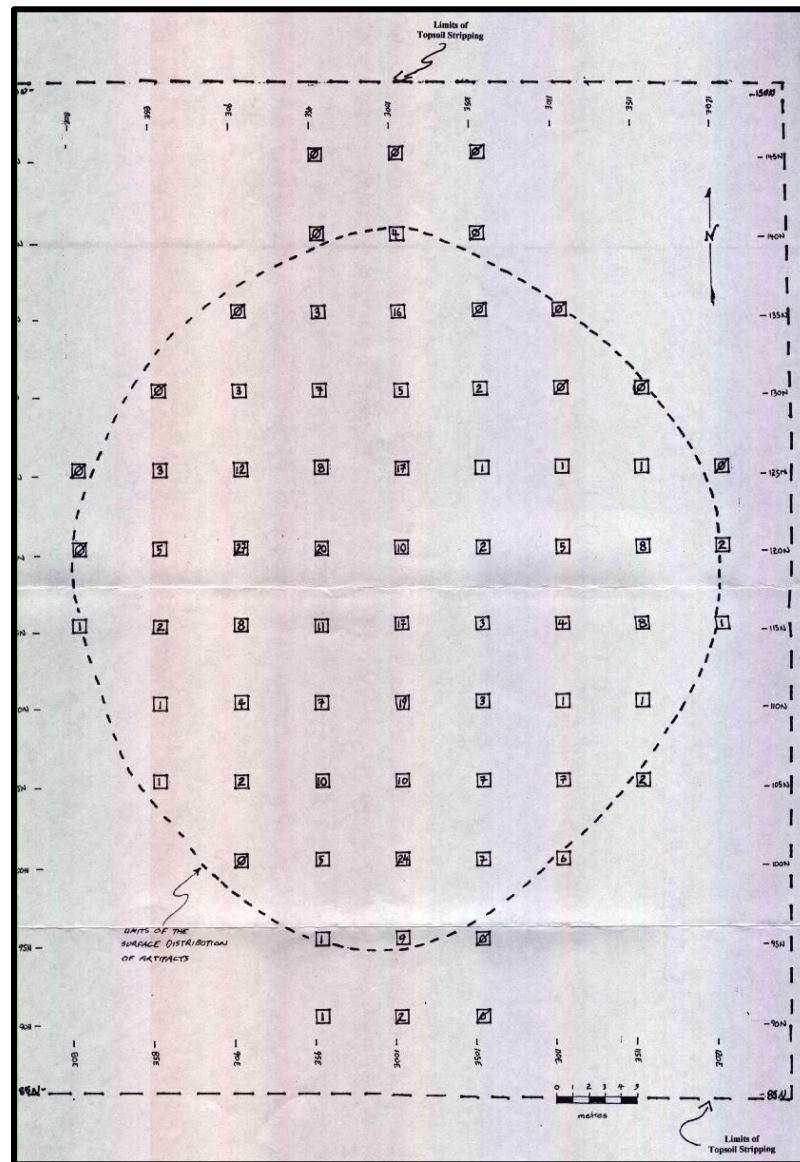
SD Map 25: 2001-2002 Investigation (AgGs-253)
(AMICK 2003:Figure 21)



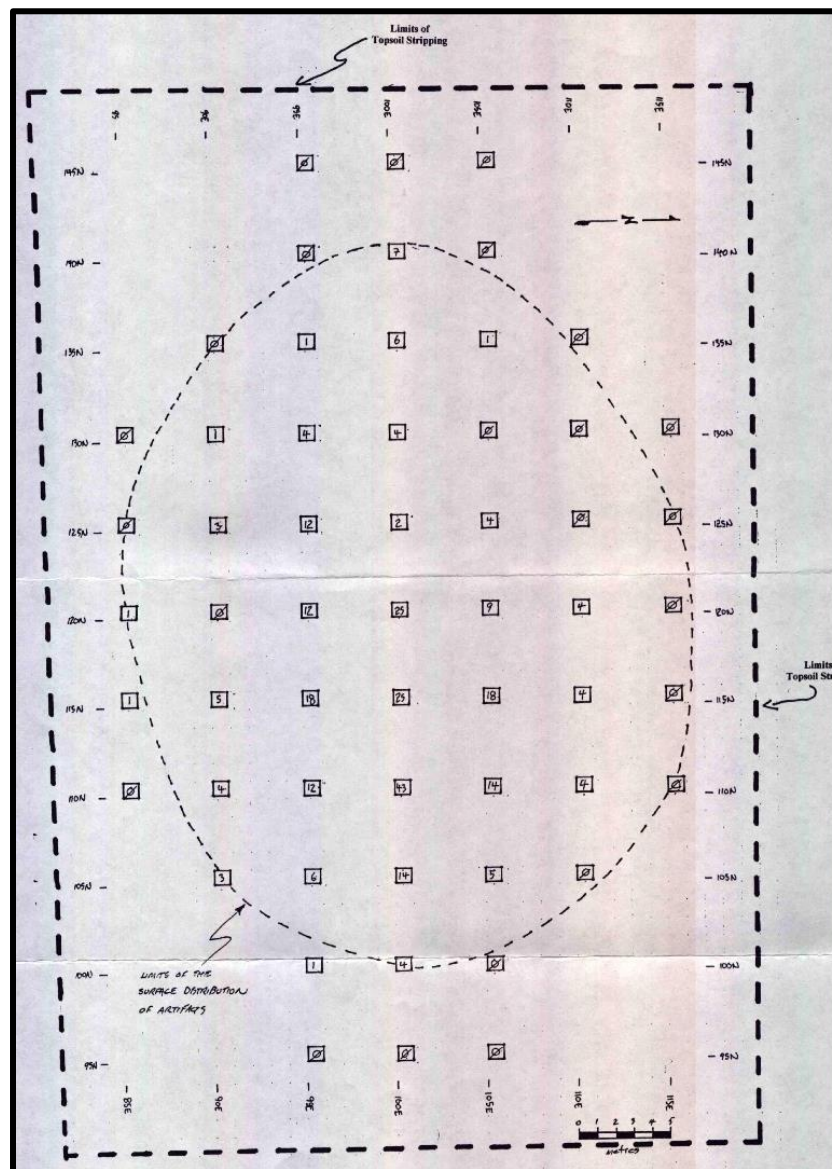
SD Map 26: 2003–2004 Investigation (Sorokolit)
(AMICK 2005:Figure 4)



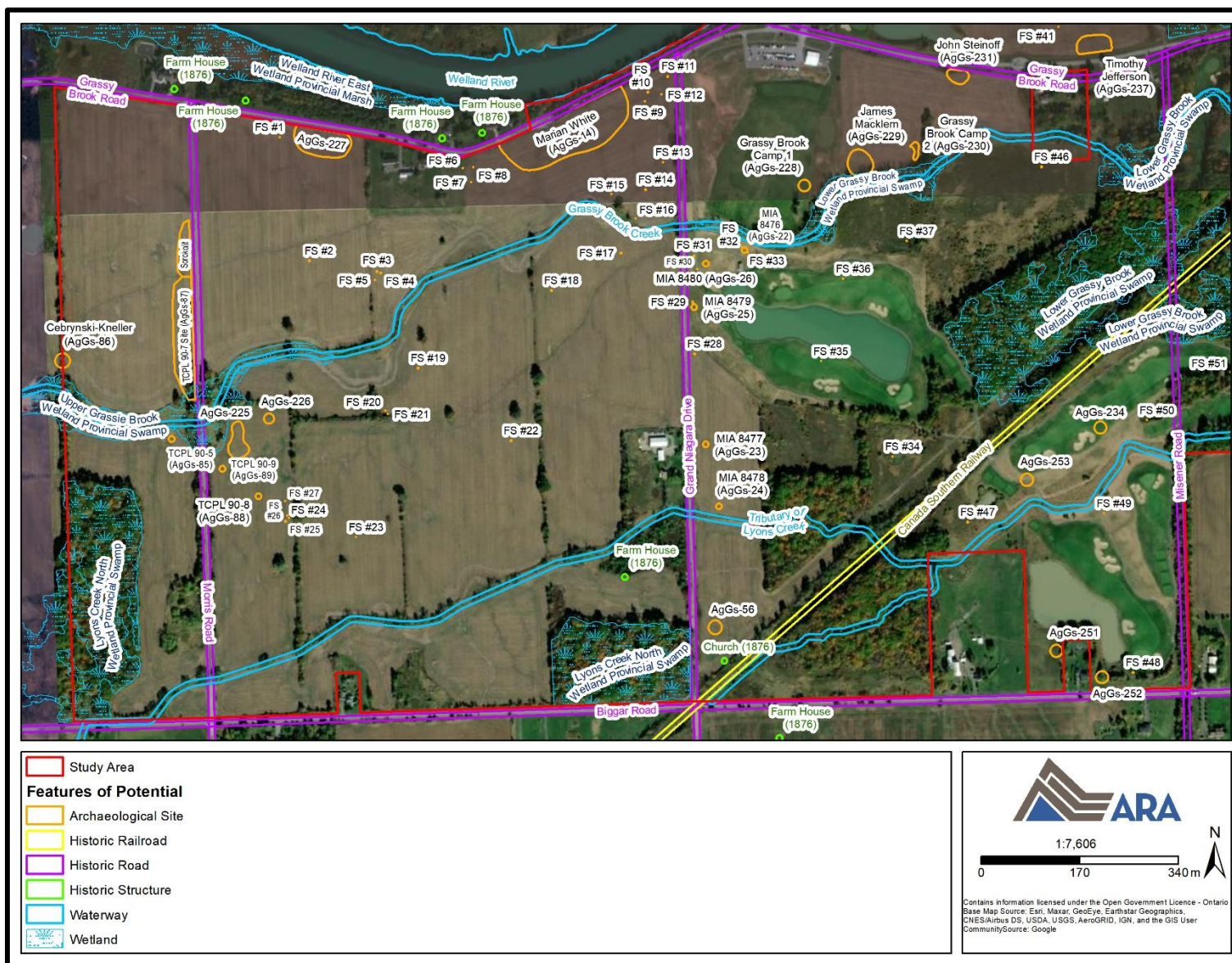
SD Map 27: 2003–2004 Investigation (TCPL 90-7)
(AMICK 2005:Figure 4)



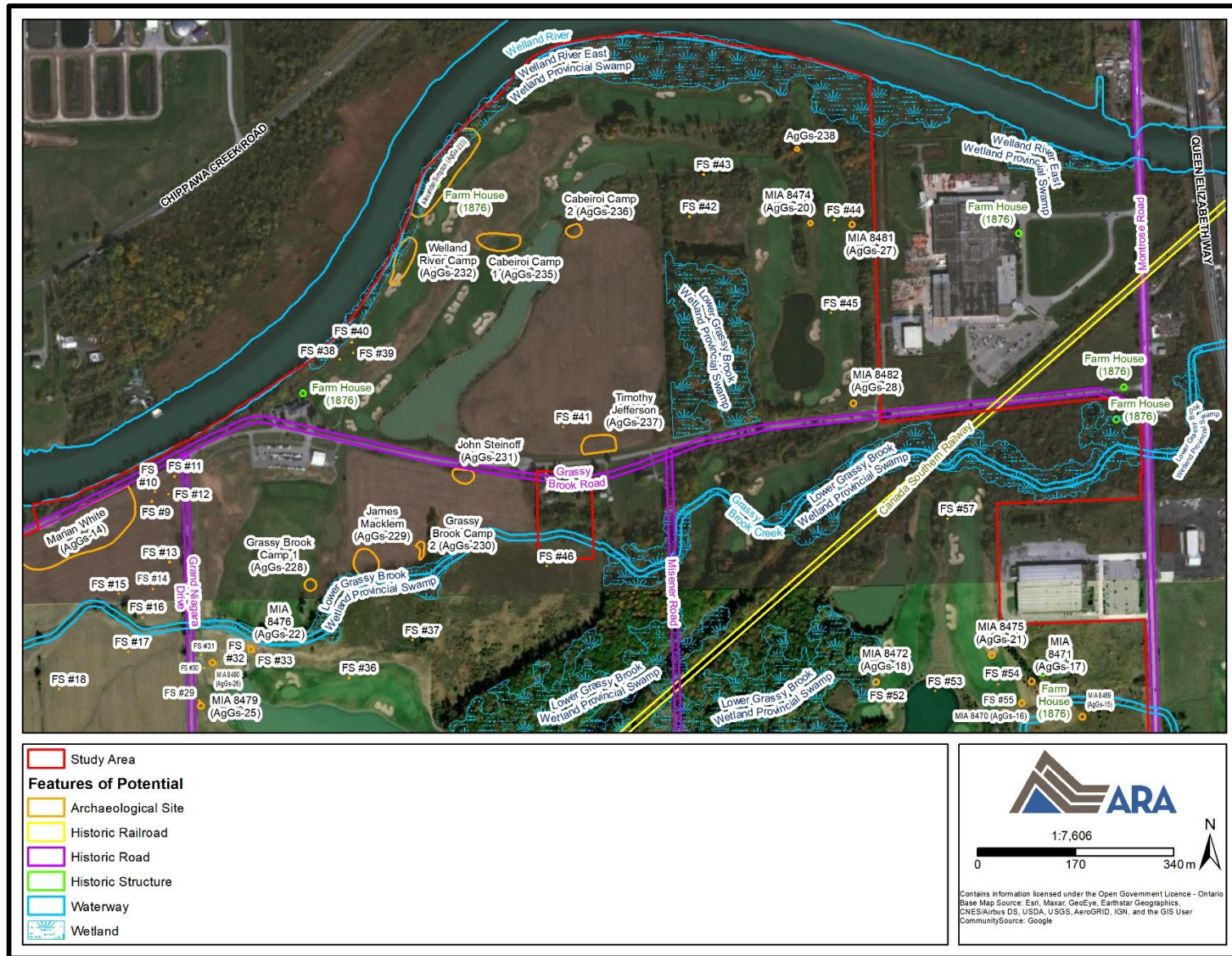
SD Map 28: 2004 Investigation (James Macklem)
(AMICK 2004:Figure 4)



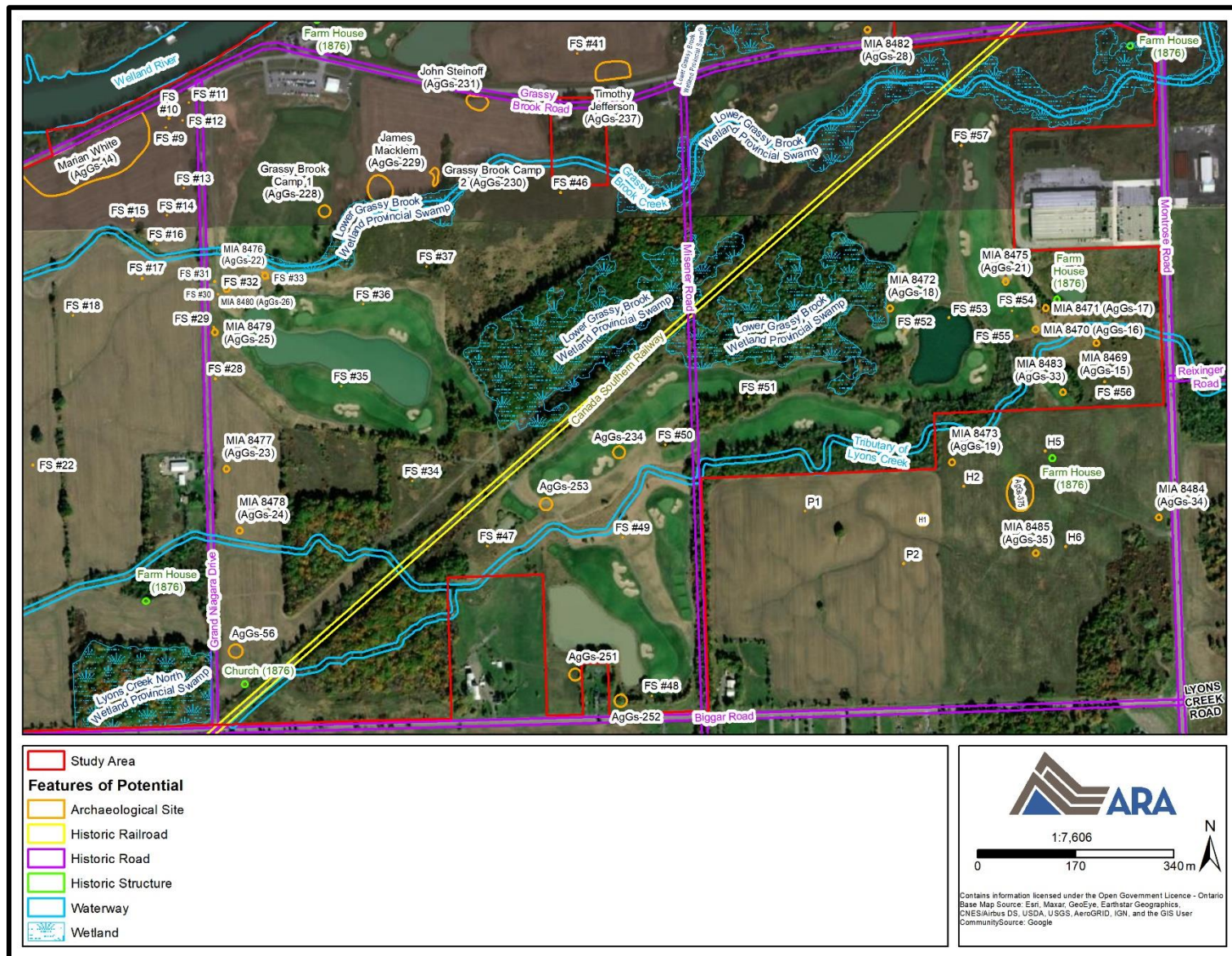
SD Map 29: 2004 Investigation (John Steinhoff)
(AMICK 2004:Figure 5)



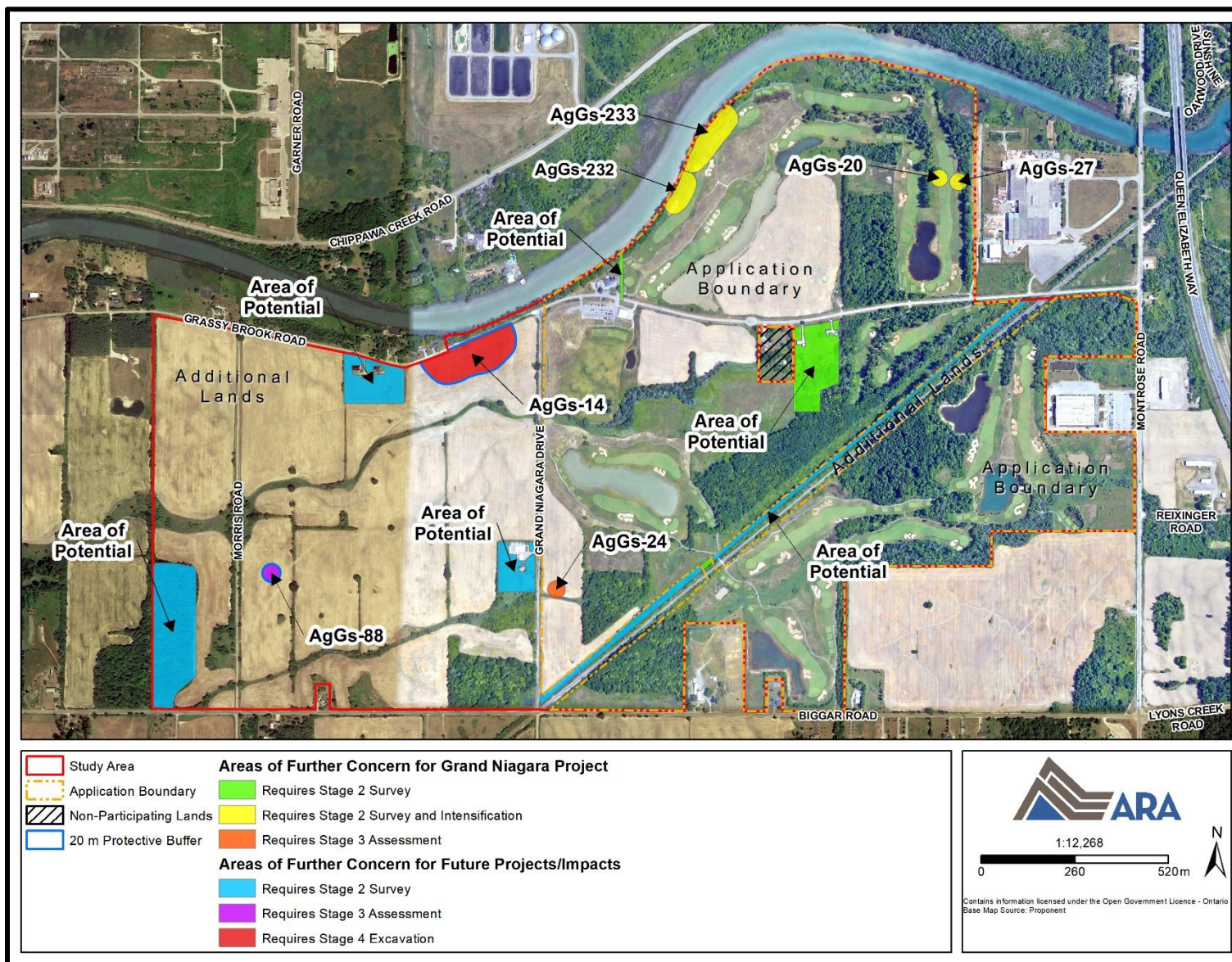
SD Map 30: Features of Potential with Site Information (West)
 (Produced under licence using ArcGIS® software by Esri, © Esri)



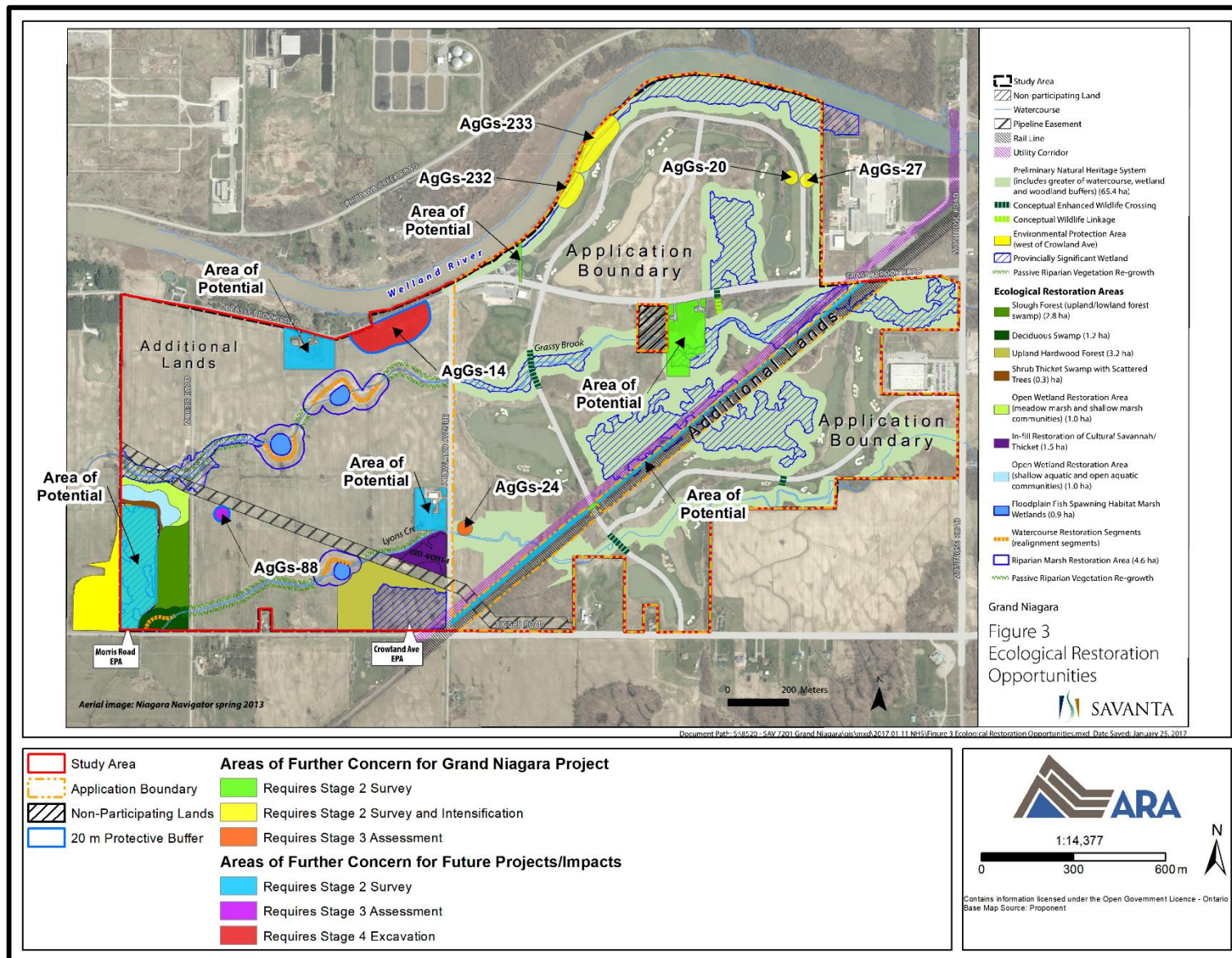
SD Map 31: Features of Potential with Site Information (North)
 (Produced under licence using ArcGIS® software by Esri, © Esri)



SD Map 32: Features of Potential with Site Information (East)
 (Produced under licence using ArcGIS® software by Esri, © Esri)



SD Map 33: Recommendations (Aerial Image)
 (Produced under licence using ArcGIS® software by Esri, © Esri)



SD Map 34: Recommendations (Ecological Restoration Areas)
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3.0 BIBLIOGRAPHY AND SOURCES

AMICK Consultants Ltd. (AMICK)

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- 2004 *Report on the 2004 Stage 4 Mitigative Excavations of the John Steinhoff Site (AgGs-231) and the James Macklem Site (AgGs-229) within the Proposed Grand Niagara Resort, Part of Lots 1–6 & Part of the Road Allowance between Lots 2 & 3 Broken Front (Formerly within the Township of Crowland, County of Welland), City of Niagara Falls, Regional Municipality of Niagara.* CIF #P058-021. AMICK.
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- 1989 *Report on an Archaeological Resource Assessment of the Proposed Union Gas NPS 24 Niagara Line.* Licence #88-60. MPA.

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- 1985 *Final Report, Site Selection Process Phase 4A: Selection of a Preferred Site(s) – Archaeology.* Licence #84-15. MIA.

**Stage 1 Archaeological Assessment
Grand Niagara Project
City of Niagara Falls
Regional Municipality of Niagara
Part of Lots 1–7, Broken Front Concession
Geographic Township of Crowland
Former Welland County, Ontario**

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24/08/2022

Record of Indigenous Engagement

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ROIE TABLES

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1.0 RECORD OF INDIGENOUS ENGAGEMENT

1.1 Summary of Events

Subsequent to submitting a Project Information Form (PIF) inquiry to the Ministry of Tourism, Culture and Sport, the Department of Accommodation & Consultation (DOCA) on behalf of the Mississaugas of the Credit First Nation (MCFN) reached out to Archaeological Research Associates Ltd. (ARA) to inquire about the status of the project. ARA accordingly engaged with DOCA on behalf of MCFN and also reached out to the Haudenosaunee Development Institute (HDI) on behalf of the Haudenosaunee Confederacy Chiefs Council (HCCC) and the Six Nations Lands & Resources Office (SNLR) on behalf of the Six Nations of the Grand River Elected Council (SNGREC) at the direction of the proponent. In keeping with the requirements set out in Section 7.6.2 of the 2011 *Standards and Guidelines for Consultant Archaeologists*, a description of ARA's involvement in the process is summarized below. The 2011 *Engaging Aboriginal Communities in Archaeology* draft technical bulletin was also consulted for guidance.

ARA's involvement in the engagement process consisted of a response to MCFN's inquiry and the circulation of the draft report to the engaged groups for review and comment. A summary of engagement events appears in RoIE Table 1.

RoIE Table 1: Summary of Engagement Events

Group	Date	Engagement Event	Nature
DOCA on behalf of MCFN Contacts: A. LaForme, M.-A. Prevost	11-Nov-21	ARA received a PIF Inquiry request from MCFN requesting details regarding the project.	Email
	07-Apr-22	V. Cafik responded to the request and circulated the draft Stage 1 report for review.	Email
	19-Apr-22	M.-A. Prevost requested clarifications regarding whether the previous surveys used a 5 m interval and 1 m intensification when sites were found and whether there were any catalogues in the old reports or mentions of pottery or exotic cherts.	Email
	15-Aug-22	V. Cafik provided a breakdown of the methods and catalogues in the past reports, and concluded that all areas were ultimately surveyed at a 5 m interval and intensified with a 1 m interval, that no pottery was found, and that ARA assumes no exotic cherts were found (as none were mentioned)	Email
HDI on behalf of HCCC Contacts: S. Martin, T. Williams	07-Apr-22	V. Cafik circulated the draft Stage 1 report for review.	Email
	17-Apr-22	V. Cafik inquired whether ARA could anticipate any comments.	Email
	19-May-22	M. McCready followed up on the status of the review.	Email
	24-Aug-22	No response received.	-
SNLR on behalf of SNGREC Contact: T. Hill-Montour	07-Apr-22	V. Cafik circulated the draft Stage 1 report for review.	Email
	19-May-22	M. McCready followed up on the status of the review.	Email
	20-May-22	T. Hill-Montour responded that she would review that morning. M. McCready sent his thanks.	Email
	24-Aug-22	No further response received.	-