

APPENDIX 3

STAGE 1 ARCHAEOLOGICAL ASSESSMENT REPORT



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Jan 27, 2017

Philip Woodley (P018)
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RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "STAGE 1 ARCHAEOLOGICAL ASSESSMENT OF REGIONAL ROAD 81 (KING STREET) FROM GREEN LANE TO LINCOLN AVENUE LOTS 19 TO 22, CONCESSION 2 AND LOTS 18 AND 19 CONCESSION 3 IN THE GEOGRAPHIC TOWNSHIP OF CLINTON, LINCOLN COUNTY, TOWN OF LINCOLN, REGIONAL MUNICIPALITY OF NIAGARA ", Dated Jan 3, 2017, Filed with MTCS Toronto Office on Jan 9, 2017, MTCS Project Information Form Number P018-0813-2016, MTCS File Number 0005453

Dear Mr. Woodley:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18.¹ This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 Standards and Guidelines for Consultant Archaeologists set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment of the study area as depicted in Figures 7 and 14 of the above titled report and recommends the following:

On the basis of the above information, the following recommendations are made:

1. A portion of the study corridor (73.91%) is disturbed and requires no further assessment.
2. The remainder of the study area (26.09%) requires a Stage 2 archaeological assessment, all of which is located on manicured lawns and the ROW and cannot be ploughed. As a result, a Stage 2 test pit survey must occur prior to ground disturbing activities as per Section 2.2.1 of the Standards and Guidelines for Consultant Archaeologists (MTCS 2011:31)

However, should previously unknown or unassessed deeply buried archaeological resources be uncovered during development, 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 archaeologist to carry out archaeological fieldwork,

in compliance with sec. 48 (1) of the Ontario Heritage Act.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 Standards and Guidelines for Consultant Archaeologists and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

John Dunlop
Archaeology Review Officer

cc. Archaeology Licensing Officer
Scott Kozub, Kerry T. Howe Engineering Limited
Phil Lambert, Niagara Region

¹In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

**STAGE 1 ARCHAEOLOGICAL ASSESSMENT OF REGIONAL ROAD 81
(KING STREET) FROM GREEN LANE TO LINCOLN AVENUE
LOTS 19 TO 22, CONCESSION 2 AND LOTS 18 AND 19 CONCESSION 3 IN THE
GEOGRAPHIC TOWNSHIP OF CLINTON, LINCOLN COUNTY,
TOWN OF LINCOLN, REGIONAL MUNICIPALITY OF NIAGARA**

Original License Report

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Project # P018-0813-2016

January 3, 2017

EXECUTIVE SUMMARY

This report discusses the rationale, methods and results of the Stage 1 archaeological assessment for the proposed road and drainage improvements to the 2.5 km corridor of Regional Road 81 (King Street) between Green Lane and Lincoln Avenue in the Town of Lincoln, Regional Municipality of Niagara. Triggered by the *Environmental Assessment Act*, this assessment was undertaken as part of the Schedule C Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (Class EA) for the proposed municipal service improvements to Regional Road 81 (King Street). The study corridor is located on Lots 19 to 22, Concession 2 and Lots 18 and 19, Concession 3 in the Geographic Township of Clinton, Lincoln County. New Directions Archaeology Ltd. (NDA) was contracted by Kerry T. Howe Engineering Ltd. on behalf of the Regional Municipality of Niagara to conduct this Stage 1 archaeological assessment. The study corridor measures approximately 2.5 km along Regional Road 81 (King Street) within the existing right-of-way (ROW), and overall measures 6.34 ha.

The purpose of this Stage 1 archaeological assessment is to provide information about the property's geography, history, previous archaeological fieldwork, and current land condition in order to determine the property's potential to contain archaeological material. Detailed documentary research was conducted as part of this study and provides a record of the property's archaeological and land use history, as well as its present condition. This research is presented in the historical and archaeological context sections of this report. A property inspection was also completed to gain first-hand knowledge of the property's geography, topography, and current condition, and to evaluate and map archaeological potential. Permission to access the property was granted to NDA by the property owner, and photos were taken from publicly accessible lands.

Late nineteenth century and twentieth century development of the study corridor has led to extensive and deep land alterations that have removed archaeological potential within a portion of the study corridor (73.91%). The disturbance observed is related to the construction of Regional Road 81, its cross streets, residential development, and related utility infrastructure. The remaining 26.09% of the study corridor retains archaeological potential.

On the basis of the above information, the following recommendations are made:

1. A portion of the study corridor (73.91%) is disturbed and requires no further assessment.
2. The remainder of the study area (26.09%) requires a Stage 2 archaeological assessment, all of which is located on manicured lawns and the ROW and cannot be ploughed. As a result, a Stage 2 test pit survey must occur prior to ground disturbing activities as per Section 2.2.1 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011:31)

However, should previously unknown or unassessed deeply buried archaeological resources be uncovered during development, 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

archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the *Ontario Heritage Act*.

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1.0 PROJECT CONTEXT

1.1 Development Context

This report discusses the rationale, methods and results of the Stage 1 archaeological assessment for the proposed road and drainage improvements to the 2.5 km corridor of Regional Road 81 (King Street) between Green Lane and Lincoln Avenue in the Town of Lincoln, Regional Municipality of Niagara (Map 1). Triggered by the *Environmental Assessment Act*, this assessment was undertaken as part of the Schedule C Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (Class EA) for the proposed municipal service improvements to Regional Road 81 (King Street) (APPENDIX I). The study corridor is located on Lots 19 to 22, Concession 2 and Lots 18 and 19, Concession 3 in the Geographic Township of Clinton, Lincoln County. New Directions Archaeology Ltd. (NDA) was contracted by Kerry T. Howe Engineering Ltd. on behalf of the Regional Municipality of Niagara to conduct this Stage 1 archaeological assessment. The study corridor measures approximately 2.5 km along Regional Road 81 (King Street) within the existing right-of-way (ROW), and overall measures 6.34 ha.

The purpose of this Stage 1 archaeological assessment is to provide information about the property's geography, history, previous archaeological fieldwork, and current land condition in order to determine the property's potential to contain archaeological material. Detailed documentary research was conducted as part of this study and provides a record of the property's archaeological and land use history, as well as its present condition. This research is presented in the historical and archaeological context sections of this report (Sections 1.2 and 1.3). A property inspection was also completed to gain first-hand knowledge of the property's geography, topography, and current condition, and to evaluate and map archaeological potential (Section 2.2). Permission to access the property was granted to New Directions Archaeology Ltd. by the property owner, and photos were taken from publicly accessible lands.

Assessment activities were conducted in accordance with the provisions of the *Ontario Heritage Act* (R.S.O. 1990, c.o. 18) in compliance with the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011) under an archaeological consulting license (#P018) issued to Phillip Woodley of New Directions Archaeology Ltd. The field notes, photos and related documents will be curated at the office of New Directions Archaeology Ltd. (APPENDIX II).

1.2 Historical Context

After a century of archaeological work in southern Ontario, scholarly understanding of the historic usage of lands in the Regional Municipality of Niagara has become very well-developed. With occupation beginning in the Palaeo-Indian period approximately 11,000 years ago, the greater vicinity of the study corridor comprises a complex chronology of Pre-Contact and Euro-Canadian histories. Section 1.2.1 provides an overview of the region's settlement history, and Section 1.2.2 summarizes the past and present land use of the study corridor.

1.2.1 Settlement History

1.2.1.1 Pre-Contact

The Pre-Contact history of the region is both lengthy and rich, and a variety of Aboriginal groups inhabited the landscape. Archaeologists generally divide this complex history into three main periods: Palaeo-Indian, Archaic and Woodland. Each of these periods comprise a range of discrete sub-periods characterized by specific material culture, settlement patterns and lifeways. The principal archaeological horizons/cultures of the region 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
<i>Early Palaeo-Indian</i>	9000–8400 BC	Gainey, Barnes and Crowfield traditions; Small bands; Mobile hunters and gatherers; Utilization of seasonal resources and large territories; Fluted projectiles
<i>Late Palaeo-Indian</i>	8400–7500 BC	Holcombe, Hi-Lo and Lanceolate biface traditions; Continuing mobility; Campsite/Way-Station sites; Smaller territories are utilized; Non-fluted projectiles
<i>Early Archaic</i>	7500–6000 BC	Side-notched, Corner-notched (Nettling, Thebes) and Bifurcate Base traditions; Growing diversity of stone tool types; Heavy woodworking tools appear (e.g., ground stone axes and chisels)
<i>Middle Archaic</i>	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
<i>Late Archaic</i>	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)
<i>Early Woodland</i>	900–400 BC	Meadowood tradition; Crude cord-roughened ceramics emerge; Meadowood cache blades and side-notched points; Bands of up to 35 people
<i>Middle Woodland</i>	400 BC–AD 600	Saugeen tradition; Stamped ceramics appear; Saugeen projectile points; Cobble spall scrapers; Seasonal settlements and resource utilization; Post holes, hearths, middens, cemeteries and rectangular structures identified
<i>Middle/Late Woodland Transition</i>	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
<i>Late Woodland (Early Iroquoian)</i>	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
<i>Late Woodland (Middle Iroquoian)</i>	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)
<i>Late Woodland (Late Iroquoian)</i>	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

1.2.1.2 Post-Contact

The arrival of the European explorers and traders at the beginning of the 17th century triggered widespread shifts in Aboriginal 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; H.R. Page & Co. 1786; Coyne 1895; Lajeunesse 1960; Cumming 1972; Smith 1987; Ellis and Ferris 1990; Surtees 1994; Hughes 2009; NRC 2010; AO 2011)

Historical Event	Timeframe	Characteristics
Early Contact	Early 17 th century	Brûlé explores the area in 1610; Champlain visits in 1613 and 1615/1616; Iroquoian-speakers (Huron, Petun and Neutral) and Algonkian-speakers (Anishinabeg) encountered; European goods begin to replace traditional tools
Five Nations Invasion	Mid-17 th century	Haudenosaunee (Five Nations) invade ca. 1650; Neutral, Huron and Petun Nations are defeated/removed; vast Iroquoian hunting territory established in the second half of the 17 th century; Explorers continue to document the area
Anishnabeg Influx	Late 17 th and early 18 th century	Ojibway, Odawa and Potawatomi expand into Haudenosaunee lands in the late 17 th century; Nanfan Treaty between Haudenosaunee and British in 1701; Anishnabeg occupy the area and trade directly with the French and English
Fur Trade Development	Early and 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-18 th century	<i>Royal Proclamation</i> of 1763 recognizes the title of the First Nations to the land; Numerous treaties arranged by the Crown; First acquisition is the Seneca surrender of the west side of the Niagara River in August 1764
Loyalist Influx	Late 18 th century	United Empire Loyalist influx after the American Revolutionary War (1775–1783); British develop interior communication routes and acquire additional lands; 'Between the Lakes Purchase' in 1784 orchestrated by Haldimand to obtain lands for Six Nations; <i>Constitutional Act</i> of 1791 creates Upper and Lower Canada
County Development	Late 18 th and early 19 th century	The lands comprising Lincoln County were originally included within the Nassau District until 1792 when Lieutenant-Governor Simcoe created the Home District. Lincoln County was created at this time within the Niagara District and included present day Welland County. In 1845, Welland County separated from Lincoln, with Lincoln being comprised of the Townships of Caistor, Clinton, Gainsborough, Grantham, Grimsby, Louth, and Niagara. In 1970, Lincoln and Welland counties re-amalgamated to form the Regional Municipality of Niagara.
Township Formation and Development	19 th century	The historic Township of Clinton, located in the district of Niagara, is said to have been an old settled township by 1846. The land contained many good farms where 10,605 acres were under cultivation of the total 23,378 acres, with one grist mill and six sawmills in operation. By 1841, the population of Clinton was 2,122 individuals. In 1876, Clinton was described as "good, if not the best agricultural township in the Niagara Peninsula. Clinton is well-watered by the 30 Mile Creek, Konkle's Creek, Red Creek and several other small streams, while the topography comprises easy gentle slopes or moderately rolling with an excellent quality of soil that is well adapted to agriculture and horticulture. Growth in the township was swift, and by 1876 there were eleven churches, eleven schools, seven sawmills, two 2 gristmills, one tobacconist establishment and a broom factory. One macadamized road passed through the township by 1876 (Queenston and Grimsby Road), which was originally intended as the Great Military Road of the Province.

1.2.2 Past and Present Land Use

The study corridor is located on Lots 19 to 22, Concession 2 and Lots 18 and 19, Concession 3 in the Geographic Township of Clinton, Lincoln. In an attempt to reconstruct the historic land use of the study corridor, NDA conducted a review of nineteenth century maps and twentieth century aerial photographs focused on the study corridor. This was completed in order to provide insight in to the past and present land use and settlement history of the property.

Review of Nineteenth Century Maps

The nineteenth century maps reviewed include G.R. and G.M. Tremaine's *Map of the Counties of Lincoln and Welland, Canada West* (1862) (Map 2) and H.R. Page & Co.'s *Illustrated Historical*

Atlas of the Counties of Lincoln and Welland, Ont. (1876) (Map 3). The ownership and settlement features of Lots 19 to 22 and Concession 2 and Lots 18 to 19, Concession 3 are documented in Table 3.

Table 3: Summary of Historic Ownership and Nearby Historic Features
(Tremaine 1862; H.R. Page & Co. 1876)

Location		1862 (Tremaine's)			1876 (H.R. Page)		
Lot	Con	Part	Owner(s)	Feat.	Acres	Owner(s)	Feat.
20	2	All	James Paton	1 Structure	All	Andrew Ridley	-
21	2	All	Joseph Simmerman	2 Structures	All	Joseph Zimmerman	1 Structure 1 Orchard
22	2	All	John McLean	1 Saw Mill 1 Structure	All	John McLean	4 Structures 1 Orchard 1 Sawmill 1 Blacksmith Shop
18	3	All	Rawley Kilborn	-	All	Rosetta McGregor	3 Structures 1 Orchard
19	3	All	William Snyder	1 Structure	All	William Snyder	1 Structure

The 1862 Tremaine map shows the study corridor runs along a historically laid road that extends west from Grimsby towards the village of Beamsville, and that traverses several waterways. Several structures were illustrated within the vicinity of the study corridor including one on each of Lots 20 to 22 Concession 2 and one on Lot 19, Concession 3. The 1876 H.R. Page & Co. Atlas illustrates a more developed thoroughfare with additional structures having been constructed along the roadway along with two orchards.

The nineteenth century map review has demonstrated that while numerous historic structures were located in the area surrounding the study corridor, no structures were located immediately within study corridor. This is unsurprising given the study corridor is a historical road. It is certainly likely that some of the structures documented on the nineteenth century maps may have been located immediately adjacent to the study corridor, and possibly within the present ROW. It is also noted that not all structures were illustrated on historic maps and as a result, additional structures such as outbuildings may be present within the study corridor. Given the proximity of the study corridor to documented historic roadways (King Street, Thirty Road and Lincoln Avenue), documented structures, and its location between historic Grimsby and Beamsville, there is a distinct possibility of locating historic materials within the study corridor.

Review of Twentieth Century Aerial Photographs

A review of 20th century aerial photographs demonstrate that there have not been significant alterations to the study corridor. Imagery from 1934 and 1954 show that the study corridor and its general surroundings were agricultural in nature, with roadways and houses present along the study corridor (Map 4 and Map 5).

Currently, the study corridor is comprised of Regional Road 81 (King Street) and both right-of ways (ROWs) including soft shoulders, ditches, and small portions of the manicured lawns and driveways located within the Region's ROW.

1.3 Archaeological Context

The archaeological context of any given study corridor must be informed by the general condition of the property (Section 1.3.1), summaries of any previous archaeological work conducted within 50 m of the study corridor (Section 1.3.2), and whether there are any registered or known archaeological sites located within 1 km of the study corridor (Section 1.3.3). The Stage 1 property inspection was carried out on August 12, 2016, and the specific weather and lighting conditions are summarized in Section 2.2.

1.3.1 Condition of the Property

The study corridor is located within the deciduous forest region of southern Ontario, which is dominated by agricultural and rural areas. In terms of physiography, this study corridor is located within the Iroquois Plain, a former zone of beaches off of ancient glacial Lake Iroquois (Chapman & Putnam 1984: 190). The Iroquois Plain physiographic region borders the western portion of Lake Ontario from the Niagara River to the Trent River and was formed as a result of glacial recession and the emptying of Lake Iroquois towards New York State, and is comprised of myriad soil variations (Chapman and Putnam 1984: 190-196).

In terms of drainage, Thirty Mile Creek traverses the study corridor, as do several tributaries of Lake Ontario. The study corridor is 1.4 km west of Bartlett Creek, 2.2 km northeast of Grimsby Woodlot Swamp and 1.9 km from Lake Ontario. The land in this study corridor generally slopes down toward Lake Ontario (Map 1). The soils within the study corridor comprises mostly Miscellaneous (NM) as well as Chinguacousy (CGU-3 and CGU-10), Oneida (OID-5), Trafalgar (TFG-2 and TFG-4) and Tavistock (TVK-11) (Presant & Wicklund 1963). More specifically, the study corridor measures 2.5 km in length from approximately 100 m east of the King Street and Lincoln Avenue intersection westward to approximately 150 m southeast of the traffic circle at Durham Road and King Street. The project location also includes about 100 m of each of the following intersecting roads and their ROWs: Lincoln Avenue, Mountainview Road and Thirty Road. The ROW varies in width between 15 and 50 m. The ROW includes King Street, the three crossroads mentioned above and in some parts, small portions of residential lawns and driveways located with the Region's ROW.

1.3.2 Previous Archaeological Work

The MTCS's Ontario Archaeological Sites Database was consulted to determine whether any archaeological assessments had been previously conducted within the limits of, or immediately adjacent to the study corridor. No assessments were identified as having been conducted within 1 km of the study corridor.

1.3.3 Registered or Known Archaeological Sites

The MTCS's Ontario Archaeological Sites Database was consulted to determine whether any registered or known archaeological resources are located within 1 km of the study corridor. While no sites have been documented within the study corridor, three sites have been previously identified within 1 km (Table 4). These sites are not within 50 m of the study corridor.

Table 4: Registered or Known Archaeological Sites within 1 km

Borden No.	Site Name	Researcher (s)	Cultural Affiliation	Site Type
AhGx-690	Location 1071	-	Pre-Contact Euro-Canadian	Camp/Campsite
AgGu-66	Highland Estates 4	-	Pre-Contact	-
AgGu-59	Hillview Estates	-	Pre-Contact	-

2.0 STAGE 1 BACKGROUND STUDY

2.1 Background Study Methods

The Stage 1 background study was completed as per Section 1.1 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011:14). The background study involved an examination of the archaeology, history, geography and current land condition of the vicinity of the study corridor and is detailed in the Historical and Archaeological Context sections above. The research includes information from the following sources:

- Historic settlement maps
- Aerial photographs
- Commemorative plaques or monuments
- The most up-to-date listing of sites from the Ministry of Tourism, Culture and Sport's archaeological sites database within 1 km of the study corridor
- Reports of previous field work within 50 m of the study corridor
- Topographic maps at 1:10,000 (recent and/or historical) or the most detailed scale available

The highest quality and most detailed mapping available was utilized. The background study has demonstrated the past and present land use and settlement history of the property, and has provided information sufficient to evaluate the presence of archaeological potential within the study corridor.

2.2 Property Inspection Field Methods

In order to gain first-hand knowledge of the geography, topography and current condition of the study corridor, a property inspection was conducted on August 12, 2016. The study corridor was subject to random spot checking in accordance with the requirements set out in Section 1.2 of the S&Gs (MTCS 2011:15–17). Fieldwork was carried out under weather and lighting conditions that met the requirements set out in Section 1.2 Standard 2 of the S&Gs (MTCS 2011:16). Environmental conditions were ideal during the inspection, with sunny skies, a high of 34 °C, and excellent lighting. The study corridor was extensively documented with photographs (Image 1 to Image 15).

The property inspection confirmed that all features of archaeological potential (e.g., historically-surveyed roadways, watercourse, etc.) 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.). No culturally-significant structures or built features that would affect assessment strategies were identified (MTCS 2011:16–17). The property inspection demonstrated that part of the corridor (74%) is disturbed, having been subject to extensive and deep land alterations related to the construction of King Street, its cross streets, residential development, and related utilities. The remaining 26% of the study corridor retains archaeological potential (Map 7 to Map 14).

Nearly the entire study corridor is located within King Street and its associated sidewalks, soft/hard shoulders and driveways (Image 1 to Image 9), where significant disturbance is evident. Some small portions of the study corridor along King Street are within manicured lawns and driveways of residential/commercial structures (Image 7). Some of the study area, mostly along the south side of the road, exhibits a slope greater than 20 degrees (Image 10 and Image 11). Some permanently wet areas (as defined within MTC 2011:28) were encountered along the study area, associated with streams and tributaries of either Lake Ontario or Thirty Mile Creek (Image 12 to Image 15). No unusual physical features were encountered that affected the results of the Stage 1 assessment.

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 S&Gs (MTCS 2011:17–18) 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. Also taken into consideration is the presence and extent of deep land alterations that have severely damaged the integrity of any archaeological resources.

The Stage 1 assessment resulted in the identification several features of archaeological potential within the vicinity of the study corridor (Map 7). The study corridor is traversed by Thirty Mile Creek and is also 1.4 km west of Bartlett Creek, 2.2 km northeast of Grimsby Woodlot Swamp and 1.9 km from Lake Ontario. Three archaeological site have been previously registered within one km of the study corridor. The visual assessment also noted that some of the study corridor appeared undisturbed.

However, late nineteenth century and twentieth century development of the study corridor has led to extensive and deep land alterations that have removed archaeological potential within a portion of the property (74%) (Map 7–Map 14). The disturbance observed is related to the construction of Regional Road 81, its cross streets, residential development, and related utility infrastructure.

3.0 RECOMMENDATIONS

On the basis of the above information, the following recommendations are made:

1. A portion of the study corridor (74%) is disturbed and requires no further assessment. Disturbance resulted from road construction of R.R. 81, side streets, residential development, and related utility infrastructure.
2. The remainder of the study area (26%) requires a Stage 2 archaeological assessment, all of which is located on manicured lawns and/or the ROW and cannot be ploughed. As a result, a Stage 2 test pit survey must occur prior to ground disturbing activities as per Section 2.1.2 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011:31).

However, should previously unknown or unassessed deeply buried archaeological resources be uncovered during development, 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 archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the *Ontario Heritage Act*.

Any person discovering human remains must immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Government Services. Contacts: Culture Unit, Programs and Services, Ministry of Tourism, Culture and Sport: (416) 212-4019 and Registrar of Cemeteries, Cemeteries Regulation Unit: (416) 326-8404 or (416)-326-8393.

Finally, development should not proceed before receiving confirmation that the Ministry of Tourism, Culture and Sport has entered the report into the provincial register of reports. This report is filed with the Minister of Tourism, Culture and Sport in compliance with sec. 65 (1) of the *Ontario Heritage Act*. The ministry reviews reports to ensure that the licensee has met the terms and conditions of the license and archaeological resources have been identified and documented according to the standards and guidelines set by the ministry, ensuring the conservation, protection and preservation of the heritage of Ontario.

4.0 ADVICE ON COMPLIANCE WITH LEGISLATION

Section 7.5.9 of the 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 (MTCS 2011:126–127):

1. This report is submitted to the *Minister of Tourism, Culture and Sport* as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the *Ministry of Tourism, Culture and Sport*, a letter will be issued by the ministry stating that there are no further concerns with regard to alteration to archaeological sites by the proposed development.
2. 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 times 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*.
3. 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*.
4. The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the *Ministry of Consumer Services*.

5.0 IMAGES



Image 1: View of King Street
(Photo Taken on August 12, 2015; Facing Southeast)



Image 2: View of King Street
(Photo Taken on August 12, 2015; Facing Northwest)



Image 3: View of King Street
(Photo Taken on August 12, 2015; Facing Northwest)



Image 4: View of King Street
(Photo Taken on August 12, 2015; Facing Northwest)



Image 5: View of King Street
(Photo Taken on August 12, 2015; Facing Northwest)

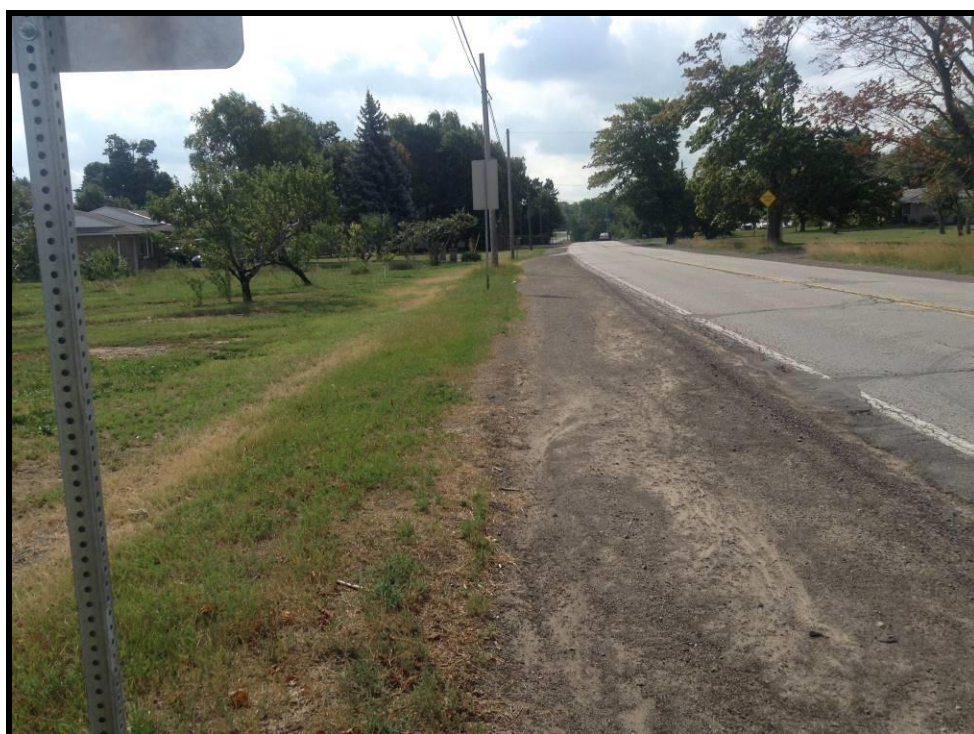


Image 6: View of King Street
(Photo Taken on August 12, 2015; Facing Southeast)



Image 7: View of King Street
(Photo Taken on August 12, 2015; Facing Southeast)



Image 8: Example of Side Street – View of Lincoln Avenue
(Photo Taken on August 12, 2015; Facing Southeast)



Image 9: Example of Side Street – View of Thirty Road
(Photo Taken on August 12, 2015; Facing Southwest)



Image 10: Example of Slope on King Street
(Photo Taken on August 12, 2015; Facing Northwest)



Image 11: Example of Slope on King Street
(Photo Taken on August 12, 2015; Facing Southeast)



Image 12: Permanently Wet – View of culvert on King Street
(Photo Taken on August 12, 2015)



Image 13: Permanently Wet – View of wooded area and a waterway
(Photo Taken on August 12, 2015; Facing North)



Image 14: Permanently Wet
(Photo Taken on August 12, 2015; Facing North)

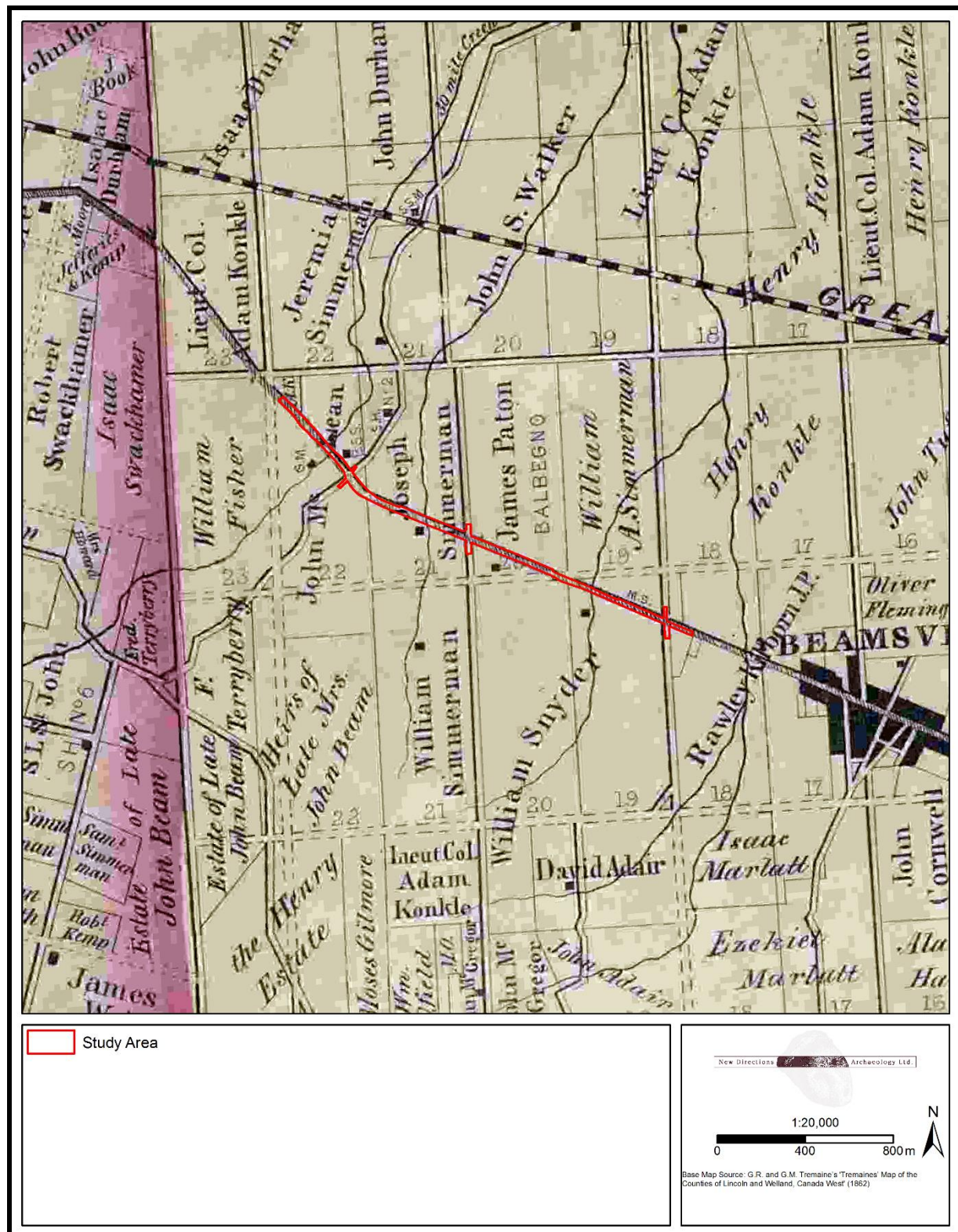


Image 15: Permanently Wet – View of culvert
(Photo Taken on August 12, 2015; Facing South)

The map displays the proposed rail alignment (red line) through the Beamsville area. Key features include:

- Topography:** Contour lines indicating elevation, with labels for 125 m and 115 m.
- Water Features:** A creek or river flowing through the area.
- Infrastructure:**
 - Roads:** Durham Road, Mountainview Road, King Street, Mulberry Avenue, Hillview Drive, Stadelbauer Drive, Highland Park Drive, and William Street.
 - Highways:** Highway 81 and Highway 40.
 - Other:** Mountainview Conservation Area, Mt. Osborne Cemetery, and Beamsville Fairgrounds.
- Legend:** A red rectangle indicates the "Study Area".
- Scale and Orientation:**
 - Scale: 1:15,000.
 - Scale bar: 0 to 600 m.
 - North arrow pointing upwards.
- Source Information:**
 - Base Map Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Mapbox India, © OpenStreetMap contributors, and the GIS User Community.

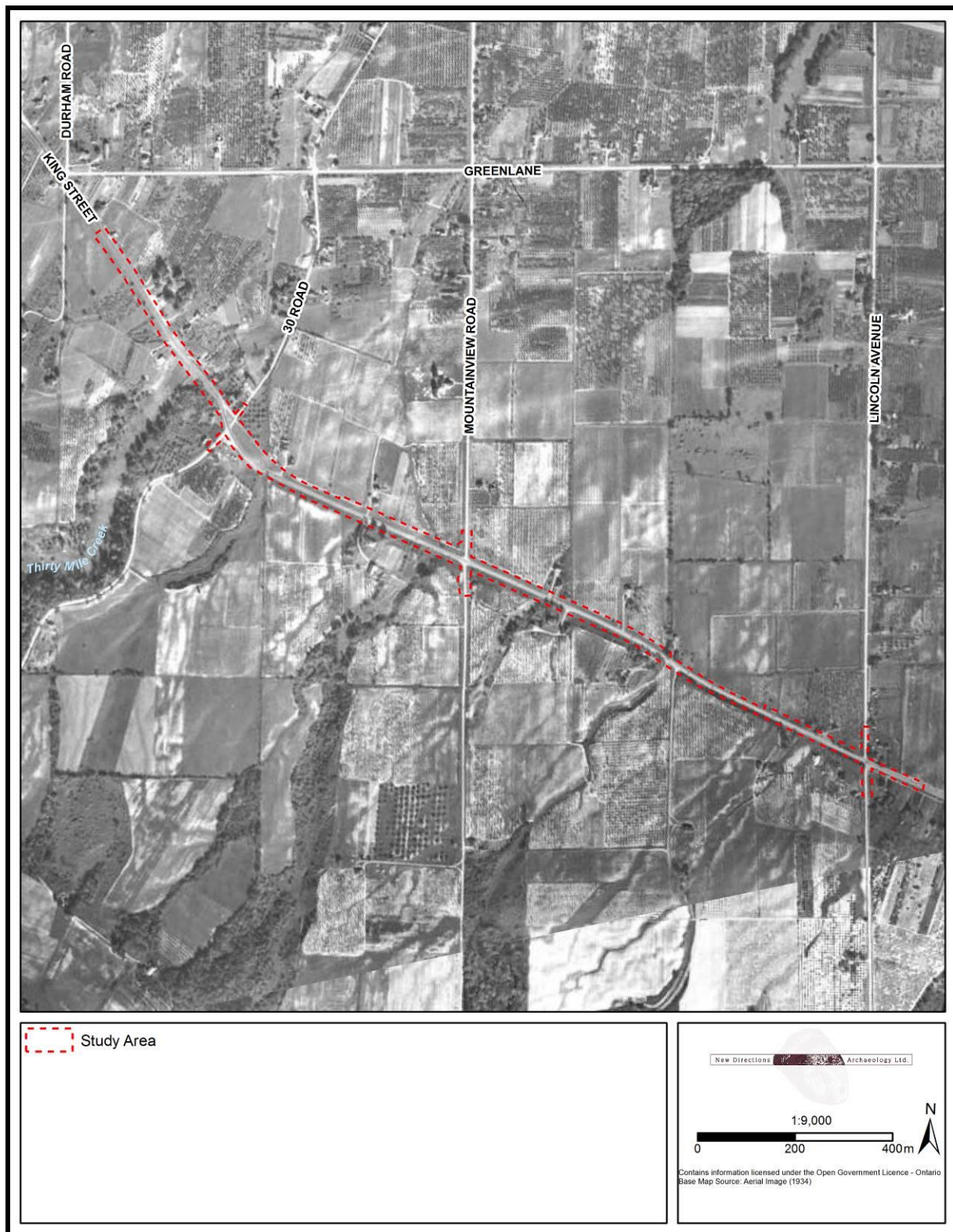
Map 1: Location of the Study Corridor on Topographic Map



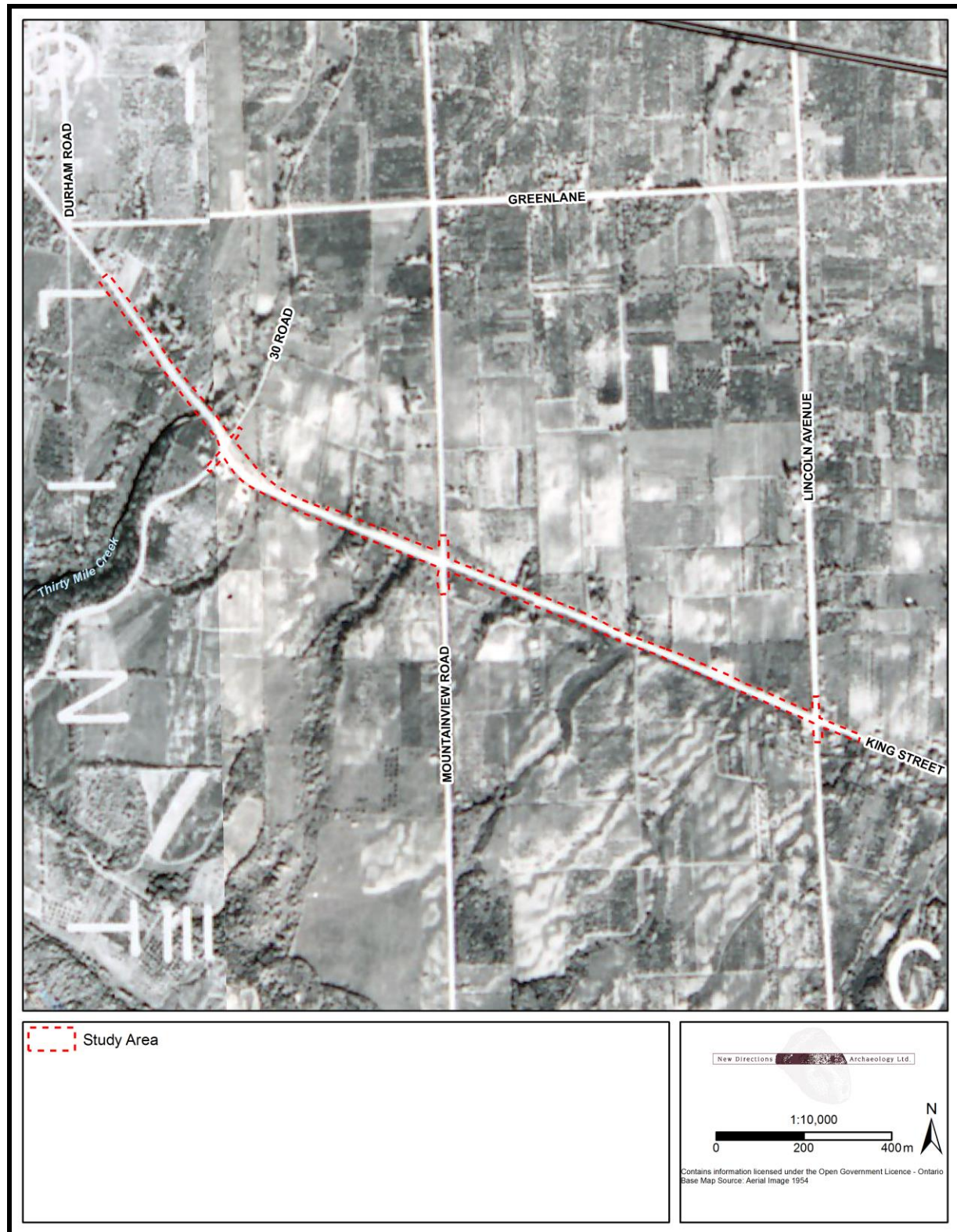
Map 2: Location of Study Corridor on the 1862 Tremaine's Map of the Counties of Lincoln and Welland, Canada West



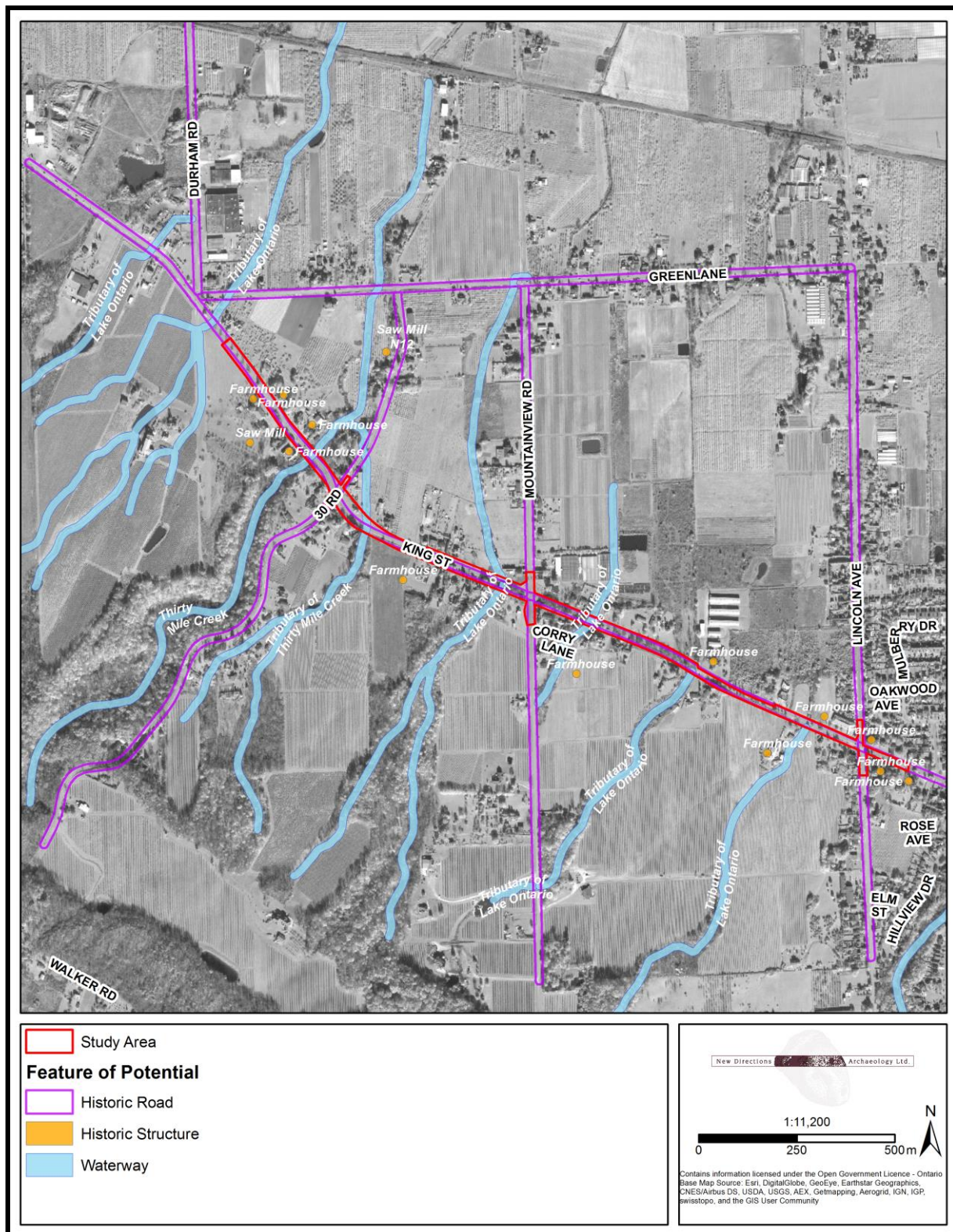
Map 3: Location of the Study Corridor on H.R. Page & Co.'s 1876 *Illustrated Historical Atlas of the Counties of Lincoln and Welland, Ont.*



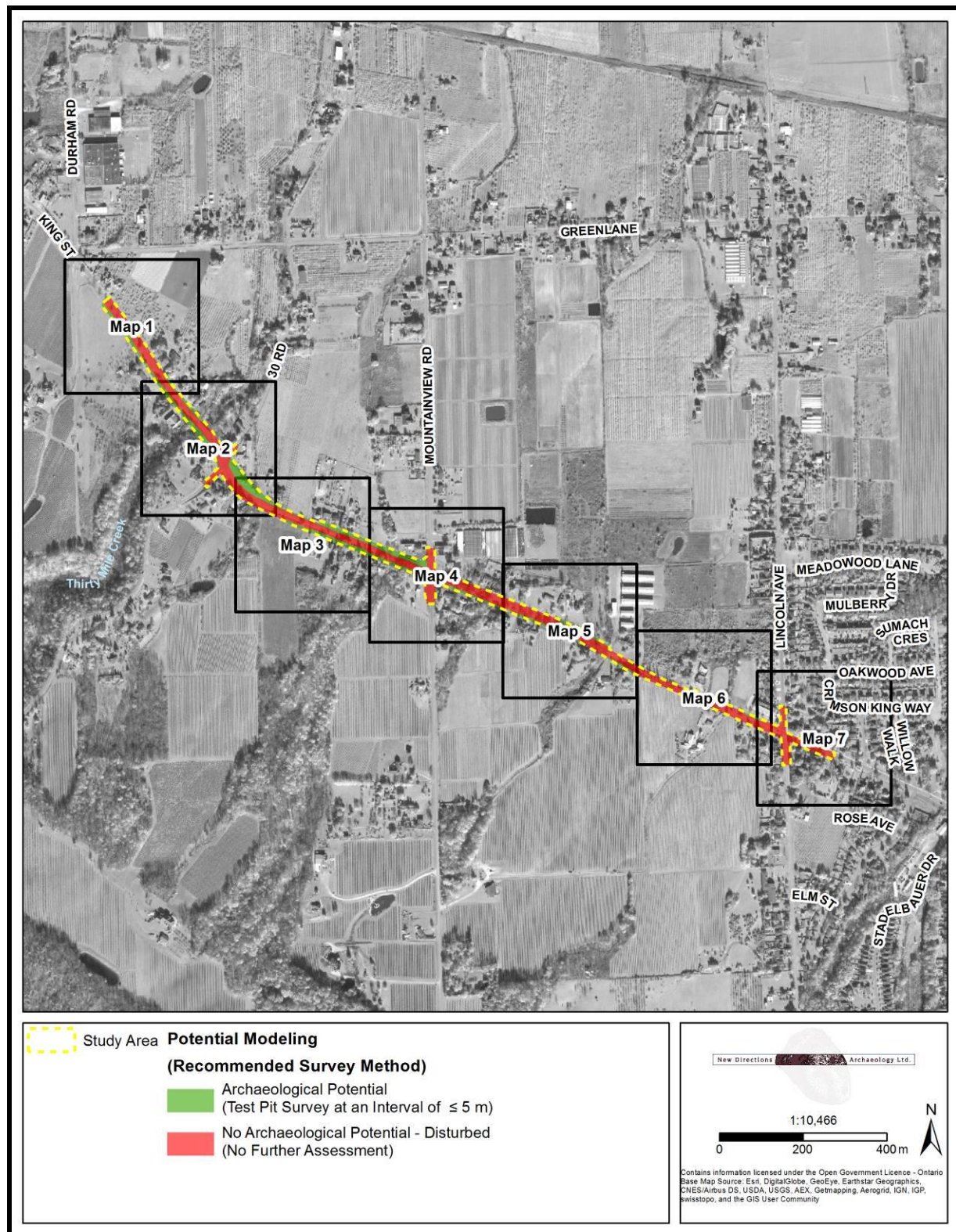
Map 4: Location of the Study Corridor on 1934 Aerial Imagery



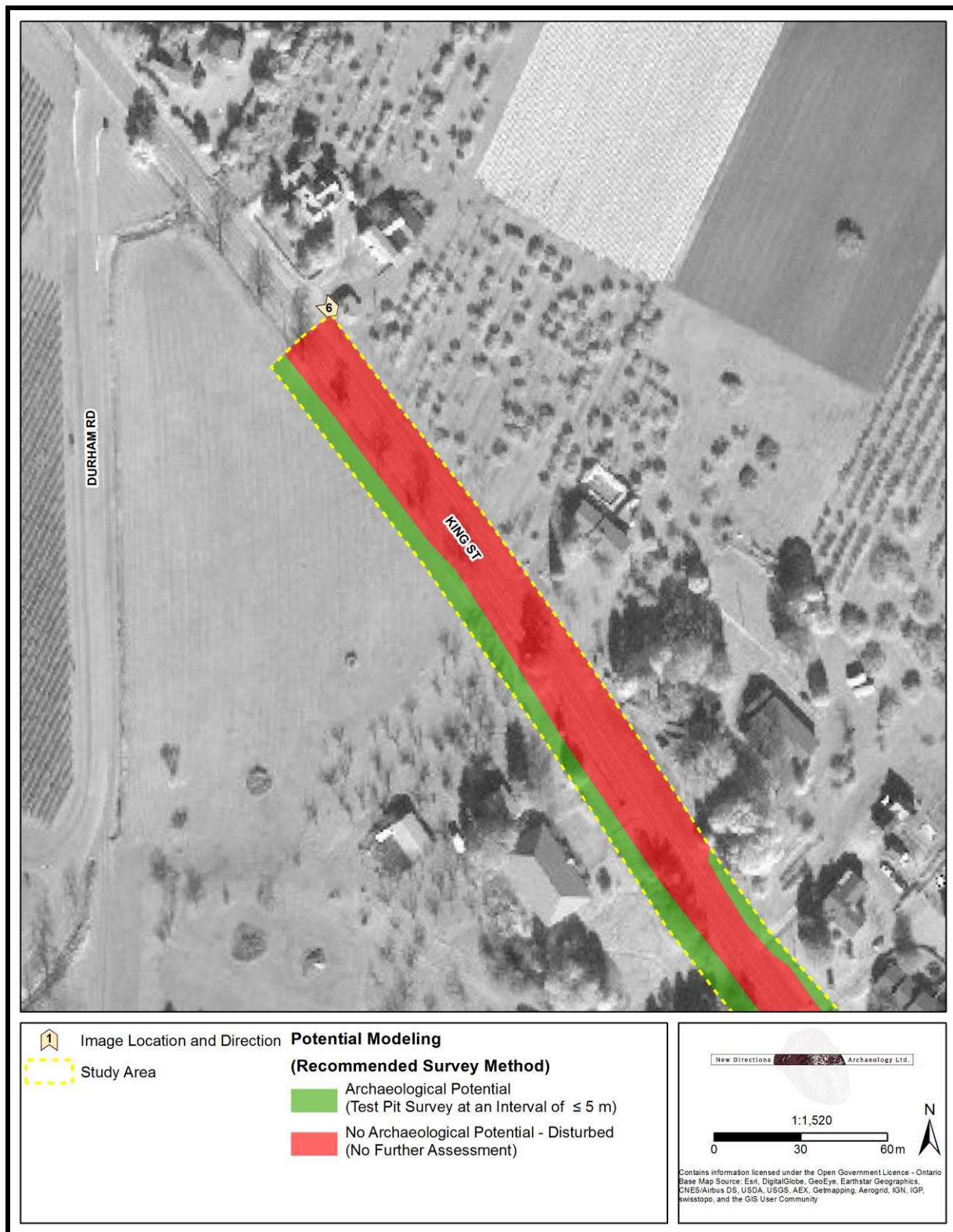
Map 5: Location of the Study Corridor on 1954 Aerial Imagery



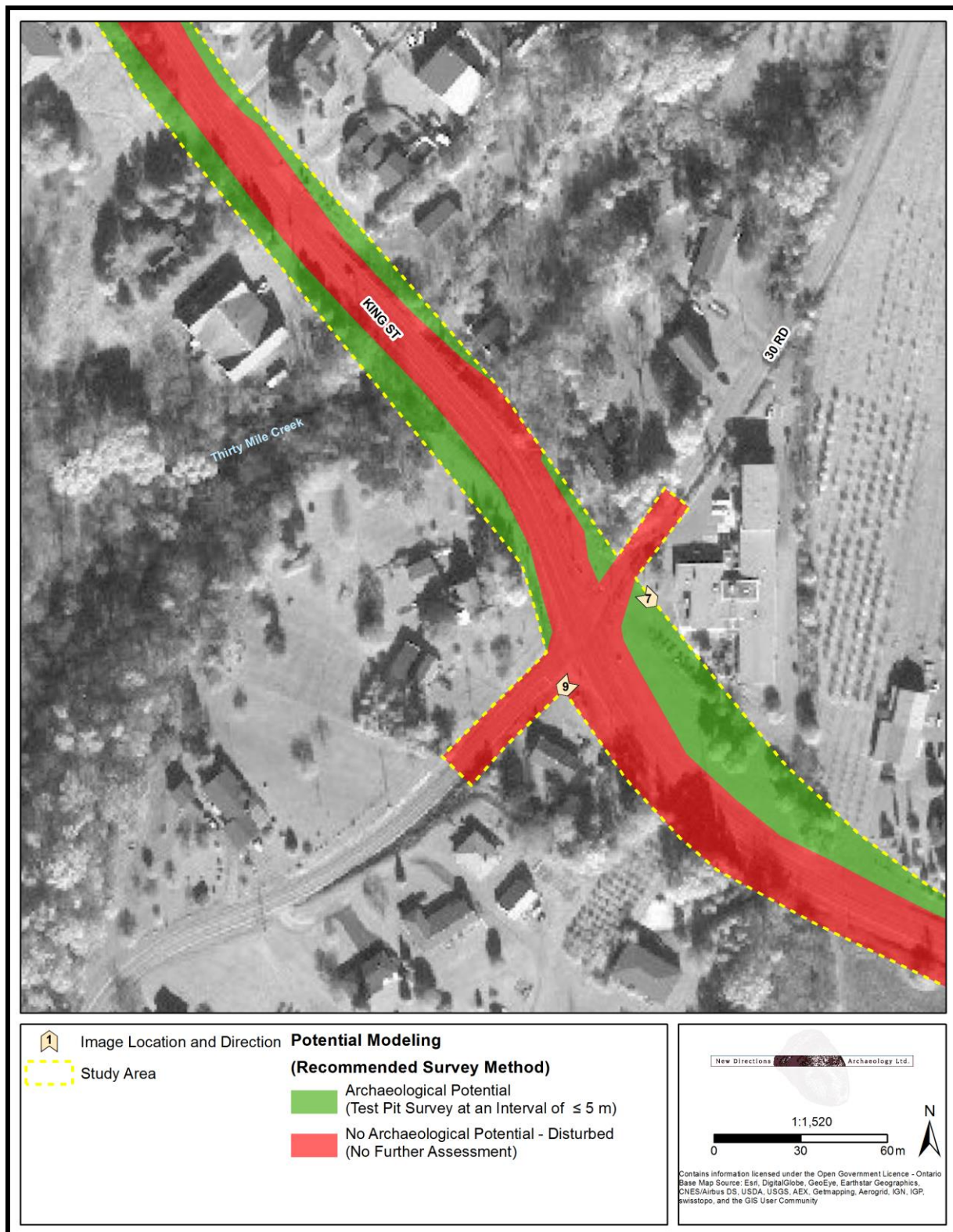
Map 6: Features of Archaeological Potential



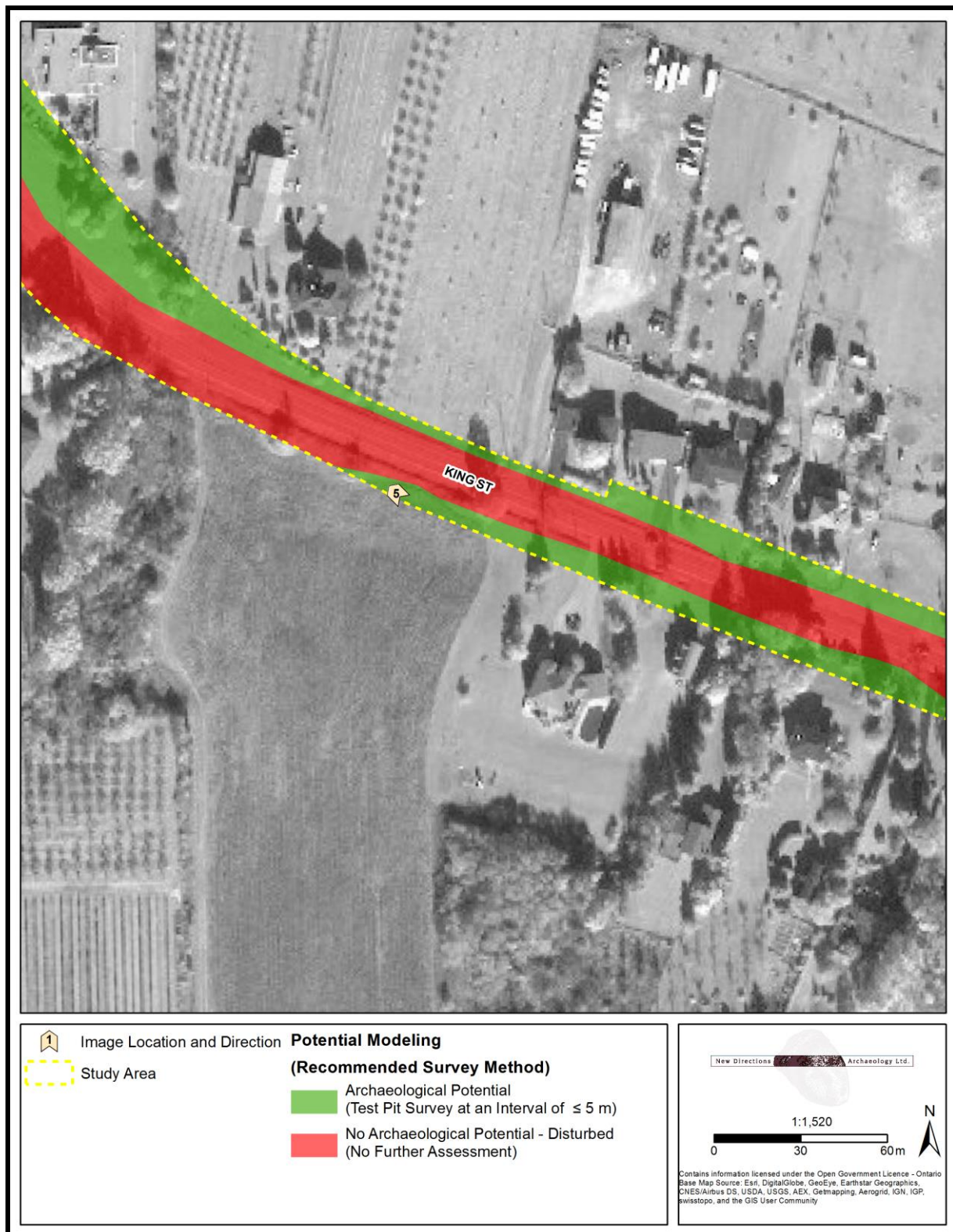
Map 7: Assessments Results Overview



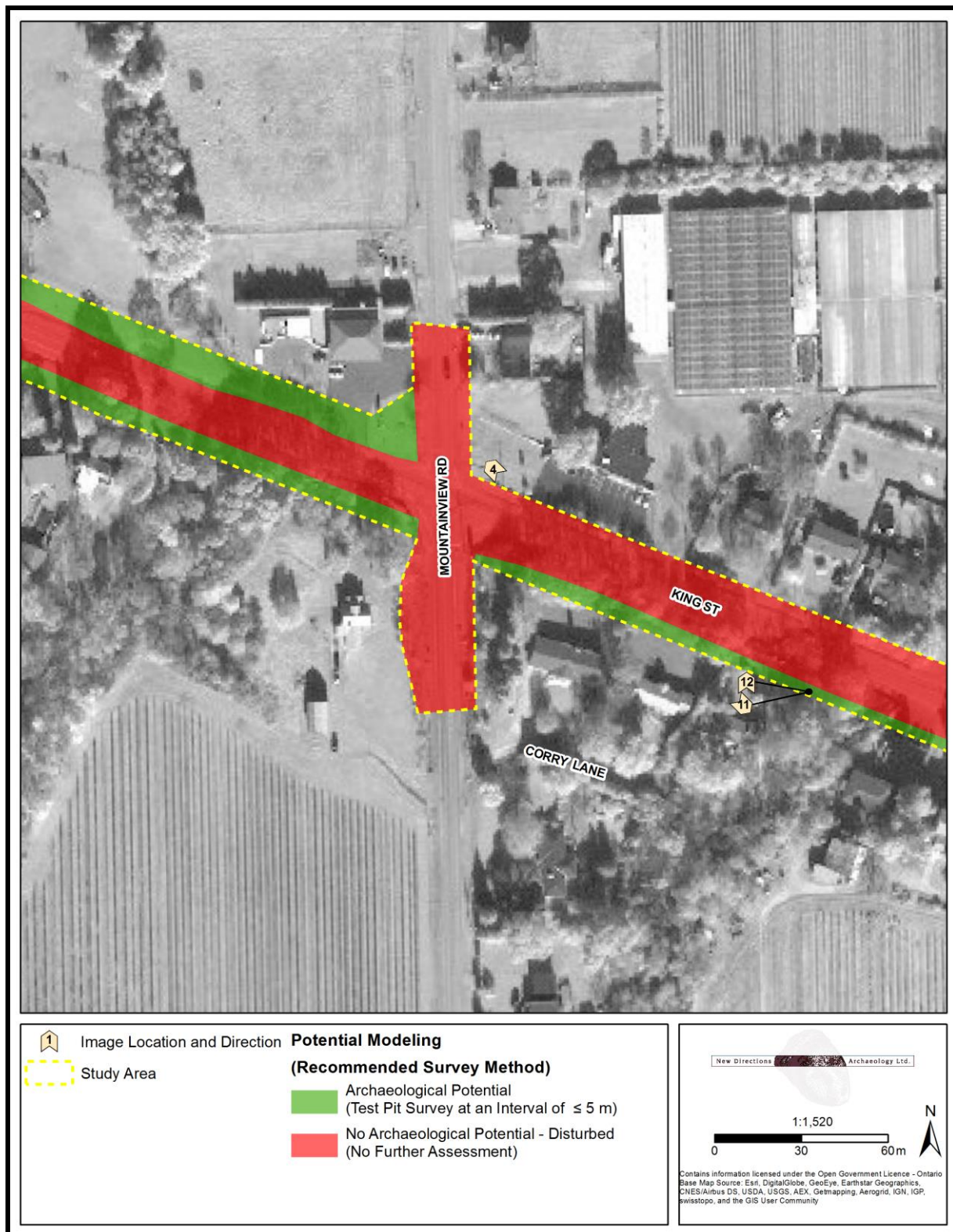
Map 8: Assessments Results Map 1



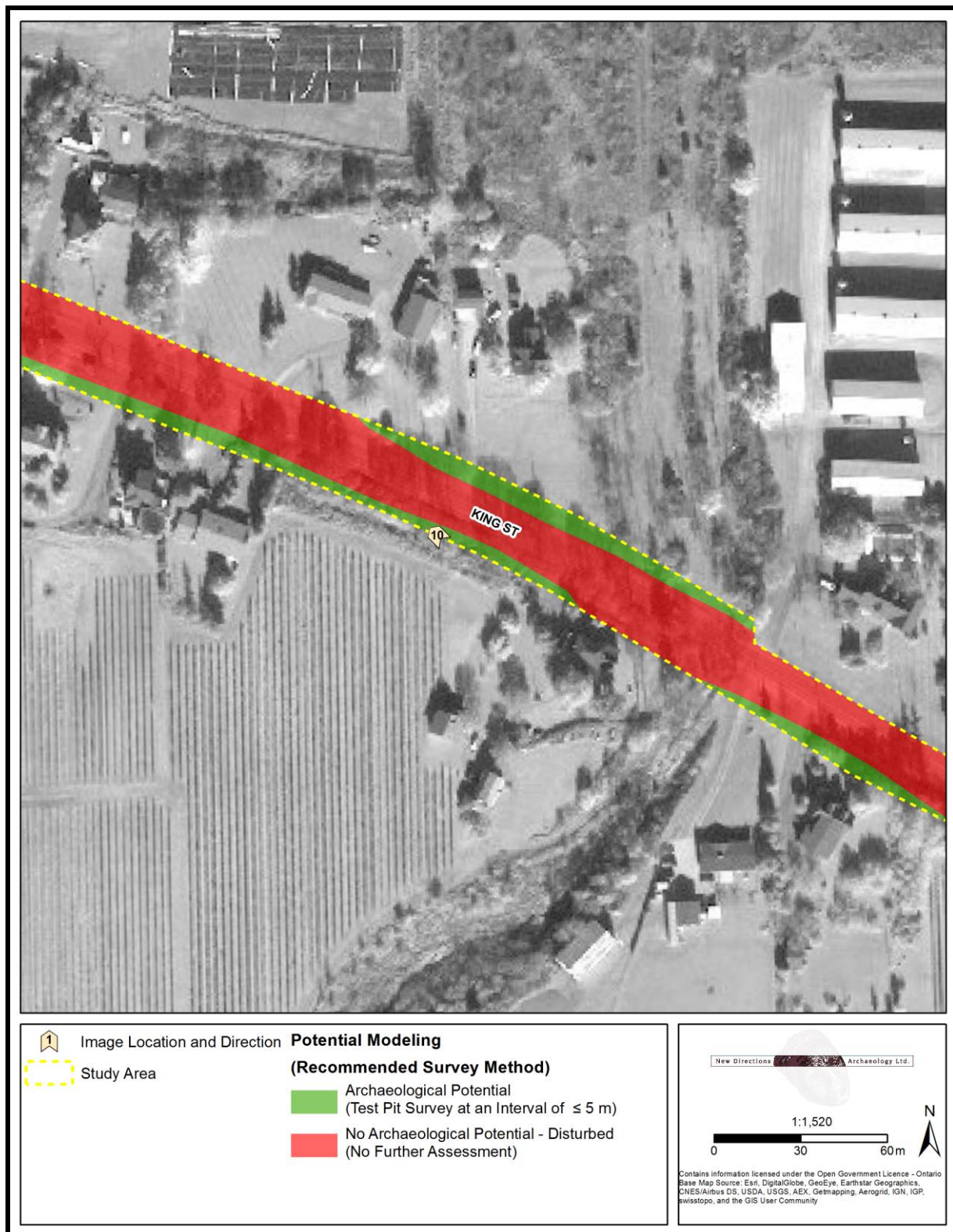
Map 9: Assessments Results Map 2



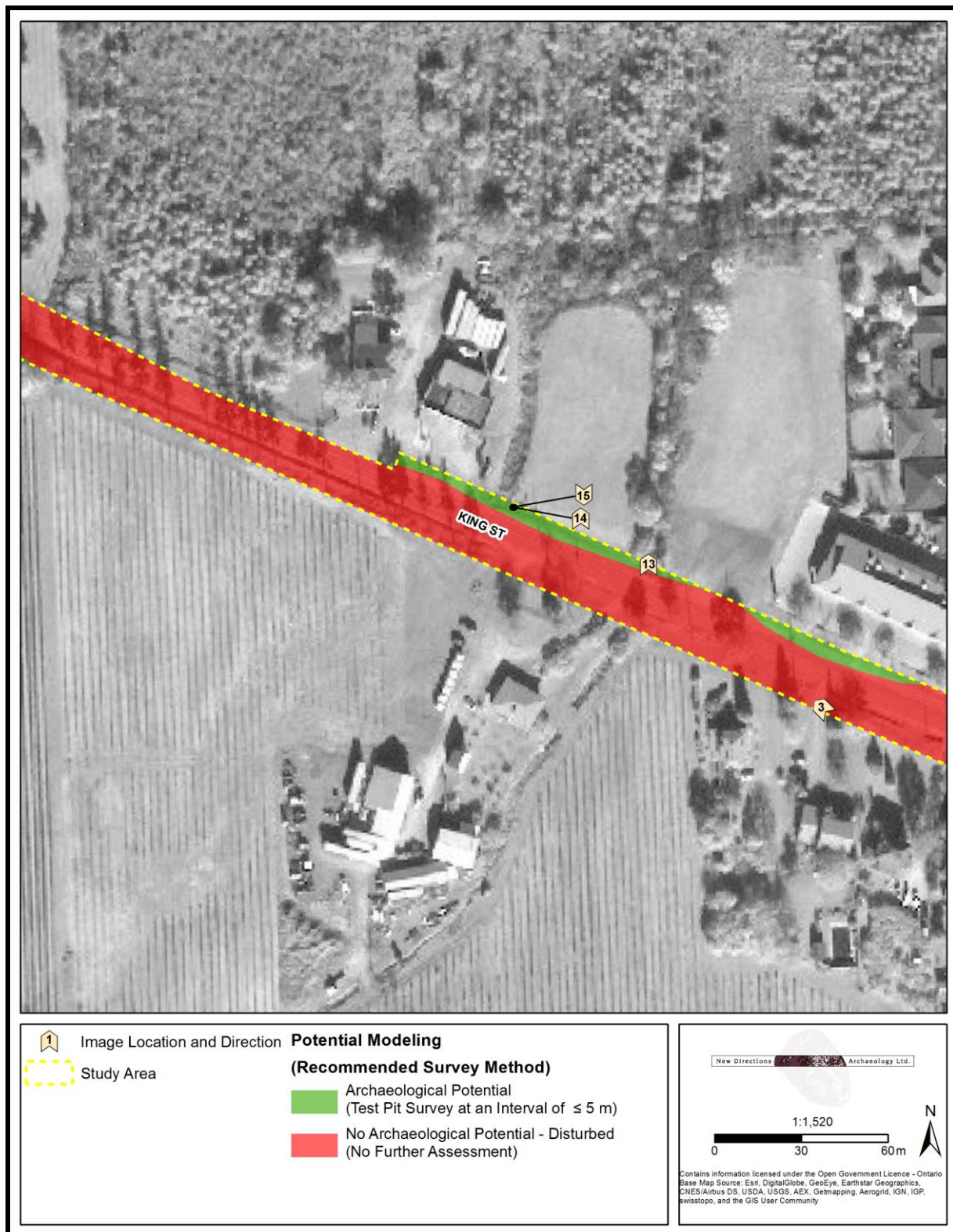
Map 10: Assessments Results Map 3



Map 11: Assessments Results Map 4



Map 12: Assessments Results Map 5



Map 13: Assessments Results Map 6



Map 14: Assessments Results Map 7

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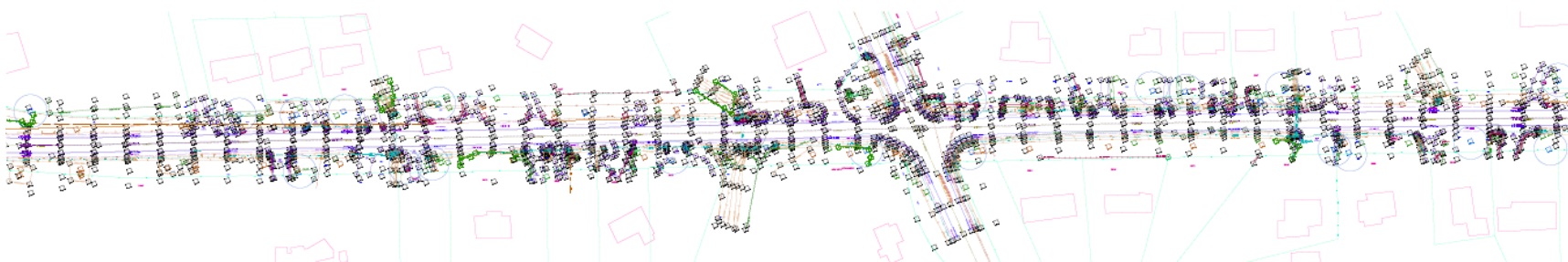
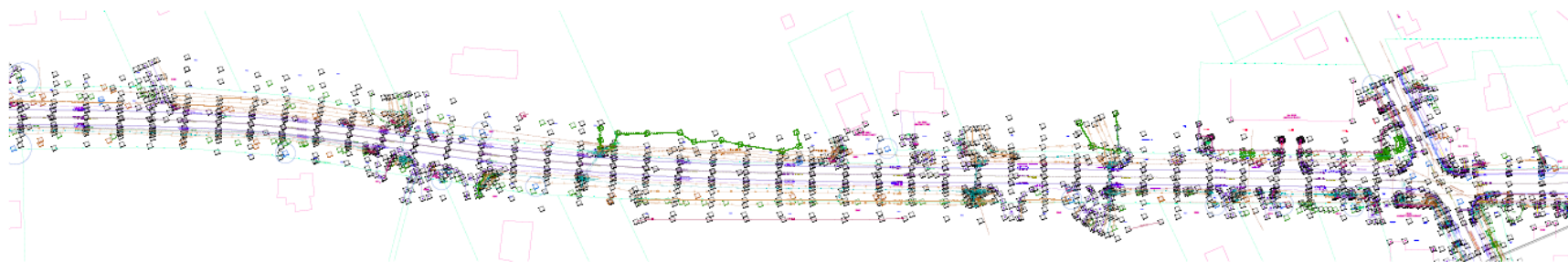
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APPENDICES



APPENDIX II: Document Inventory

Assessment	Field Documents	Total	Nature	Location
Stage 1 A.A. of Regional Road 81	Photographs	74	Digital	On server at 1480 Sandhill Drive, Unit 3, Ancaster; Folder P018-0813-2016
	Field Notes	1	Digital and hard copy	On server and on file at 1480 Sandhill Drive, Unit 3, Ancaster; Folder P018-0813-2016
	Field Maps	14	Digital and hard copy	On server and on file at 1480 Sandhill Drive, Unit 3, Ancaster; Folder P018-0813-2016