1.0 PROJECT REPORT COVER PAGE

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PROJECT INFORMATION:

Corporate Project Number:	14429-K
MTCS Project Number:	P384-0171-2014
Investigation Type:	Stage 1-2 Archaeological Assessment
Project Name:	173087 County Road 25
Project Location:	Part of North Half of Lot 31, Concession 1 (Geographic Township of East Luther), Town of Grand Valley, County of Dufferin

APPROVAL AUTHORITY INFORMATION:

File Designation Number:	Not currently available

REPORTING INFORMATION:

Site Record/Update Forms:	N/A
Date of Report Filing:	January 29 2015
Type of Report:	ORIGINAL

2.0 EXECUTIVE SUMMARY

This report describes the results of the 2014 Stage 1-2 Archaeological Assessment of 173087 County Road 25, Part of North Half of Lot 31, Concession 1 (Geographic Township of East Luther), Town of Grand Valley, County of Dufferin, conducted by AMICK Consultants Limited. This study was conducted under Archaeological Consulting License #P384 issued to Kayleigh MacKinnon by the Minister of Tourism, Culture and Sport for the Province of Ontario. This assessment was undertaken as a requirement under the Planning Act (RSO 1990b) in order to support a Draft Plan of Subdivision application and companion Zoning By-law Amendment application as part of the pre-submission process. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011), the Ontario Heritage Act (RSO 1990a), and the Ontario Heritage Amendment Act (SO 2005).

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological work on 28 April 2014. The entirety of the study area was subject to reconnaissance and photographic documentation concurrently with the Stage 2 Property Assessment on 27 May 2014, consisting of high-intensity test pit survey at an interval of five metres between individual test pits and high intensity pedestrian survey at an interval of five metres between individual transects. All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.

As a result of the physical assessment of the study area, no archaeological resources were encountered. Consequently, the following recommendations are made:

- *no further archaeological assessment of the study area is warranted;*
- *the Provincial interest in archaeological resources with respect to the proposed undertaking has been addressed;*
- *the proposed undertaking is clear of any archaeological concern;*

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4.0 PROJECT PERSONNEL

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5.0 PROJECT BACKGROUND

5.1 DEVELOPMENT CONTEXT

This report describes the results of the 2014 Stage 1-2 Archaeological Assessment of 173087 County Road 25, Part of North Half of Lot 31, Concession 1 (Geographic Township of East Luther), Town of Grand Valley, County of Dufferin, conducted by AMICK Consultants Limited. This study was conducted under Archaeological Consulting License #P384 issued to Kayleigh MacKinnon by the Minister of Tourism, Culture and Sport for the Province of Ontario. This assessment was undertaken as a requirement under the Planning Act (RSO 1990b) in order to support a Draft Plan of Subdivision application and companion Zoning By-law Amendment application as part of the pre-submission process. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011), the Ontario Heritage Act (RSO 1990a), and the Ontario Heritage Amendment Act (SO 2005).

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological work on 28 April 2014. The entirety of the study area was subject to reconnaissance and photographic documentation concurrently with the Stage 2 Property Assessment on 27 May 2014, consisting of high-intensity test pit survey at an interval of five metres between individual test pits and high intensity pedestrian survey at an interval of five metres between individual transects. All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.

The proposed development of the study area includes a residential development with associated services and landscape modifications. There will be 106 lots with two streets as well as a parkland and storm water management ponds. A set of proposed development drawings has been submitted to MTCS together with this report.

5.2 HISTORICAL CONTEXT

As part of the present study, background research was conducted in order to determine the archaeological potential of the proposed project area.

"A Stage 1 background study provides the consulting archaeologist and Ministry report reviewer with information about the known and potential cultural heritage resources within a particular study area, prior to the start of the field assessment." (OMCzCR 1993)

The evaluation of potential is further elaborated Section 1.3 of the Standards and Guidelines for Consultant Archaeologist (2011) prepared by the Ontario Ministry of Tourism and Culture:

" The Stage 1 background study (and, where undertaken, property inspection) leads to an evaluation of the property's archaeological potential. If the evaluation indicates that there is archaeological potential anywhere on the property, the next step is a Stage 2 assessment."
(MTC 2011: 17)

Features or characteristics that indicate archaeological potential where found anywhere on the property include:

" - previously identified archaeological sites
- *water sources (It is important to distinguish types of water and shoreline, and to distinguish natural from artificial water sources, as these features affect site locations and types to varying degrees.):*
    - *primary water sources (lakes, rivers, streams, creeks)*
    - *secondary water sources (intermittent streams and creeks, springs, marshes, swamps)*
    - *features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches)*
    - *accessible or inaccessible shoreline (e.g., high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh)*
- *elevated topography (e.g., eskers, drumlins, large knolls, plateaux)*
- *pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground*
- *distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.*
- *resource areas, including:*
    - *food or medicinal plants (e.g., migratory routes, spawning areas, prairie)*
    - *scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert)*
    - *early Euro-Canadian industry (e.g., fur trade, logging, prospecting, mining)*
- *areas of early Euro-Canadian settlement. These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks.*
- *Early historical transportation routes (e.g., trails, passes, roads, railways, portage routes)*
- *property listed on a municipal register or designated under the Ontario Heritage Actor that is a federal, provincial or municipal historic landmark or site*

- *property that local histories or informants have identified with possible archaeological sties, historical events, activities, or occupations"*

(MTC 2011: 17-18)

The evaluation of potential does not indicate that sites are present within areas affected by proposed development. Evaluation of potential considers the possibility for as yet undocumented sites to be found in areas that have not been subject to systematic archaeological investigation in the past. Potential for archaeological resources is used to determine if physical assessment of a property or portions of a property is required.

> *"Archaeological resources not previously documented may also be present in the affected area. If the alternative areas being considered, or the preferred alternative selected, exhibit either high or medium potential for the discovery of archaeological remains an archaeological assessment will be required."*
>
> (MCC & MOE 1992: 6-7)

> *"The Stage 1 background study (and, where undertaken, property inspection) leads to an evaluation of the property's archaeological potential. If the evaluation indicates that there is archaeological potential anywhere on the property, the next step is a Stage 2 assessment."*
>
> (MTC 2011: 17)

In addition, the collected data is also used to determine if any archaeological resources had been formerly documented within or in close proximity to the study area and if these same resources might be subject to impacts from the proposed undertaking. This data was also collected in order to establish the significance of any resources that might be encountered during the conduct of the present study. The requisite archaeological sites data was collected from the Programs and Services Branch, Culture Programs Unit, MTCS and the corporate research library of AMICK Consultants Limited

5.2.1 CURRENT CONDITIONS

The present use of the study area is an actively farmed agricultural land. The study area is roughly 34.42 hectares in area. The study area includes within it mostly ploughable lands. A former farm complex consisting of a silo, barn ruins, and ruins of two other structures are situated near the south edge of the study area. There is a gravel lane entering the study area off of County Road 25 and proceeds to the area of the former structures. There is also a lawn area that includes a mixture of trees surrounding the structures. Along the east edge of the agricultural field to the north of the former farm complex is a meadow area. The study area is bounded on the north by existing commercial development and meadow, on the east by meadow, on the west by County Road 25 and on the south by agricultural land. The study area is approximately 1000 metres to the south of the intersection of the County Road 25 and Dufferin County Road 109. A plan of the study area is included within this report as Figure 3. Current conditions encountered during the Stage 1-2 Property Assessment are illustrated in Figures 4 & 5.

5.2.2 General Historical Outline

Dufferin County formed as a county on January 24th, 1881, consisting of Melancthon, Mulmur, Mono, East Luther, Amaranth, and East Garafraxa Townships. Prior to the formation of Dufferin County, East Luther Township was part of Wellington County. In 1995, East Luther and Grand Valley amalgamated to form the Township of East Luther Grand Valley. The land that currently makes up Dufferin County was first partially surveyed in 1837 by Lewis Burwell, and the first Euro-Canadian settler is considered to be William McPherson circa 1851. William McPhillips eventually completed the survey of the lands that now comprise Dufferin County in 1854 and 1855. Luther Township separated from Arthur Township, Wellington County in 1860, and 20 years later the Township was divided into West and East Luther Township within Wellington County. In 1881 East Luther became part of Dufferin County (Ontario GenWeb 2014).

Figure 2 is a facsimile segment of the Township of East Luther map reproduced from The Illustrated Historical Atlas of the County of Wellington (Walker & Miles 1877). Figure 3 illustrates the location of the study area and environs as of 1877. The study area is shown to belong to Jas King. Accordingly, it has been determined that there is potential for archaeological deposits related to early Euro-Canadian settlement within the study area. In addition, this map illustrates an unnamed river channel situated immediately north and a tributary river channel southeast of the study area and a settlement road is depicted as adjacent to the study area to the west. This road is the current County Road 25 and the river channel is the Grand River and the tributary river channel is tributary of the Grand River.

5.2.3 Summary of Historical Context

The brief overview of documentary evidence readily available indicates that the study area is situated within an area that was close to the historic transportation routes and in an area well populated during the nineteenth century and as such has potential for sites relating to early Euro-Canadian settlement in the region. Background research indicates the property has potential for significant archaeological resources of Native origins based on proximity to a natural source of potable water in the past.

5.3 Archaeological Context

The Archaeological Sites Database administered by the Ministry of Tourism, Culture and Sport (MTCS) indicates that there is one (1) previously documented site within 1 kilometre of the study area. However, it must be noted that this is based on the assumption of the accuracy of information compiled from numerous researchers using different methodologies over many years. AMICK Consultants Limited assumes no responsibility for the accuracy of site descriptions, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MTCS. In addition, it must also be noted that a lack of formerly documented sites does not indicate that there are no sites present

as the documentation of any archaeological site is contingent upon prior research having been conducted within the study area.

On the basis of information supplied by MTCS, no archaeological assessments have been conducted within 50 metres of the study area. AMICK Consultants Limited assumes no responsibility for the accuracy of previous assessments, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MTCS. In addition, it must also be noted that the lack of formerly documented previous assessments does not indicate that no assessments have been conducted.

5.3.1 First Nations Registered Sites

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MTCS. As a result it was determined that one (1) archaeological site relating directly to First Nations habitation/activity had been formally registered within the immediate vicinity of the study area. However, the lack of formally documented archaeological sites does not mean that First Nations people did not use the area; it more likely reflects a lack of systematic archaeological research in the immediate vicinity. All previously registered First Nations sites are briefly described below in Table 1:

Table 1 First Nations Sites within 1km

Site Name	Borden #	Site Type	Cultural Affiliation
	AIhb-11	Undetermined	Undetermined

The above noted archaeological site is not situated within 300 metres of the study area. Therefore, it has no impact on determinations of archaeological potential with respect to the archaeological assessment of the proposed undertaking.

The distance to water criteria used to establish potential for archaeological sites suggests potential for First Nations occupation and land use in the area in the past. This consideration establishes archaeological potential within the study area.

Table 2 illustrates the chronological development of cultures within southern Ontario prior to the arrival of European cultures to the area at the beginning of the 17th century. This general cultural outline is based on archaeological data and represents a synthesis and summary of research over a long period of time. It is necessarily generalizing and is not necessarily representative of the point of view of all researchers or stakeholders. It is offered here as a rough guideline and outline to illustrate the relationships of broad cultural groups and time periods.

TABLE 2 CULTURAL CHRONOLOGY FOR SOUTHERN ONTARIO

Years ago	Period	Southern Ontario
250	Terminal Woodland	Ontario Iroquois and St. Lawrence Iroquois Cultures
1000 2000	Initial Woodland	Princess Point Culture Saugeen-Point Peninsula-Meadowood Cultures
3000 4000 5000 6000	Archaic	 Laurentian Culture
7000 8000 9000 10000 11000	Palaeo-Indian	 Plano Culture Clovis Culture
		(Wright 1972)

5.3.2 EURO-CANADIAN REGISTERED SITES

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MTCS. As a result it was determined that no (0) archaeological sites relating directly to Euro-Canadian habitation/activity had been formally registered within the immediate vicinity of the study area.

5.3.3 Location and Current Conditions

The study area is described as 173087 County Road 25, Part of North Half of Lot 31, Concession 1 (Geographic Township of East Luther), Town of Grand Valley, County of Dufferin. This assessment was undertaken as a requirement under the Planning Act (RSO 1990b) in order to support a Draft Plan of Subdivision application and companion Zoning By-law Amendment application as part of the pre-submission process.

The present use of the study area is an actively farmed agricultural land. The study area is roughly 34.42 hectares in area. The study area includes within it mostly ploughable lands. A former farm complex consisting of a silo, barn ruins, and ruins of two other structures are situated near the south edge of the study area. There is a gravel lane entering the study area off of County Road 25 and proceeds to the area of the former structures. There is also a lawn area that includes a mixture of trees surrounding the structures. Along the east edge of the agricultural field to the north of the former farm complex is a meadow area. The study area is bounded on the north by existing commercial development and meadow, on the east by meadow, on the west by County Road 25 and on the south by agricultural land. The study area is approximately 1000 metres to the south of the intersection of the County Road 25 and Dufferin County Road 109. A plan of the study area is included within this report as Figure 3. Current conditions encountered during the Stage 1-2 Property Assessment are illustrated in Figures 4 & 5.

5.3.4 Physiographic Region

The study area is situated within the Stratford Till Plain physiographic region. It is an area of ground moraine interrupted by several terminal moraines. The overall slope is toward the southwest from 1,500 to 900 feet a.s.l. throughout this area, the till is fairly uniform, being brown calcerous silty clay whether on the ridges or the more level ground moraine. The soils of the Stratford Plain may almost all be classified in the Huron catena based on the heavy textured calcerous till which is so widespread in the region once covered by the Huron ice lobe (Chapman and Putnam, 1984: 133-135).

5.3.5 Surface Water

Sources of potable water, access to waterborne transportation routes, and resources associated with watersheds are each considered, both individually and collectively to be the highest criteria for determination of the potential of any location to support extended human activity, land use, or occupation. Accordingly, proximity to water is regarded as the primary indicator of archaeological site potential. The Standards and Guidelines for Consultant Archaeologists stipulates that undisturbed lands within 300 metres of a water source are considered to have archaeological potential (MTC 2011: 21).

The Grand River is located 100 metres to the north and a tributary stream of the Grand River is 50 metres east of the study area. The Grand River and the unnamed tributary stream are

both shown on the East Luther Township map within the Illustrated Atlas of the County of Wellington. (Walker & Miles 1877).

5.3.6 CURRENT PROPERTY CONDITIONS CONTEXT

Current characteristics encountered within an archaeological research study area determine if physical assessment of specific portions of the study area will be necessary and in what manner a Stage 2 Property Assessment should be conducted, if necessary. Conventional assessment methodologies include pedestrian survey on ploughable lands and test pit methodology within areas that cannot be ploughed. For the purpose of determining where physical assessment is necessary and feasible, general categories of current landscape conditions have been established as archaeological conventions. These include:

5.3.6.1 BUILDINGS AND STRUCTURAL FOOTPRINTS

A building, in archaeological terms, is a structure that exists currently or has existed in the past in a given location. The footprint of a building is the area of the building formed by the perimeter of the foundation. Although the interior area of building foundations would often be subject to physical assessment when the foundation may represent a potentially significant historic archaeological site, the footprints of existing structures are not typically assessed. Existing structures commonly encountered during archaeological assessments are often residential-associated buildings (houses, garages, sheds), and/or component buildings of farm complexes (barns, silos, greenhouses). In many cases, even though the disturbance to the land may be relatively shallow and archaeological resources may be situated below the disturbed layer (e.g. a concrete garage pad), there is no practical means of assessing the area beneath the disturbed layer. However, if there were evidence to suggest that there are likely archaeological resources situated beneath the disturbance, alternative methodologies may be recommended to study such areas.

The study area contains 1 existing structure and 3 structural footprints. The study area includes a farm complex consisting of a silo, barn (ruins), and two other structure ruins situated in the south end of the study area.

5.3.6.2 DISTURBANCE

Areas that have been subjected to extensive and deep land alteration that has severely damaged the integrity of archaeological resources are known as land disturbances. Examples of land disturbances are areas of "past quarrying, major landscaping, recent built and industrial uses, sewage and infrastructure development, etc." (MCL 2005: 15), as well as driveways made of either gravel or concrete, in-ground pools, and wells or cisterns. Utility lines are conduits that provide services such as water, natural gas, hydro, communications, sewage, and others. Areas containing below ground utilities are considered areas of disturbance, and are excluded from Stage 2 Physical Assessment. Disturbed areas are excluded from Stage 2 Physical Assessment due to no or low archaeological potential or because they are not viable to assess using conventional methodology.

The study area does contain previous disturbances. There is a gravel lane entering the study area off of County Road 25 and proceeds to the structures. A gravel-covered laneway is not viable to assess.

5.3.6.3 Low-Lying and Wet Areas

Landscape features that are covered by permanently wet areas, such as marshes, swamps, or bodies of water like streams or lakes, are known as low-lying and wet areas. Low-lying and wet areas are excluded from Stage 2 Physical Assessment due to inaccessibility.

The study area does not contain low-lying and wet areas.

5.3.6.4 Steep Slope

Landscape which slopes at a greater than (>) 20 degree change in elevation, is known as steep slope. Areas of steep slope are considered uninhabitable, and are excluded from Stage 2 Physical Assessment.

The study area does not contain areas of steep slope.

5.3.6.5 Wooded Areas

Areas of the property that cannot be ploughed, such as natural forest or woodlot, are known as wooded areas. These wooded areas qualify for Stage 2 Physical Assessment, and are required to be assessed using test pit survey methodology.

The study area does not contain any wooded areas.

5.3.6.6 Ploughable Agricultural Lands

Areas of current or former agricultural lands that have been ploughed in the past are considered ploughable agricultural lands. Ploughing these lands regularly moves the soil around, which brings covered artifacts to the surface, easily identifiable during visual inspection. Furthermore, by allowing the ploughed area to weather sufficiently through rainfall washing soil off any artifacts, the visibility of artifacts at the surface of recently worked field areas increases significantly. Pedestrian survey of ploughed agricultural lands is the preferred method of physical assessment because of the greater potential for finding evidence of archaeological resources if present.

The study area is primarily ploughable land. In addition to the farm complex, lawn and wooded area, the study area includes active agricultural fields, which were worked and allowed to weather for the purposes of the completion of the Stage 2 Property Assessment. Over 80% of the study area is covered by 5 agricultural fields.

5.3.6.7 LAWN, PASTURE, MEADOW

Landscape features consisting of former agricultural land covered in low growth, such as lawns, pastures, meadows, shrubbery, and immature trees. These are areas that may be considered too small to warrant ploughing, (i.e. less than one hectare in area), such as yard areas surrounding existing structures, and land-locked open areas that are technically workable by a plough but inaccessible to agricultural machinery. These areas may also include open area within urban contexts that do not allow agricultural tillage within municipal or city limits or the use of urban roadways by agricultural machinery. These areas are required to be assessed using test pit survey methodology.

The study area does contain any areas of lawn and meadow. The lawn area surrounds the structures at the south end and an area of meadow is found along the east edge of the agricultural field immediately north of the former farm complex.

5.3.7 SUMMARY

Background research indicates the vicinity of the study area has potential for archaeological resources of Native origins based on proximity to a source of potable water in the past. Background research also suggests potential for archaeological resources of Euro-Canadian origins based on proximity to a historic roadway and documented historic settlement.

A significant proportion of the study area does exhibit archaeological potential and therefore a Stage 2 Property Assessment is required.

Archaeological potential does not indicate that there are necessarily sites present, but that environmental and historical factors suggest that there may be as yet undocumented archaeological sites within lands that have not been subject to systematic archaeological research in the past.

6.0 FIELD METHODS

This report confirms that the entirety of the study area was subject to visual inspection, and that the fieldwork was conducted according to the archaeological fieldwork standards and guidelines, including weather and lighting conditions. The property reconnaissance and assessment were completed in under partly cloudy skies on 27 May 2014. The temperature at the time of the reconnaissance and assessment was 23°C. The locations from which photographs were taken and the directions toward which the camera was aimed for each photograph are illustrated in Figures 4 & 5 of this report. Upon completion of the field reconnaissance of the study area, it was determined that select areas would require Stage 2 archaeological assessment consisting of test pit survey methodology and pedestrian survey methodology.

6.1 PHOTO RECONNAISSANCE

A detailed examination and photo documentation was carried out on the study area in order to document the existing conditions of the study area to facilitate the Stage 2 Property Assessment. All areas of the study area were visually inspected and photographed. This component of the study was completed concurrently with the Stage 2 Property Assessment. The locations from which photographs were taken and the directions toward which the camera was aimed for each photograph are illustrated in Figures 4 & 5 of this report.

6.2 PEDESTRIAN SURVEY

In accordance with the Standards and Guidelines for Consultant Archaeologists, pedestrian survey is required for all portions of the study area that are ploughable or can be subject to cultivation. This is the preferred method to utilize while conducting an assessment. This report confirms that the conduct of pedestrian survey within the study area conformed to the following standards:

1. *Actively or recently cultivated agricultural land must be subject to pedestrian survey.*
   [All actively or recently cultivated agricultural land was subject to pedestrian survey]

2. *Land to be surveyed must be recently ploughed. Use of chisel ploughs is not acceptable. In heavy clay soils ensure furrows are disked after ploughing to break them up further.*
   [All land was recently ploughed]

3. *Land to be surveyed must be weathered by one heavy rainfall or several light rains to improve visibility of archaeological resources.*
   [All land was weathered by rainfall]

4. *Provide direction to the contractor undertaking the ploughing to plough deep enough to provide total topsoil exposure, but not deeper than previous ploughing.*
   [Direction was given to the contractor undertaking the ploughing to plough deep enough to provide total topsoil exposure, but not deeper than previous ploughing]

5. *At least 80 % of the ploughed ground surface must be visible. If surface visibility is below 80% (e.g. due to crop stubble, weeds, young crop growth), ensure the land is re-ploughed before surveying.*
   [Roughly 92% of the ploughed field surface was exposed and visible. A very slight amount of crop debris remained exposed in some areas of the fields]

6. *Space survey transects at maximum intervals of 5m (20 survey transects per hectare)*
   [All transects were conducted at an interval of 5m between individual transects]

7. *When archaeological resources are found, decrease survey transects to 1m intervals over a minimum of a 20m radius around the find to determine whether it is an isolated find or part of a larger scatter. Continue working outward at this interval until full extent of the surface scatter has been defined.*
   [Not Applicable – No archaeological resources were encountered]

8. *Collect all formal artifact types and diagnostic categories. For 19th century archaeological sites, collect all refined ceramic sherds (or, for larger sites collect a sufficient sample to form the basis for dating).*
   [Not Applicable – No archaeological resources were encountered]

9. *Based on professional judgment, strike a balance between gathering enough artifacts to document the archaeological site and leaving enough in place to relocate the site if it is necessary to conduct further assessment.*
   [Not Applicable – No archaeological resources were encountered]

(MTC 2011: 30-31)

The study area boundary is irregular and cuts across some ploughed field areas. In such areas where the field boundaries did not coincide with study area boundaries, the pedestrian survey was extended to ensure that the entire study area was contained within the area of assessment as illustrated in Figures 5 & 6.

6.3 TEST PIT SURVEY

In accordance with the Standards and Guidelines for Consultant Archaeologists, test pit survey is required to be undertaken for those portions of the study area where deep prior disturbance had not occurred prior to assessment or which were accessible to survey. Test pit survey is only used in areas that cannot be subject to ploughing or cultivation. This report confirms that the conduct of test pit survey within the study area conformed to the following standards:

1. Test pit survey only on terrain where ploughing is not possible or viable, as in the following examples:

a. wooded areas
[Not Applicable - The study area does not contain any wooded areas]

b. pasture with high rock content
[Not Applicable - The study area does not contain any pastures with high rock content]

c. abandoned farmland with heavy brush and weed growth
[Not Applicable - The study area does not contain any abandoned farmland with heavy brush and weed growth]

d. orchards and vineyards that cannot be strip ploughed (planted in rows 5 m apart or less), gardens, parkland or lawns, any of which will remain in use for several years after the survey
[Not Applicable - The study area does not contain any of the above-mentioned circumstances]

e. properties where existing landscaping or infrastructure would be damaged. The presence of such obstacles must be documented in sufficient detail to demonstrate that ploughing or cultivation is not viable.
[Not Applicable - The study area does not contain the above-mentioned circumstances]

f. narrow (10 m or less) linear survey corridors (e.g., water or gas pipelines, road widening). This includes situations where there are planned impacts 10 m or less beyond the previously impacted limits on both sides of an existing linear corridor (e.g., two linear survey corridors on either side of an existing roadway). Where at the time of fieldwork the lands within the linear corridor meet the standards as stated under the above section on pedestrian survey land preparation, pedestrian survey must be carried out. Space test pits at maximum intervals of 5 m (400 test pits per hectare) in areas less than 300 m from any feature of archaeological potential.
[Not Applicable – The study area does not contain any linear corridors]

2. *Space test pits at maximum intervals of 5 m (400 test pits per hectare) in areas less than 300 m from any feature of archaeological potential.*
[All test pits were spaced at an interval of 5m between individual test pits]

3. *Space test pits at maximum intervals of 10 m (100 test pits per hectare) in areas more than 300 m from any feature of archaeological potential.*
[The entirety of the test pitted areas of the study area were assessed using high intensity test pit methodology at an interval of 5 metres between individual test pits]

4. *Test pit to within 1 m of built structures (both intact and ruins), or until test pits show evidence of recent ground disturbance.*
[Test pits were placed within 1m of all built structures]

5. *Ensure that test pits are at least 30 cm in diameter.*
[All test pits were at least 30 cm in diameter]

6. *Excavate each test pit, by hand, into the first 5 cm of subsoil and examine the pit for stratigraphy, cultural features, or evidence of fill.*
[All test pits were excavated by hand into the first 5 cm of subsoil and examined for stratigraphy, cultural features, or evidence of fill]

7. *Screen soil through mesh no greater than 6 mm.*

[All soil was screened through mesh no greater than 6 mm]

8. *Collect all artifacts according to their associated test pit.*
   [Not Applicable - No archaeological resources were encountered]

9. *Backfill all test pits unless instructed not to by the landowner.*
   [All test pits were backfilled]

(MTC 2011: 31-32)

"*A combination of property inspection and test pitting may be used when initial Stage 2 results determine that all or part of the project area may in fact be disturbed. The Stage 2 survey may then consists of a detailed inspection (equivalent to Stage 1), combined with test pitting."*

1. *If it was not done as part of Stage 1, inspect and document the disturbed areas according to the standards described for Stage 1 property inspections.*
   [The disturbed areas of the study area were inspected and documented as per the standards described for Stage 1 property inspections. Apparent areas of disturbance where Stage 2 Property Assessment survey was not viable were mapped and documented photographically but excluded from the Stage 2 survey. The gravel laneway and the foundation walls of the former structures and of the area of the concrete silo were areas not viable to assess. These areas were documented photographically at the time of the assessment.

2. *Place Stage 2 test pits throughout the disturbed areas according to professional judgment (and where physically viable) as to confirm that these areas have been completely disturbed.*
   [No portions of the study area were identified as areas of potential disturbance that were also viable to confirmation by test pits]

(MTC 2011: 38)

Approximately 96% (roughly 33.5 hectares) of the study area consisted of ploughable land that was pedestrian surveyed at an interval of 5 metres between individual transects. Approximately 3% (roughly 1 hectare) of the study area was unploughable meadow and lawn that was test pit surveyed at an interval of 5 metres between individual test pits. Approximately 1% of the study area was not assessable due to the presence of existing structure and structural footprints and disturbed gravel driveway.

6.4 FIELD WORK WEATHER CONDITIONS

The conduct of the Stage 1-2 Archaeological Assessment of the study area was completed in accordance with the above noted standards on 27 May 2014. The temperature was around 23°C. The work was completed under cloudy skies. Weather conditions were appropriate for the conduct of archaeological fieldwork.

7.0 RECORD OF FINDS

Section 7.8.2 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 137-138) outlines the requirements of the Record of Finds component of a Stage 2 report:

1. *For all archaeological resources and sites that are identified in Stage 2, provide the following:*
    a. *a general description of the types of artifacts and features that were identified*
    b. *a general description of the area within which artifacts and features were identified, including the spatial extent of the area and any relative variations in density*
    c. *a catalogue and description of all artifacts retained*
    d. *a description of the artifacts and features left in the field (nature of material, frequency, other notable traits).*
2. *Provide an inventory of the documentary record generated in the field (e.g. photographs, maps, field notes).*
3. *Submit information detailing exact site locations on the property separately from the project report, as specified in section 7.6. Information on exact site locations includes the following:*
    a. *table of GPS readings for locations of all archaeological sites*
    b. *maps showing detailed site location information.*

7.1 ARCHAEOLOGICAL RESOURCES

No archaeological resources of any description were encountered anywhere within the study area.

7.2 ARCHAEOLOGICAL FIELDWORK DOCUMENTATION

The documentation produced during the field investigation conducted in support of this report includes: two sketch maps, one page of photo log, one page of field notes, and 41 digital photographs.

8.0 ANALYSIS AND CONCLUSIONS

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological work on 28 April 2014. The entirety of the study area was subject to reconnaissance and photographic documentation concurrently with the Stage 2 Property Assessment on 27 May 2014, consisting of high-intensity test pit survey at an interval of five metres between individual test pits and high intensity pedestrian survey at an interval of five metres between individual transects. All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of

these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport(MTCS) on behalf of the government and citizens of Ontario.

Section 7.7.3 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 132) outlines the requirements of the Analysis and Conclusions component of a Stage 1 Background Study.

1) *"Identify and describe areas of archaeological potential within the project area.*
2) *Identify and describe areas that have been subject to extensive and deep land alterations. Describe the nature of alterations (e.g., development or other activity) that have severely damaged the integrity of archaeological resources and have removed archaeological potential."*

8.1 CHARACTERISTICS INDICATING ARCHAEOLOGICAL POTENTIAL

Section 1.3.1 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics that indicate archaeological potential (MTC 2011: 17-18). Factors that indicate archaeological potential are features of the local landscape and environment that may have attracted people to either occupy the land or to conduct activities within the study area. One or more of these characteristics found to apply to a study area would necessitate a Stage 2 Property Assessment to determine if archaeological resources are present. These characteristics are listed below together with considerations derived from the conduct of this study.

1) *Previously Identified Archaeological Sites*
   Previously registered archaeological sites have not been documented within 300 metres of the study area.

2) *Water Sources*
   Primary water sources are described as including lakes, rivers streams and creeks. Close proximity to primary water sources (300 metres) indicates that people had access to readily available sources of potable water and routes of waterborne trade and communication should the study area have been used or occupied in the past.

   There are identified primary water sources within 300 metres of the study area. The Grand River is approximately 100 metres north of the study area. A tributary of the Grand River is approximately 50 metres east of the study area. Both of these are shown on the historic atlas map (Figure 2).

   Secondary water sources are described as including intermittent streams and creeks, springs, marshes, and swamps. Close proximity (300 metres) to secondary water sources indicates that people had access to readily available sources of potable water, at least on a seasonal basis, and in some cases seasonal access to routes of waterborne

trade and communication should the study area have been used or occupied in the past.

There are no identified secondary water sources within 300 metres of the study area.

3) *Features Indicating Past Water Sources*
Features indicating past water resources are described as including glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, and cobble beaches. Close proximity (300 metres) to features indicating past water sources indicates that people had access to readily available sources of potable water, at least on a seasonal basis, and in some cases seasonal access to routes of waterborne trade and communication should the study area have been used or occupied in the past.

There are no identified features indicating past water sources within 300 metres of the study area.

4) *Accessible or Inaccessible Shoreline*
This form of landscape feature would include high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.

There are no shorelines within 300 metres of the study area.

5) *Elevated Topography*
Features of elevated topography that indicate archaeological potential include eskers, drumlins, large knolls, and plateaux.

There are no identified features of elevated topography within the study area.

6) *Pockets of Well-drained Sandy Soil*
Pockets of sandy soil are considered to be especially important near areas of heavy soil or rocky ground.

The soil throughout the study area is dark brown sandy loam, which is consistent with the wider area surrounding the property. Therefore, the presence of this soil has no impact on potential within the study area, as the wider area is not known for clay soils or exposed bedrock.

7) *Distinctive Land Formations*
These are landscape features that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.

There are no identified distinctive land formations within the study area.

8) *Resource Areas*

Resource areas that indicate archaeological potential include food or medicinal plants (e.g., migratory routes, spawning areas, and prairie), scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert) and resources of importance to early Euro-Canadian industry (e.g., logging, prospecting, and mining).

There are no identified resource areas within the study area.

9) *Areas of Early Euro-Canadian Settlement*

These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, and farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks.

The study area is situated in close proximity to a historic community (Grand Valley) and sawmill identified on the historic atlas map situated to the north of the study area.

10) *Early Historical Transportation Routes*

This includes evidence of trails, passes, roads, railways, portage routes.

The study area is adjacent to early settlement roads that appear on the Historic Atlas Map of 1877. These historic roads correspond to the roads presently known as County Road 25 and Dufferin County Road 109, which are adjacent to the study area. The study area is situated within 150 metres of a railway line indicated on the historic atlas map. The property is situated within 50 to 100 metres of a body of water that was used for waterborne trade and communication.

11) *Heritage Property*

Property listed on a municipal register or designated under the *Ontario Heritage Act* or is a federal, provincial or municipal historic landmark or site.

There are no listed or designated heritage buildings or properties that form a part of the study area. There are no listed or designated heritage buildings or properties that are adjacent to the study area.

12) *Documented Historical or Archaeological Sites*

This includes property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations. These are properties which have not necessarily been formally recognized or for which there is additional evidence identifying possible archaeological resources associated with historic properties in addition to the rationale for formal recognition.

There are no known heritage features, or known historic sites, or known archaeological sites within the study area in addition to those formally documented with the appropriate agencies or previously noted under a different criterion.

8.2 CHARACTERISTICS INDICATING REMOVAL OF ARCHAEOLOGICAL POTENTIAL

Section 1.3.2 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics which indicate no archaeological potential or for which archaeological potential has been removed (MTC 2011: 18-19). These characteristics are listed below together with considerations derived from the conduct of this study.
The introduction of Section 1.3.2 (MTC 2011: 18) notes that *"Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources. This is commonly referred to as 'disturbed' or 'disturbance', and may include:"*

1) *Quarrying*
   There is no evidence to suggest that quarrying operations were ever carried out within the study area.

2) *Major Landscaping Involving Grading Below Topsoil*
   Unless there is evidence to suggest the presence of buried archaeological deposits, such deeply disturbed areas are considered to have lost their archaeological potential. Properties that do not have a long history of Euro-Canadian occupation can have archaeological potential removed through extensive landscape alterations that penetrate below the topsoil layer. This is because most archaeological sites originate at grade with relatively shallow associated excavations into the soil. First Nations sites and early historic sites are vulnerable to extensive damage and complete removal due to landscape modification activities. In urban contexts where a lengthy history of occupation has occurred, properties may have deeply buried archaeological deposits covered over and sealed through redevelopment activities that do not include the deep excavation of the entire property for subsequent uses. Buildings are often erected directly over older foundations preserving archaeological deposits associated with the earlier occupation.

   There is no evidence to suggest that major landscaping operations involving grading below topsoil were ever carried out within the study area.

3) *Building Footprints*
   Typically, the construction of buildings involves the deep excavation of foundations, footings and cellars that often obliterate archaeological deposits situated close to the surface.

There is 1 existing structure (the silo) and 3 structural footprints of former buildings within the study area.

4) *Sewage and Infrastructure Development*
Installation of sewer lines and other below ground services associated with infrastructure development often involves deep excavation that can remove archaeological potential.

There is no evidence to suggest that substantial below ground services of any kind have resulted in significant impacts to any significant portion of the study area. This consideration does not apply to relatively minor below ground services that connect structures and facilities to services that support their operation and use.

"Activities such as agricultural cultivation, gardening, minor grading and landscaping do not necessarily affect archaeological potential."

(MTC 2011: 18)

"Archaeological potential is not removed where there is documented potential for deeply buried intact archaeological resources beneath land alterations, or where it cannot be clearly demonstrated through background research and property inspection that there has been complete and intensive disturbance of an area. Where complete disturbance cannot be demonstrated in Stage 1, it will be necessary to undertake Stage 2 assessment."

(MTC 2011: 18)

Table 3 below summarizes the evaluation criteria of the Ministry of Tourism and Culture together with the results of the Stage 1 Background Study for the proposed undertaking. Based on the criteria, the property is deemed to have archaeological potential on the basis of proximity to water and the location of early historic transportation routes (roads, railroad and the Grand River) in close proximity to the study area.

TABLE 3 EVALUATION OF ARCHAEOLOGICAL POTENTIAL

FEATURE OF ARCHAEOLOGICAL POTENTIAL		YES	NO	N/A	COMMENT
1	Known archaeological sites within 300m		**N**		If Yes, potential determined
PHYSICAL FEATURES					
2	Is there water on or near the property?	**Y**			If Yes, what kind of water?
2a	Primary water source within 300 m. (lakeshore, river, large creek, etc.)	**Y**			If Yes, potential determined
2b	Secondary water source within 300 m. (stream, spring, marsh, swamp, etc.)		**N**		If Yes, potential determined
2c	Past water source within 300 m. (beach ridge, river bed, relic creek, etc.)		**N**		If Yes, potential determined
2d	Accessible or Inaccessible shoreline within 300 m. (high bluffs, marsh, swamp, sand bar, etc.)		**N**		If Yes, potential determined
3	Elevated topography (knolls, drumlins, eskers, plateaus, etc.)		**N**		If Yes, and Yes for any of 4-9, potential determined
4	Pockets of sandy soil in a clay or rocky area		**N**		If Yes and Yes for any of 3, 5-9, potential determined
5	Distinctive land formations (mounds, caverns, waterfalls, peninsulas, etc.)		**N**		If Yes and Yes for any of 3-4, 6-9, potential determined
HISTORIC/PREHISTORIC USE FEATURES					
6	Associated with food or scarce resource harvest areas (traditional fishing locations, agricultural/berry extraction areas, etc.)		**N**		If Yes, and Yes for any of 3-5, 7-9, potential determined.
7	Early Euro-Canadian settlement area within 300 m.		**N**		If Yes, and Yes for any of 3-6, 8-9, potential determined
8	Historic Transportation route within 100 m. (historic road, trail, portage, rail corridors, etc.)	**Y**			If Yes, and Yes for any 3-7 or 9, potential determined
9	Contains property designated and/or listed under the Ontario Heritage Act (municipal heritage committee, municipal register, etc.)		**N**		If Yes and, Yes to any of 3-8, potential determined
APPLICATION-SPECIFIC INFORMATION					
10	Local knowledge (local heritage organizations, First Nations, etc.)		**N**		If Yes, potential determined
11	Recent disturbance not including agricultural cultivation (post-1960-confirmed extensive and intensive including industrial sites, aggregate areas, etc.)		**N**		If Yes, no potential or low potential in affected part (s) of the study area.

If **YES** to any of 1, 2a-c, or 10 Archaeological Potential is **confirmed**
If **YES** to 2 or more of 3-9, Archaeological Potential is **confirmed**
If **YES** to 11 or No to 1-10 Low Archaeological Potential is **confirmed** for at least a portion of the study area.

8.3 STAGE 1 RESULTS

As a result of the Stage 1 portion of the study it was determined that the study area has archaeological potential on the basis of proximity to water, and the location of early historic settlement roads adjacent to the study area and early historic railway in proximity to the study area.

8.4 STAGE 2 ANALYSIS AND RECOMMENDATIONS

Section 7.8.3 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 138-139) outlines the requirements of the Analysis and Conclusions component of a Stage 2 Physical Assessment.

1. *Summarize all finding from the Stage 2 survey, or state that no archaeological sites were identified.*
2. *For each archaeological site, provide the following analysis and conclusions:*
   a. *A preliminary determination, to the degree possible, of the age and cultural affiliation of any archaeological sites identified.*
   b. *A comparison against the criteria in 2 Stage 2: Property Assessment to determine whether further assessment is required*
   c. *A preliminary determination regarding whether any archaeological sites identified in Stage 2 show evidence of a high level cultural heritage value or interest and will thus require Stage 4 mitigation.*

No archaeological sites or resources were found during the Stage 2 survey of the study area.

9.0 RECOMMENDATIONS

9.1 STAGE 1 RECOMMENDATIONS

Under Section 7.7.4 of the Standards and Guidelines for Consultant Archaeologists (MTC2011: 133) the recommendations to be made as a result of a Stage 1 Background Study are described.

1) Make recommendations regarding the potential for the property, as follows:
a. if some or all of the property has archaeological potential, identify areas recommended for further assessment (Stage 2) and areas not recommended for further assessment. Any exemptions from further assessment must be consistent with the archaeological fieldwork standards and guidelines.
b. if no part of the property has archaeological potential, recommend that the property does not require further archaeological assessment.

2) Recommend appropriate Stage 2 assessment strategies.

The study area has been identified as an area of archaeological potential.

The study area is roughly 34.42 hectares in area. The study area includes within it mostly ploughable lands. A former farm complex consisting of a concrete silo, barn (ruins), and two other structural ruins is situated in the south end of the study area. There is a gravel lane entering the study area off of County Road 25 and proceeds to the structures. There is also a lawn area surrounding the structures, which includes within it a number of trees surrounding the structures. Along the east edge of the agricultural field to the north of the former farm complex is a meadow. The silo, structural footprints of former buildings and gravel lane were not viable to assess. The areas not consisting of structures, structural footprints and gravel lane were determined to have potential and Stage 2 assessment was therefore conducted using a combination of pedestrian and test pit survey methodologies in accordance with the Standards governing the use of each method.

All portions of the property that could be ploughed were ploughed in advance of the assessment and were well weathered. The pedestrian survey was completed on all ploughed lands at an interval of 5 metres in between individual transects. Any areas that could not be ploughed were subject to assessment using the test pit methodology. Test pits were dug at a fixed interval of 5 metres across the surface area. Test pits measured a minimum of 30 centimeters in diameter and were dug at least 5 centimeters into the subsoil beneath the topsoil layer. All excavated earth was screened through 6 mm wire mesh to ensure that any artifacts contained within the soil matrix are recovered. All test pits were back filled and restored as much as was reasonably possible to the level of the surrounding grade.

9.2 STAGE 2 RECOMMENDATIONS

Under Section 7.8.4 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 139) the recommendations to be made as a result o f a Stage 2 Physical Assessment are described.

1) *For each archaeological site, provide a statement of the following:*
   a. *Borden number or other identifying number*
   b. *Whether or not it is of further cultural heritage value or interest*
   c. *Where it is of further cultural heritage value or interest, appropriate Stage 3 assessment strategies*
2) *Make recommendations only regarding archaeological matters. Recommendations regarding built heritage or cultural heritage landscapes should not be included.*
3) *If the Stage 2 survey did not identify any archaeological sites requiring further assessment or mitigation of impacts, recommend that no further archaeological assessment of the property be required.*

As a result of the physical assessment of the study area, no archaeological resources were encountered. Consequently, the following recommendations are made:

- *no further archaeological assessment of the study area is warranted;*
- *the Provincial interest in archaeological resources with respect to the proposed undertaking has been addressed;*
- *the proposed undertaking is clear of any archaeological concern;*

10.0 ADVICE ON COMPLIANCE WITH LEGISLATION

While not part of the archaeological record, this report must include the following standard advisory statements for the benefit of the proponent and the approval authority in the land use planning and development process:

a. *This report is submitted to the Minister of Tourism and Culture 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 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 and Culture, 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.*

b. *It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the Ontario Heritage Act.*

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

d. *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.*

e. *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.*

11.0 BIBLIOGRAPHY AND SOURCES

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12.0 MAPS

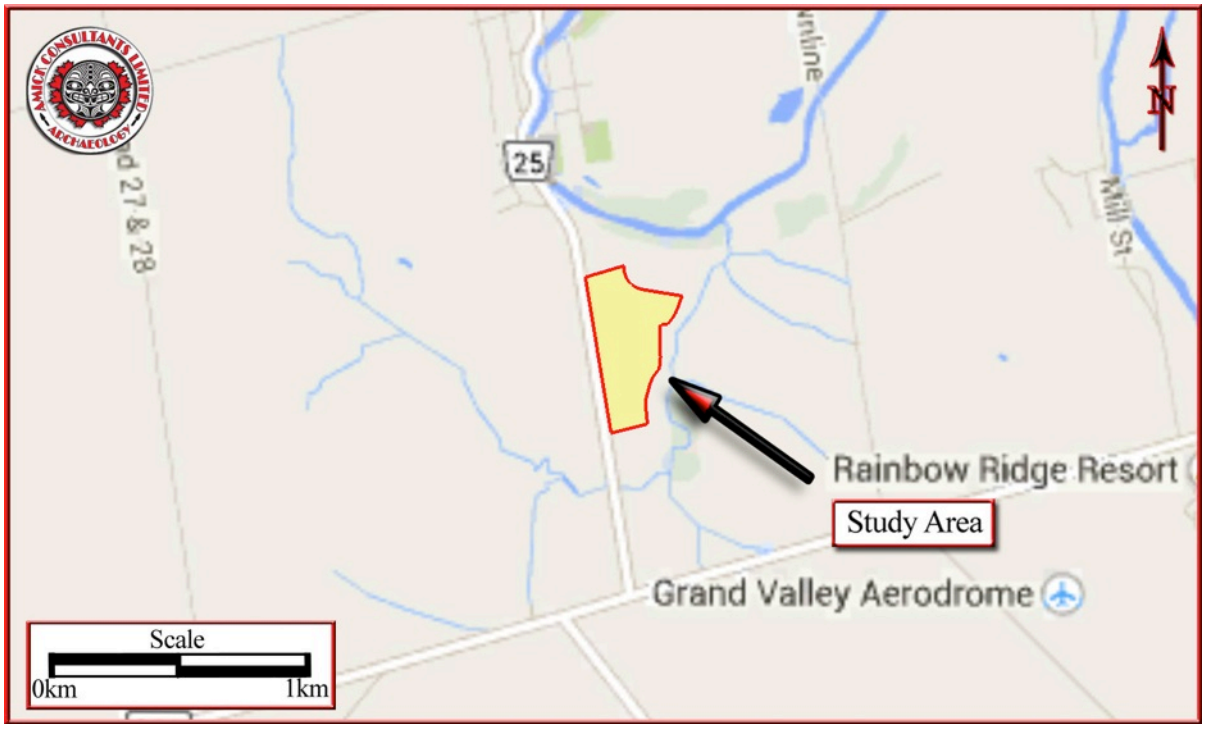

FIGURE 1 LOCATION OF THE STUDY AREA (GOOGLE MAPS 2012)

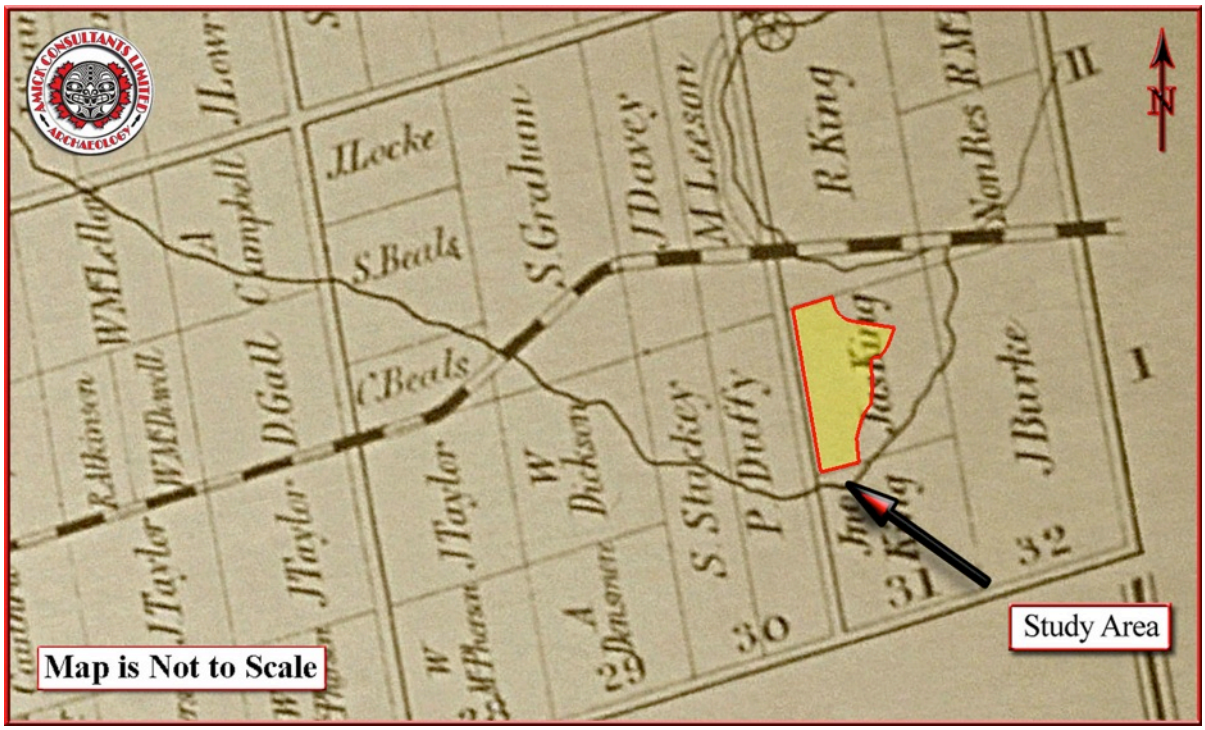

FIGURE 3 FACSIMILE SEGMENT OF THE HISTORIC ATLAS MAP OF THE TOWNSHIP OF EAST LUTHER (WALKER & MILES 1877)

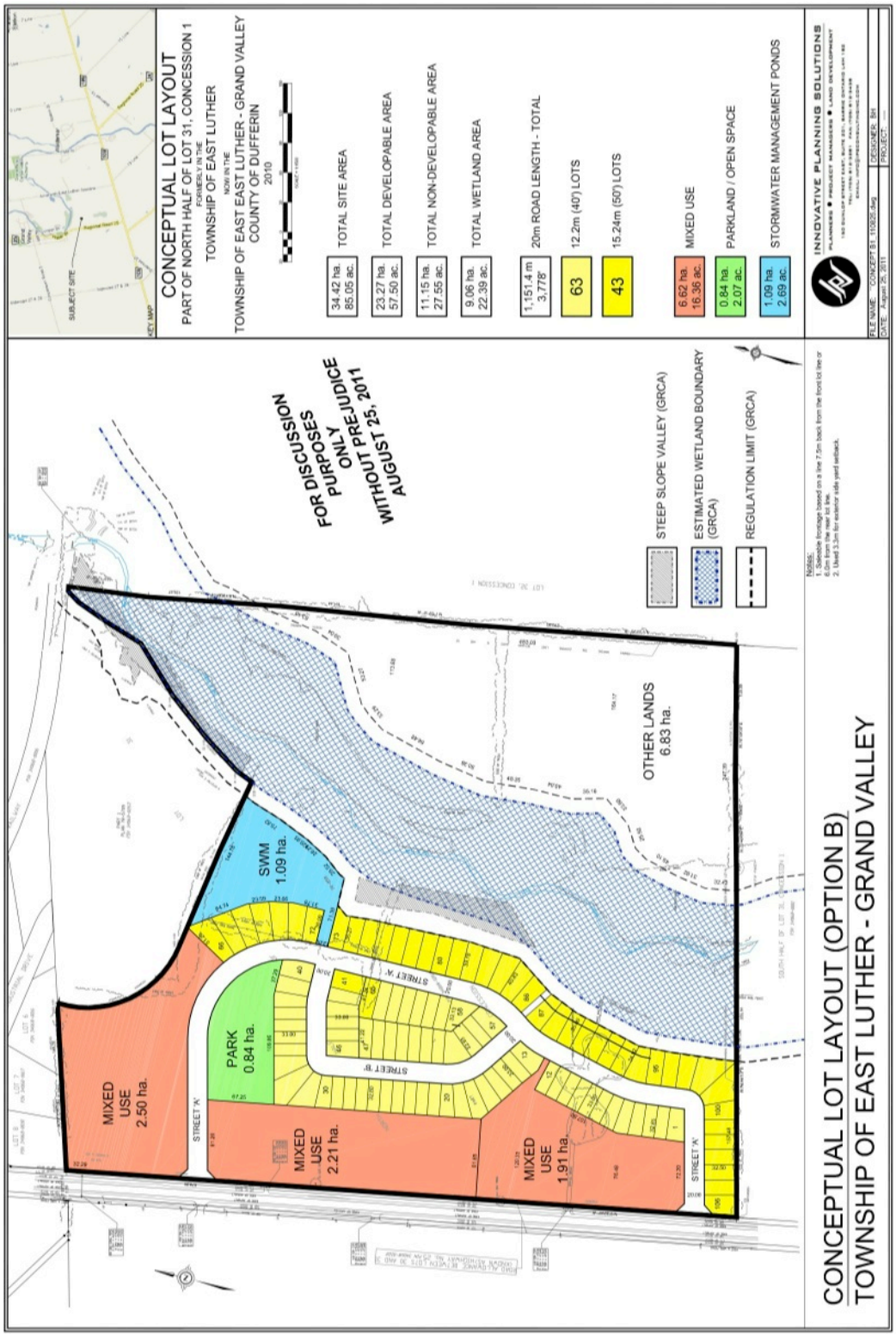

FIGURE 3 CONCEPTUAL LOT LAYOUT (INNOVATIVE PLANNING SOLUTIONS 2011)

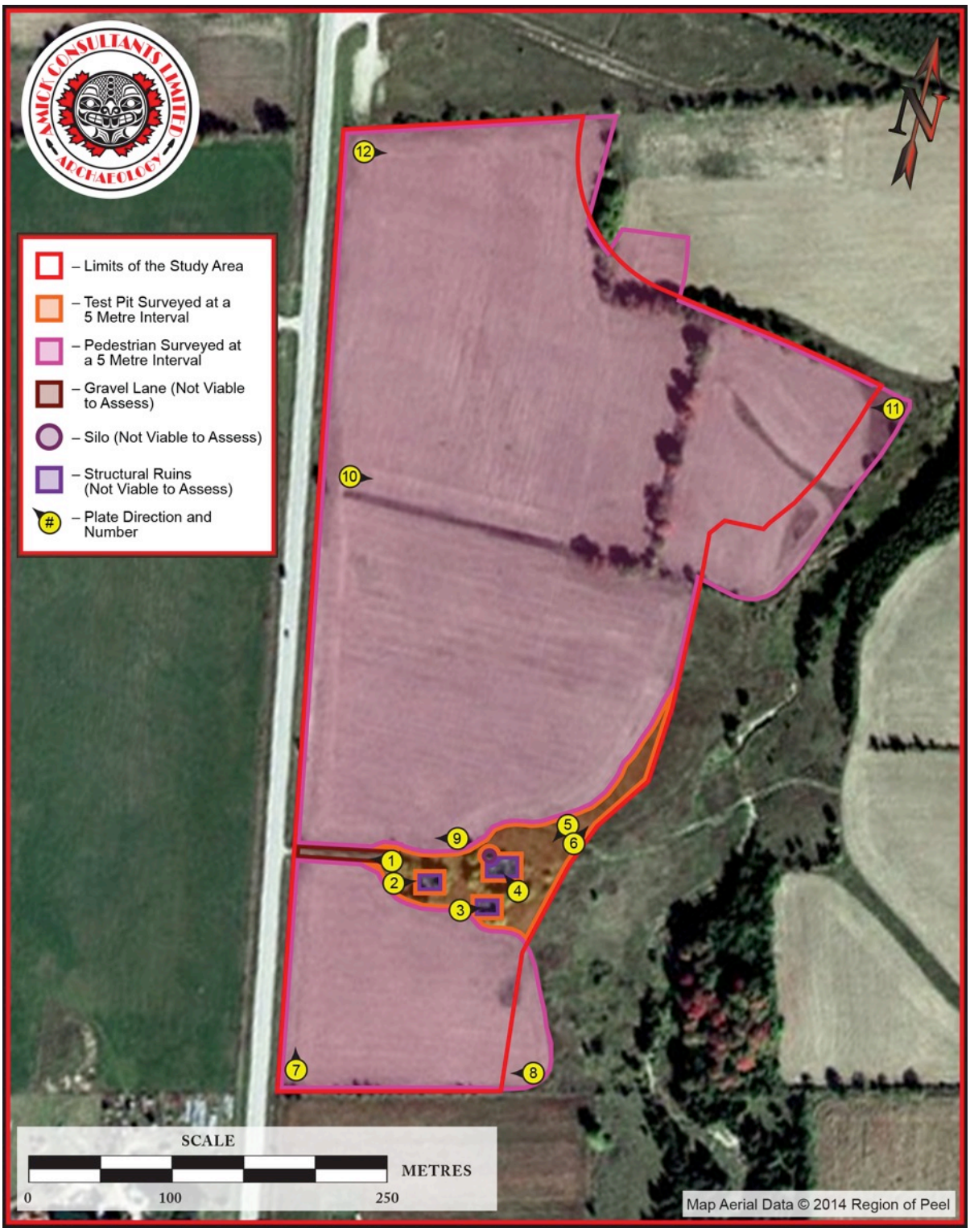

FIGURE 4 AERIAL PHOTO OF THE STUDY AREA (GOOGLE EARTH 2011)

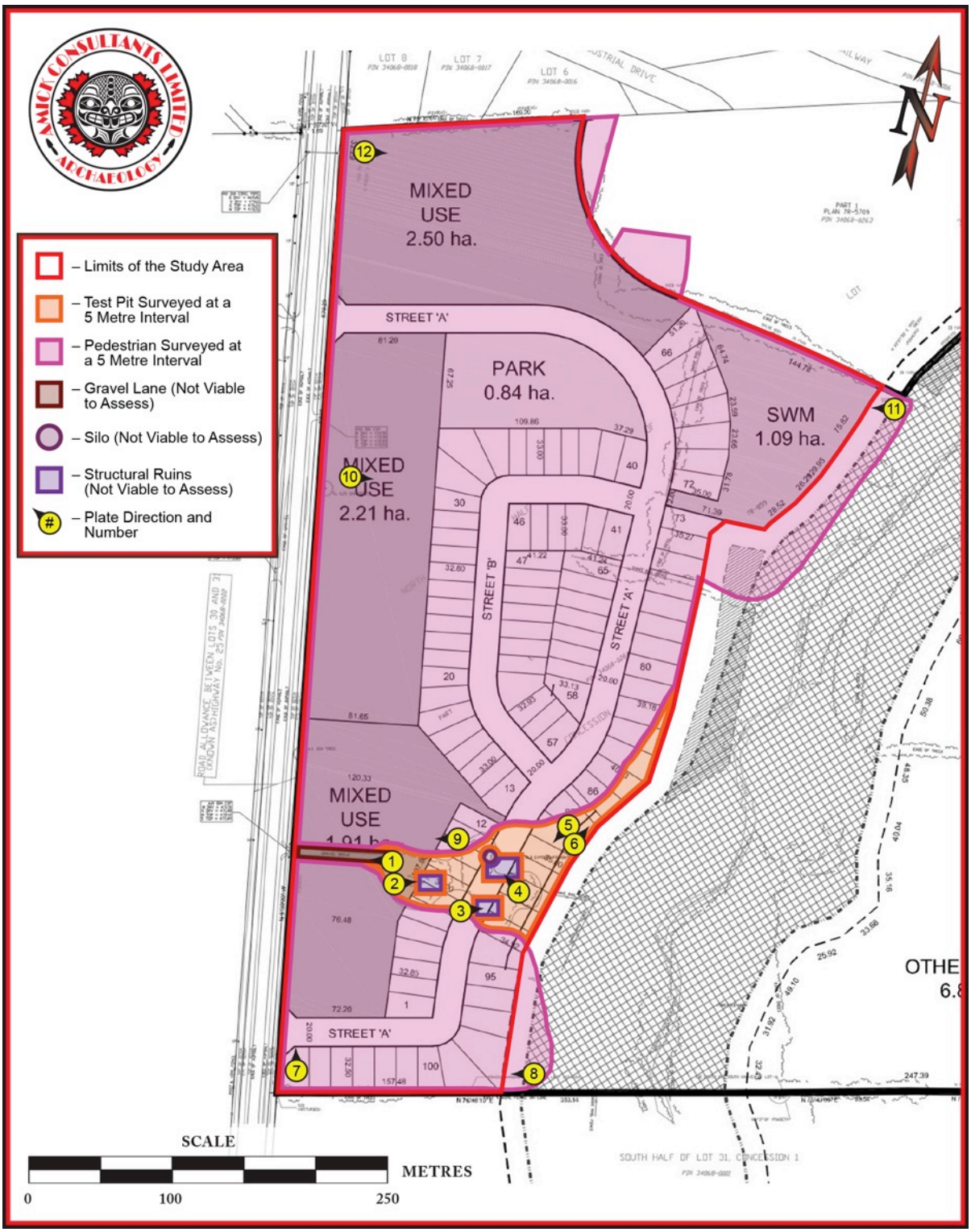

FIGURE 5 DETAILED PLAN OF THE STUDY AREA

13.0 IMAGES

PLATE 1 GRAVEL LANE

PLATE 2 RUINS WITH CONCRETE FOUNDATION

PLATE 3 RUINS WITH CONCRETE FOUNDATION

PLATE 4 CONCRETE SILO

PLATE 5 STONE AND CONCRETE BARN RUINS

PLATE 6 TEST PIT SURVEY CONDITIONS

PLATE 7 PEDESTRIAN SURVEY CONDITIONS

PLATE 8 PEDESTRIAN SURVEY CONDITIONS

PLATE 9 PEDESTRIAN SURVEY CONDITIONS

PLATE 10 PEDESTRIAN SURVEY CONDITIONS

PLATE 11 PEDESTRIAN SURVEY CONDITIONS

PLATE 12 PEDESTRIAN SURVEY CONDITIONS