Stage 4 Mitigation of Location 17 (AfHg-376) at 83 Christie Drive, in Part of Lot 19, Concession B South of Thames River, Geographic Township of North Dorchester, Middlesex County, Ontario, Ontario

Submitted to

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and

The Ontario Ministry of Citizenship and Multiculturalism

Prepared by

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Executive Summary

Lincoln Environmental Consulting Corp. (LEC) was retained by Doug Tarry Homes Ltd. to conduct a Stage 4 mitigation for an Indigenous archaeological site known as Location 17 (AfHg-376). The assessment was undertaken to meet the requirements of the *Planning Act* (Government of Ontario 2014) in advance of site plan approval. The study area is located at 83 Christie Drive, in Part of Lot 19, Concession B South of Thames River, in the Geographic Township of North Dorchester, Middlesex County, Ontario.

This assessment was triggered by the Provincial Policy Statement that is informed by the Planning Act (Government of Ontario 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger Ontario Heritage Act (1990b). According to Section 2.6.2 of the PPS, "development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved."

The Stage 2 assessment was conducted from November 26th, 2019, to January 15th, 2020, under PIF number P348-0074-2019. The Stage 2 consisted of a test pit survey at 5-meter intervals and pedestrian survey at 5m intervals. A total of 17 archaeological locations were identified during the Stage 2 survey, including 5 previously registered archaeological sites.

Locations 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, and 14, do not meet provincial criteria for requiring Stage 3 assessments, as listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' *Standards and Guidelines for Consultant Archaeologists* (2011). These locations were deemed to have little cultural heritage value or interest and were considered sufficiently assessed during Stage 2. As such, no additional fieldwork or assessments were recommended for these Locations.

Location 17 (AfHg-376) was identified as a Woodland Period Aboriginal site with cultural heritage value or interest according to Section 2.2 Standard 1.a.i(1) and (3) of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' *Standards and Guidelines for Consultant Archaeologists* (2011). Location 17 (AfHg-376) was recommended for a Stage 3 site specific assessment followed by Stage 4 mitigation of development impacts.

The Stage 3 site specific assessment of Location 17 (AfHg-376) conducted by LEC consisted of the excavation of 90 one-meter by one-meter test units across the extent of the site. A total of 380 lithic artifacts from the test unit excavation, distributed over roughly the same area as the Stage 2 site. The assemblage is similar to the Stage 2 assemblage by breakdown of artifact class and type, but with no diagnostics. The assemblage consists entirely of chipped lithics, including 375 pieces of chipping detritus and 5 biface fragments. An abundance of natural local chert was also noted during excavations. No

cultural features were identified during the Stage 3 site specific assessment. Location 17 (AfHhg-376) has been interpreted as lithic scatter and due to the presence of 17 stage 3 units where 10 or more artifacts were recovered, requires further work in the form of a Stage 4 archaeological mitigation of development impact.

The MTCS prefers, for sites recommended for Stage 4 mitigation of impacts, that the site be avoided and protected rather than excavated, as per Section 7.9.4 Standard 2 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Options to reduce or eliminate impacts to archaeological sites include redesigning the Project, excluding the archaeological site area from the Project, or incorporating the area of the archaeological site into the Project but without alteration, as outlined in Section 3.5 of the 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). If these options are not feasible, Stage 4 archaeological mitigation by excavation is an alternative.

In consultation with the proponent and the Oneida of the Thames First Nation (OOTTFN), the Stage 4 mitigation of Location 17 (AfHg-376) by avoidance and protection is not a viable option. Thus, Location 17 (AfHg-376) requires Stage 4 mitigation of development impacts by excavation prior to any construction activities or impacts to the archaeological site. The Stage 4 mitigative excavation strategy of Location 17 (AfHg-376) will be determined in accordance with Section 4.2.2 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), and in consultation with First Nation communities.

The Stage 4 archaeological mitigation of development impacts of Location 17 (AfHg-376) consisted of the hand block excavation of 136 one metre by one metre units and resulted in the recovery of 933 Pre-Contact lithic artifacts, consisting mainly of chipping detritus (927), with only three retouched flakes, one utilized flake, and two bifaces also recovered.

The Stage 4 mitigation of development impacts of Location 17 (AfHg-376) resulted in the complete excavation and removal of the archaeological site from the ground. The archaeological value of the site now lies solely with the artifact assemblage, high precision mapping and field documentation. As such, in accordance with the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011b), **Location 17 (AfHg-376) no longer retains cultural heritage value or interest and does not require further archaeological investigation. No further assessment of Location 17 (AfHg-376) is recommended.**

The Ministry of Heritage, Sport, Tourism, and Culture Industries is asked to review the information presented herein, issue comment and offer written confirmation of their acceptance of this report into the provincial registry.

Project Personnel

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Acknowledgements

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1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

Lincoln Environmental Consulting Corp. (LEC) was retained by Doug Tarry Homes Ltd. to conduct a Stage 4 mitigation for an Indigenous archaeological site known as Location 17 (AfHg-376). The assessment was undertaken to meet the requirements of the *Planning Act* (Government of Ontario 2014) in advance of site plan approval. The study area is located at 83 Christie Drive, in Part of Lot 19, Concession B South of Thames River, in the Geographic Township of North Dorchester, Middlesex County, Ontario.

This assessment was triggered by the Provincial Policy Statement that is informed by the Planning Act (Government of Ontario 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger Ontario Heritage Act (1990b). According to Section 2.6.2 of the PPS, "development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved."

Permission to enter the study area and document archaeological resources was provided by Martha Saucier of Doug Tarry Homes Ltd.

1.1.1 Objectives

The objective of the Stage 4 archaeological mitigation of development impacts for Location 17 (AfHg-376) is to fully remove the archaeological site from the ground and in doing so, convert the archaeological site into data (excavation records, artifacts), resulting in the loss of contextual information.

Although it may not be necessary to excavate the whole area of the archaeological site being impacted, excavation strategies must focus on recovering as much data as possible rather than sampling on the site. Full documentation of archaeological sites in stage 4 is necessary to ensure the conservation, protection, and preservation of the heritage of Ontario. The objectives of a Stage 4 mitigation of impacts are:

- To document the archaeological context, cultural features, and artifacts for all parts of the archaeological site
- To document the removal of the archaeological site
- To preserve the information about the archaeological site for future study

A Stage 4 mitigation of development impacts typically consists of the hand excavation of part or all of a site, followed by the excavation of any cultural features.

The Stage 4 investigation has been conducted to meet the requirements of the Ministry of Tourism, Culture and Sport's (MTCS) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011) as well as in consultation with the Chippewa of the Thames First Nation and the Oneida Nation of the Thames.

1.2 HISTORICAL CONTEXT

The entire Stage 2 study area comprises 42.56 hectares, consisting mainly of agricultural field, with small meadow and Woodlots in the east, and a residential structure with associated barn complex. Location 17 (AfHg-376) exists in the Southeastern portion of the study area, in a low-lying meadow. Location 17 (AfHg-376) is located at 83 Christie Drive, in Part of Lot 19, Concession B South of Thames River, in the Geographic Township of North Dorchester, Middlesex County, Ontario.

1.2.1 Pre and early Post-Contact Aboriginal Resources

Our knowledge of past First Peoples settlement and land use in Middlesex County is incomplete. Nonetheless, using province-wide (MCCR 1997) and region-specific archaeological data, a generalized cultural chronology for native settlement in the area can be proposed. The following paragraphs provide a basic textual summary of the known general cultural trends and a tabular summary appears in Table 1.

The Paleoindian Period

The first human populations to inhabit Ontario came to the region between 12,000 and 10,000 years ago, coincident with the end of the last period of glaciation. Climate and environmental conditions were significantly different than they are today; local environs would not have been welcoming to anything but short-term settlement. Termed Paleoindians by archaeologists, Ontario first peoples would have crossed the landscape in small groups (i.e., bands or family units) searching for food, particularly migratory game species. In the area, caribou may have provided the staple of the Paleoindian diet, supplemented by wild plants, small game, birds and fish. Given the low density of populations on the landscape at this time and their mobile nature, Paleoindian sites are small and ephemeral. They are usually identified by the presence of fluted projectile points and other finely made stone tools.

Table 1: Cultural Chronology for Native Settlement within Middlesex County

Period			Time Range (circa)	Diagnostic Features	Complexes
Paleoindian	Early		9000 – 8400 B.C.	fluted projectile points	Gainey, Barnes, Crowfield
	Late		8400 – 8000 B.C.	non-fluted and lanceolate points	Holcombe, Hi-Lo, Lanceolate

Archaic	Early		8000 – 6000 B.C.	serrated, notched, bifurcate base points	Nettling, Bifurcate Base Horizon
	Middle		6000 – 2500 B.C.	stemmed, side & corner notched points	Brewerton, Otter Creek, Stanly/Neville
	Late		2000 – 1800 B.C.	narrow points	Lamoka
			1800 – 1500 B.C.	broad points	Genesee, Adder Orchard, Perkiomen
			1500 – 1100 B.C.	small points	Crawford Knoll
	Terminal		1100 – 850 B.C.	first true cemeteries	Hind
Woodland	Early		800 – 400 B.C.	expanding stemmed points, Vinette pottery	Meadowood
	Middle		400 B.C. – A.D. 600	thick coiled pottery, notched rims; cord marked	Couture
	Late	Western Basin	A.D. 600 – 900	Wayne ware, vertical cord marked ceramics	Riviere au Vase-Algonquin
			A.D. 900 – 1200	first corn; ceramics with multiple band impressions	Young- Algonquin
			A.D. 1200 – 1400	longhouses; bag shaped pots, ribbed paddle	Springwells-Algonquin
			A.D 1400-1600	villages with earthworks; Parker Festoon pots	Wolf- Algonquin
Contact		Aboriginal	A.D. 1600 – 1700	early historic native settlements	Neutral Huron, Odawa, Wenro
		Euro-Canadian	A.D. 1700-1760	fur trade, missionization, early military establishments	French
			A.D. 1760-1900	Military establishments, pioneer settlement	British colonials, UELs

Archaic

The archaeological record of early native life in Southern Ontario indicates a change in lifeways beginning circa 10,000 years ago at the start of what archaeologists call the Archaic Period. The Archaic populations are better known than their Paleoindian predecessors, with numerous sites found throughout the area. The characteristic projectile points of early Archaic populations appear similar in some respects to early varieties and are likely a continuation of early trends. Archaic populations continued to rely heavily on game, particularly caribou, but diversified their diet and exploitation patterns with changing environmental conditions. A seasonal pattern of warm season riverine or lakeshore settlements and interior cold weather occupations has been documented in the archaeological record. Since the large cold weather mammal species that formed the basis of the Paleoindian subsistence pattern became extinct or moved northward with the onset of a warmer climate, Archaic populations had a more varied diet, exploiting a range of plant, bird, mammal and fish species. Reliance on specific food resources like fish, deer and nuts becomes more pronounced through time and the presence of more hospitable environs and resource abundance led to the expansion of band and family sizes. In the archaeological record, this is evident in the presence of larger sites and aggregation camps, where several families or bands would come together in times of resource abundance. The change to more preferable environmental circumstances led to a rise in population density. As a result, Archaic sites are more abundant than those from the earlier period. Artifacts typical of these occupations include a variety of stemmed and notched projectile points, chipped stone scrapers, ground stone tools (e.g. celts, adzes) and ornaments (e.g. bannerstones, gorgets), bifaces or tool blanks, animal bone and waste flakes, a by-product of the tool making process.

Woodland Period

Significant changes in cultural and environmental patterns are witnessed in the Woodland Period (circa 950 B.C to historic times). The coniferous forests of earlier times were replaced by stands of mixed and deciduous species. Occupations became increasingly more permanent in this period, culminating in major semi-permanent villages by 1,000 years ago. Archaeologically, the most significant changes by Woodland times are the appearance of artifacts manufactured from modeled clay and the construction of house structures. The Woodland Period is often defined by the occurrence of pottery, storage facilities and residential areas similar to those that define the incipient agricultural or Neolithic period in Europe. The earliest pottery was rather crudely made by the coiling method and house structures were simple enclosures.

Iroquoian Period

The primary Late Woodland occupants of the area were the Neutral Nation, an Iroquoian speaking population described by European missionaries. Like other known Iroquoian groups including the Huron (Wendat) and Petun, the Neutral practiced a system of intensive horticulture based on three primary subsistence crops (corn, beans and squash). Neutral villages incorporated a number of longhouses, multi-family dwellings that contained several families related through the female line. The Jesuit Relations describe several Neutral centers in existence in the 17th century, including a number of sites where missions were later established. While pre-contact Neutral sites may be identified by a predominance of well-made pottery decorated with various simple and geometric motifs, triangular stone projectile points, clay pipes and ground stone implements, sites post-dating European contact are recognized through the appearance of various items of European manufacture. The latter include materials acquired by trade (e.g., glass beads, copper/brass kettles, iron axes, knives and other metal implements) in addition to the personal items of European visitors and Jesuit priests (e.g., finger rings, stoneware, rosaries, glassware). The Neutral were dispersed and their population decimated by the arrival of epidemic European diseases and inter-tribal warfare.

1.2.2 Euro-Canadian Resources

The study area historically existed in the Township of North Dorchester, County of Middlesex. Like much of Southwestern Ontario, mostly European immigrants arrived throughout the nineteenth century and cleared Dorchester's coniferous and deciduous mixed forests for settlement and agriculture. The agriculturally fertile and rich Middlesex similarly shares a history with places like London and Woodstock: it was settled in the wake of John Graves Simcoe's visits and surveys of the region in 1793, when he also indicated his thoughts of making the Thames River the site of the capital of Upper Canada (Wood, 2020). The study area retained the primary purpose of agriculture from then on.

Middlesex incorporated in 1849, united with Elgin County in 1852, and split in 1853, with the earliest Euro-Canadian settlement being the village of Delaware (Carter, 1984). Middlesex County hosts some historically salient locations, such as Longwoods Road, which connects Delaware to Chatham and acted as a key supply route in the War of 1812.

North Dorchester Township's namesake is Sir Guy Carleton, Lord Dorchester, who acted as Canada's Governor General throughout the late eighteenth century (Wood, 2020). In 1794, William Reynolds built Middlesex County's first log cabin near what is now Dorchester. As a Township, Dorchester owes its development to Colonel Thomas Talbot, an early land speculator from whom the majority of the area's early Euro-Canadian settlers acquired their property. Dorchester Township's first road was Hamilton Road, formed in 1831, while the village came into existence around James Lane's smithy and Joseph Hardy's lumber mill in 1844 (Wood, 2020). Hardy was also the village's first postmaster after the first post office was sanctioned in 1856. A few years earlier (1852), the Great Western Railway invested in North Dorchester's first rail line – often a precondition of a post office at the time (Mika & Mika, 1983).

Use of the study area on Part of Lots 19 and 20, Concession A, and Part of Lots 19 and 20, Concession B, South of the River Thames, Geographic Township of North Dorchester, County of Middlesex, Ontario in the nineteenth century is determinable through historical records. According to the 1861 Census, Mrs. Orlow Mabee occupied the western parcel of Lot 20, Concession A (Library and Archives Canada, 2019a). James Cartwright, a 21-year-old bachelor farmer born in Upper Canada, occupied Lot 19 of Concession A with his family. The Cartwright family entailed James' father William (aged 56), his mother Caroline (aged 53), and their three children all under 18 together living in a single-story frame house (Library and Archives Canada, 2019a). On the Northern parcel of Lot 20, Concession B, 38-year-old England-born farmer Peter Smith lived with his wife Elisia (aged 38) and their six children in a single-story frame house (Library and Archives Canada, 2019a). Hugh Madole held the eastern side of that same Concession, while James Eagen held the western parcel.

Ten years later in 1871, the Census indicates Mrs. Mabee still held her property, though a W.T. Cartwright possessed the Cartwright family land on Lot 19, Concession A (Library and Archives Canada, 2019b). Peter Smith continued to hold land on the northwest parcel of Lot 20 Concession B, while R. Smith held the northeast section. The Smiths held other parcels in the study area – S. Smith held Lot 19, Concession B's northwest parcel, while M. Smith held the northeast portion (Library and Archives Canada, 2019b).

Also extant is the Illustrated Historical Atlas of the County of Middlesex, which shows the study area's occupation in 1878 (H.R. Page & Co., 1878). Corroborating the early census, Mabee still held her parcel, W.T. Cartwright held the same, and Peter Smith, R. Smith, S. Smith, and M. continued to own their respective parcels from the 1871 census. Fortunately, the map also details some structures/features, including: a homestead and agricultural field on lot 20, Concession B, and a homestead and agricultural field on Lot 19, Concession B (Figure 3). Around 60 metres east and northeast of the study area, the map also indicates two homesteads and more fields belonging to Mrs. Mabee. There was one homestead and field 120 metres to the east, a cemetery roughly 300 metres to the northeast, and an east-west roadway

transecting the centre of the study area between Concessions A and B. Finally, the Atlas indicates a roadway running north-south just west of the study area, in addition to the Great Western Railway line 1 kilometre north of it.

1.3 ARCHAEOLOGICAL CONTEXT

1.3.1 Existing Conditions

The entire Stage 2 study area comprises 42.56 hectares, consisting mainly of agricultural field, with small meadow and Woodlots in the east, and a residential structure with associated barn complex. Location 17 (AfHg-376) exists in the Southeastern portion of the study area, in a low-lying meadow. Location 17 (AfHg-376) is located at 83 Christie Drive, in Part of Lot 19, Concession B South of Thames River, in the Geographic Township of North Dorchester, Middlesex County, Ontario.

1.3.2 The Natural Environment

The project area is located in the Mount Elgin Ridges physiographic region as identified by Chapman and Putnam (1984:144).

> *The Mount Elgin Ridges region spans an area of approximately 145,686 hectares (360,000 acres) between the Thames Valley and the Norfolk Sand Plain. Geologically, this area consists of a succession of vales and ridges with elevations ranging from 245 m to 300 m asl. The ridges are moraines that consist mostly of a brown silty clay, while the vales are mostly alluvial gravel or silty sand (Chapman and Putnam 198:145). The ridges are well drained due to their soil composition while the vales are often poorly drained, resulting in the formation of a number of undrained basins that contain peat and muck soils.*
>
> (Chapman and Putnam 1984:144-145)

The soils here are comprised of sandy loam, ideal for agricultural practices and aboriginal settlement.

Potable water is the single most important resource for any extended human occupation or settlement and since water sources in southwestern Ontario have remained relatively stable over time, proximity to drinkable water is regarded as a useful index for the evaluation of archaeological site potential. In fact, distance to water is one of the most commonly used variables for predictive modeling of archaeological site location in Ontario. The Thames River flows less than a kilometre to the North of the study area, while a tributary flows 490metres to the East.

1.3.3 Previously Known Archaeological Sites and Surveys

In order to compile an inventory of archaeological resources, the registered archaeological site records kept by the MHSTCI were consulted. In Ontario, information concerning archaeological sites stored in the ASDB is maintained by the MHSTCI. This database contains archaeological sites registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden Block is approximately 13 kilometers east to west and approximately 18.5 kilometers

north to south. Each Borden Block is referenced by a four-letter designator and sites within a block are numbered sequentially as they are found. The study area under review is within Borden Block AfHg.

An examination of the ASDB has shown that there are 35 archaeological sites registered within a one-kilometer radius of the study area, including seven which lie within 250m of the Stage 2 study area, five of which, including Location 15 (AfHg-17), lie within in (Sites Data Search, Government of Ontario, April 30th, 2021); Table 2 summarizes the registered archaeological sites within one-kilometer of the study area.

Table 2: Registered Archaeological Sites within One Kilometer of the Study Area

Borden #	Site Name	Site Type	Cultural Affiliation
AfHg-30	Puff	-	-
AfHg-1	Calvert	Village	Late Woodland (Iroquoian)
AfHg-142	James O'Brien	Homestead	Euro-Canadian
AfHg-143	-	Findspot	Pre-Contact
AfHg-144	-	Scatter	Pre-Contact
AfHg-145	-	Scatter	Pre-Contact
AfHg-146	Dorchester Mill Pond Dam	Dam, Mill	Euro-Canadian
AfHg-17	**Larch Lookout**	**Camp/Campsite/Hamlet**	**Archaic/Late Woodland/Euro-Canadian**
AfHg-170	Szucs 1	Camp/Campsite	Pre-Contact
AfHg-171	Szucs 2	Findspot	Pre-Contact
AfHg-172	Szucs 4	Homestead	Euro-Canadian
AfHg-173	Szucs 5	Scatter	Pre-Contact
AfHg-174	Szucs 6	Scatter	Pre-Contact
AfHg-175	Szucs 7	Scatter	Pre-Contact
AfHg-176	Szucs 9	Camp/Campsite	Pre-Contact
AfHg-177	Szucs 11	Camp/Campsite	Pre-Contact
AfHg-178	Szucs 12	Scatter	Pre-Contact
AfHg-179	Szucs 13	Camp/Campsite	Pre-Contact
AfHg-18	**Andrew**	**Homestead**	**Euro-Canadian/Late Woodland (Iroquoian)**
AfHg-180	Szucs 14	Camp/Campsite	Pre-Contact
AfHg-181	Szucs 15	Camp/Campsite	Pre-Contact
AfHg-182	Szucs 16	House	Euro-Canadian
AfHg-183	Szucs 17	House	Euro-Canadian
AfHg-184	**Szucs 18**	**Camp/Campsite**	**Pre-Contact**
AfHg-19	Kieth	Homestead	Euro-Canadian/Late Woodland (Iroquoian)
AfHg-2	**Mustus**	**Hamlet, Village**	**Late Woodland (Iroquoian)**
AfHg-206	Cromarty Site	Camp/Campsite	Late Woodland (Iroquoian)
AfHg-25	Thinly	-	-
AfHg-26	Creek Bend	Camp/Campsite	Pre-Contact
AfHg-27	Jackle	-	-
AfHg-28	Northmuck	-	-
AfHg-29	**Gunk**	**Cabin**	**Euro-Canadian**
AfHg-32	Cedar Ravine	-	Archaic
AfHg-36	Celery	Cabin/Dump	Euro-Canadian
AfHg-99	AfHg-99	Findspot	Pre-Contact

1.3.4 Summary of Previous Investigations

Prior to Woods stage 2 assessment of the study area, three previous studies had been conducted within 50m of the study area.

In 2008, Archaeologix conducted a Stage 1 & 2 archaeological assessment on lands directly south and east of the current study area. The work was documented in a report titled *Archaeological Assessment (Stages 1 & 2) Szucs Property Part of Lots 18 and 19, Concession B, Geographic Township of North Dorchester, Municipality of Thames Centre, Middlesex County, Ontario* and conducted under PIF P001-448-2008.

Nineteen locations were recorded during this survey, including 16 Aboriginal sites and three Euro-Canadian sites. Nine of the Aboriginal sites and all three Euro- Canadian sites were recommended for Stage 3 site-specific assessment (Archaeologix 2008: 34).

Of note is the Szucs 18 Site (AfHg-184), which according to the OASD is located within the current study area. Mapping within the report itself, however, indicates that the site is 70 m to the south (Archaeologix 2008: Figure 3). Fifty-nine precontact artifacts were collected within a 50m x 40m scatter, and further Stage 3 assessment was recommended.

None of the remaining 18 sites are located within 50 m of the current study area, and there is no overlap between Archaeologix' study area and the current study area, so it appears likely that AfHg-184 is not actually within the current study area boundary.

In 1983, James Keron conducted a pedestrian survey on lands throughout Westminster and North Dorchester Townships, including a portion of the present study area. The work was documented in a report titled *Archaeological Survey of the Townships of Westminster and North Dorchester.*

The Gunk Site (AfHg-29), located within the current study area, was discovered during this assessment. The Euro-Canadian artifacts collected at the Gunk Site were found within a light scatter measuring 60 m in diameter. The surface collection was completed on a 10-m transect. Keron interpreted this site as a short duration occupation, likely around the 1860's (Keron 1983: 76).

Between 1981 and 1982 William Fox conducted an excavation on the previously identified Calvert Site (AfHg-1), an Early Iroquoian Glen Meyer Village occupied between the 12th and 13th centuries (Timmins 1997: 1). The excavation was conducted prior to the development of a subdivision immediately east of the current study area. Between 1981 and 1982, Fox and his team excavated 70% of the 0.28-ha village. Their excavation documented some 5,000 post moulds and 333 features. The total assemblage includes 31,847 artifacts and an additional 655,779 ecofacts. The total artifact assemblage was narrowed down to the following categories: ceramic, lithic and bone, antler and shell (Timmins 1997: 32–33). Of the 46 bone artifacts recovered from the 1981–82 excavation, a single human bone was recovered in one of the refuse pits. The Calvert Site village consisted of 14 house structures and four rows of palisades. The

overlapping features indicated that the village had been in use over the course of 50 to 60 years with four primary phases of occupation (Timmins 1997: 35).

William Fox also documented three other registered sites within the current study area: AfHg-17, AfHg-18, and AfHg-2. These three sites are likely associated with the Calvert Village Site (Fox personal communication).

There have been no other documented archaeological investigations within 50 meters of the subject property. However, it should be noted that the Ministry of Heritage, Sport, Tourism, and Culture Industries currently does not provide an inventory of archaeological assessments carried out within 50 meters of a property, so a complete inventory of assessments on lands adjacent to the subject property cannot be provided.

1.3.5 Summary of Past Archaeological Investigations within 50m

The Stage 2 assessment was conducted from November 26th 2019, to January 15th, 2020 under PIF number P348-0074-2019. The Stage 2 consisted of a test pit survey at 5 meter intervals and pedestrian survey at 5m intervals. A total of 17 archaeological locations were identified during the Stage 2 survey. Four of the identified sites, four sites had been previously registered in the OASD, and an additional four sites were newly registered. Recommendations were made as follows below (Wood 2020).

1) The archaeological site identified as Location 1 (AfHg-377) in this report is a multicomponent site, with a pre-contact Aboriginal component and a Euro-Canadian domestic component.

a. The pre-contact Aboriginal component at Location 1 represents a single findspot that is not temporally diagnostic. This component of Location 1 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Therefore, the Aboriginal component of Location 1 has no further cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. No additional fieldwork or assessment is recommended for the Aboriginal component of Location 1.

b. Stage 3 Investigations are warranted for the Euro-Canadian component of Location 1. This site represents a Euro-Canadian domestic site with cultural heritage value or interest according to the criteria listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Specifically, 20 artifacts that date the period of use to before 1900 were found at the site. Location 1 (AfHg-377) is a small post-contact site where it is not yet evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 excavations. Therefore, Stage 3 fieldwork will involve the hand excavation of 1-m square units in a 5-m grid across the site. Grid unit excavation should be followed by excavation of additional test units, amounting to 20% of the grid unit total, focusing on areas of interest within the site extent (such as distinct areas of higher concentrations of artifacts or adjacent to high-yield

units) as per Section 3.2.2 and Table 3.1 of the Standards and Guidelines for Consultant Archaeologists. If any features are encountered, they will be addressed as per Section 3.2.2 Standard 6 where their profile will be recorded, be covered in geotextiles and backfilled.

2) The Euro-Canadian findspot identified in this report as Location 2 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 2 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 2.

3) The Euro-Canadian scatter identified in this report as Location 3 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 3 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 3.

4) The Late Archaic Aboriginal findspot identified in this report as Location 4 (AfHg-373) does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 4 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 4.

5) Stage 3 investigations are warranted for the site identified in this report as Location 5 (AfHg-2). This site represents a Late Woodland Glen Meyer village site with cultural heritage value or interest according to Section 2.2 Standard 1.a.i(1) and (3) of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). It is evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 excavations. This site is in an agricultural field. Therefore, Stage 3 fieldwork will involve a controlled surface artifact collection after the field on which it is located has been ploughed and allowed to appropriately weather as per Section 3.2.1. This will be followed by the hand-excavation of 1-m square units in a 10-m grid across the site. Grid unit excavation should be followed by excavation of additional test units, amounting to 40% of the grid unit total, focusing on areas of interest within the site extent (such as distinct areas of higher concentrations of artifacts or adjacent to high-yield units) as per Section 3.2.2 and Table 3.2.1 of the Standards and Guidelines for Consultant Archaeologists. If any features are encountered, they will be addressed as per Section 3.2.2 Standard 6 where their profile will be recorded, be covered in geotextiles and backfilled.

6) The Aboriginal findspot identified in this report as Location 6 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 6 is

deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 6.

7) The Late Archaic findspot identified in this report as Location 7 (AfHg-374) does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 7 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 7.

8) The Aboriginal findspot identified in this report as Location 8 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 8 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 8.

9) The Aboriginal findspot identified in this report as Location 9 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 9 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 9.

10) Stage 3 investigations are warranted for the site identified in this report as Location 10 (AfHg-375). This site represents a Woodland period Aboriginal site with cultural heritage value or interest according to Section 2.2 Standard 1.a.i(1) and (3) of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). It is evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 excavations. This site is in an agricultural field. Therefore, Stage 3 fieldwork will involve a controlled surface artifact collection after the field on which it is located has been ploughed and allowed to appropriately weather as per Section 3.2.1. This will be followed by the hand-excavation of 1-m square units in a 10-m grid across the site. Grid unit excavation should be followed by excavation of additional test units, amounting to 40% of the grid unit total, focusing on areas of interest within the site extent (such as distinct areas of higher concentrations of artifacts or adjacent to high-yield units) as per Section 3.2.2 and Table 3.2.1 of the Standards and Guidelines for Consultant Archaeologists. If any features are encountered, they will be addressed as per Section 3.2.2 Standard 6 where their profile will be recorded, be covered in geotextiles and backfilled.

11) The Aboriginal findspot identified in this report as Location 11 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant

Archaeologists (2011). Location 11 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 11.

12) The Aboriginal findspot identified in this report as Location 12 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 12 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 12.

13) The Aboriginal lithic scatter identified in this report as Location 13 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 13 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 13.

14) The Aboriginal findspot identified in this report as Location 14 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 14 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 14.

15) Stage 3 Investigations are warranted for the site identified in this report as Location 15 (AfHg-17). This site represents a Late Woodland campsite with cultural heritage value or interest according to Section 2.2 Standard 1.a.i(1) and (3) of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). It is evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 excavations. This site is in an agricultural field. Therefore, Stage 3 fieldwork will involve a controlled surface artifact collection after the field on which it is located has been ploughed and allowed to appropriately weather as per Section 3.2.1. This will be followed by the hand-excavation of 1-m square units in a 10-m grid across the site. Grid unit excavation should be followed by excavation of additional test units, amounting to 40% of the grid unit total, focusing on areas of interest within the site extent (such as distinct areas of higher concentrations of artifacts or adjacent to high-yield units) as per Section 3.2.2 and Table 3.2.1 of the Standards and Guidelines for Consultant Archaeologists. If any features are encountered, they will be addressed as per Section 3.2.2 Standard 6 where their profile will be recorded, be covered in geotextiles and backfilled.

16) The archaeological site identified as Location 16 (AfHg-18) in this report is a multicomponent site, with a pre-contact Aboriginal component and a Euro-Canadian domestic component.

a. The pre-contact Late Archaic component of Location 16 meets the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and

Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 16 (AfHg-18) is a pre-contact site where it is not yet evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 excavations. Therefore, Stage 3 fieldwork will involve the hand excavation of 1-m square units in a 5-m grid across the site. Grid unit excavation should be followed by excavation of additional test units, amounting to 20% of the grid unit total, focusing on areas of interest within the site extent (such as distinct areas of higher concentrations of artifacts or adjacent to high-yield units) as per Section 3.2.2 and Table 3.1 of the Standards and Guidelines for Consultant Archaeologists. If any features are encountered, they will be addressed as per Section 3.2.2 Standard 6 where their profile will be recorded, be covered in geotextiles and backfilled.

b. The Euro-Canadian scatter identified in this report as Location 16 does not meet the criteria for requiring Stage 3 assessment listed in Section 2.2. Standard 1 of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). Location 16 is deemed to have little cultural heritage value or interest and it is considered sufficiently assessed at Stage 2. As such, no additional fieldwork or assessment is recommended for Location 16.

17) Stage 3 investigations are warranted for the site identified in this report as Location 17 (AfHg-376). This site represents a Woodland period Aboriginal site with cultural heritage value or interest according to Section 2.2 Standard 1.a.i(1) and (3) of the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011). It is evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 excavations. This site is in an agricultural field. Therefore, Stage 3 fieldwork will involve a controlled surface artifact collection after the field on which it is located has been ploughed and allowed to appropriately weather as per Section 3.2.1. This will be followed by the hand-excavation of 1-m square units in a 10-m grid across the site. Grid unit excavation should be followed by excavation of additional test units, amounting to 40% of the grid unit total, focusing on areas of interest within the site extent (such as distinct areas of higher concentrations of artifacts or adjacent to high-yield units) as per Section 3.2.2 and Table 3.2.1 of the Standards and Guidelines for Consultant Archaeologists. If any features are encountered, they will be addressed as per Section 3.2.2 Standard 6 where their profile will be recorded, be covered in geotextiles and backfilled.

18) The balance of the study area does not require further archaeological assessment.

(Wood 2020:4-9)

Location 17 was subject to a Stage 3 site specific assessment in 2020 by LEC under PIF# P344-0428-2020.

The Stage 3 site specific assessment of Location 17 (AfHg-376) conducted by LEC consisted of the excavation of 90 one-meter by one-meter test units across the extent of the site. A total of 380 lithic artifacts from the test unit excavation, distributed over roughly the same area as the Stage 2 site. The assemblage is similar to the Stage 2 assemblage by breakdown of artifact class and type, but with no

diagnostics. The assemblage consists entirely of chipped lithics, including 375 pieces of chipping detritus and 5 biface fragments. An abundance of natural local chert was also noted during excavations. No cultural features were identified during the Stage 3 site specific assessment. Location 17 (AfHhg-376) has been interpreted as lithic scatter and due to the presence of 17 stage 3 units where 10 or more artifacts were recovered, requires further work in the form of a Stage 4 archaeological mitigation of development impact.

Location 17 (AfHg-376) was deemed to retain further cultural heritage value or interest according to section 3.4 of the *2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011)* and a stage 4 mitigation of development impacts was recommended.

2.0 FIELD METHODS

The entire Stage 2 study area comprises 42.56 hectares, consisting mainly of agricultural field, with small meadow and Woodlots in the east, and a residential structure with associated barn complex. Location 17 (AfHg-376) exists in the Southeastern portion of the study area, in a low-lying meadow. Location 17 (AfHg-376) is located at 83 Christie Drive, in Part of Lot 19, Concession B South of Thames River, in the Geographic Township of North Dorchester, Middlesex County, Ontario.

Upon arrival at the site, geographic reference markers that were documented during the Stage 3 archaeological assessment were relocated using a Top Con FC-5000 Network Rover using the North American Datum 1983 (NAD83).

The original five-meter by five-meter grid was reestablished across the extent of the sites according to the Stage 3 site specific assessment. This grid was reestablished using a Top Con Fc-5000 Network Rover, using the NAD83. Furthermore, the grid from the Stage 3 was still in place.

The five-meter units in the grid are referred to by the intersection coordinates of their southwest corner. Each five-meter square was divided into 25 one-meter units, with sub-square number one located in the southwest corner of the five-meter unit, number five in the southeast corner, number six located immediately north of number one, and so on. All test units were excavated in systematic levels. Each one-meter unit contained a single stratigraphic layer (topsoil) and was excavated into the first five centimeters of subsoil. All soil from the units was screened through six-millimeter hardware cloth. All artifacts recovered during Stage 4 mitigation were retained for laboratory analysis and description. Artifacts recovered during Stage 4 mitigation were recorded and catalogued regarding their corresponding one-meter sub-square unit number.

The Stage 4 archaeological mitigation of development impacts of Location 15 (AfHg-376) consisted of the hand block excavation of 136 one metre by one metre units and resulted in the recovery of 933 Pre-Contact lithic artifacts, consisting mainly of chipping detritus (927), with only three retouched flakes, one utilized flake, and two bifaces also recovered. The subsoil surface of each unit was shovel shined, troweled and examined for any evidence of subsurface cultural features prior to backfilling, none of which were identified. The test units ranged in depth from 26 centimeters to 35 centimeters. Each test unit contained a single stratigraphic layer (ploughzone) and was excavated into the first five centimeters of subsoil.

All artifacts recovered were retained for laboratory analysis and will be processed as per Section 3.2.1 Standard 6 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011b).

During the Stage 4 mitigation the weather was warm and sunny. At no time were field or weather conditions detrimental to the recovery of archaeological material. Lighting and soil conditions were

suitable, and visibility was excellent. Photos 1-8 illustrate field conditions during the Stage 4 excavations. Table 3 provides a summary of the weather and field conditions.

All artifacts recovered during Stage 4 mitigation were retained for laboratory analysis and description. Artifacts recovered during Stage 4 mitigation were recorded and catalogued regarding their corresponding one-meter sub-square unit number, or corresponding Feature and context within the feature.

Table 3: Location 17 (AfHg-376) Weather and Field Conditions

Date	Activity	Weather	Field Conditions
July 29th, 2020	Block Excavation	Warm, sunny	Dry friable soils; screens well
July 30th, 2020	Block Excavation	Warm, sunny	Dry friable soils; screens well
August 1st, 2020	Block Excavation	Warm, sunny	Dry friable soils; screens well
August 2nd, 2020	Block Excavation	Warm, sunny	Dry friable soils; screens well
August 3rd, 2020	Block Excavation	Warm, sunny	Dry friable soils; screens well
August 4th, 202o	Block Excavation	Warm, sunny	Dry friable soils; screens well

Fieldwork for Location 17 (AfHg-376) was done in consultation with the Oneida Nation of the Thames who had a monitor on site when one was available. All strategies followed the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011) as well as strategies previously agreed upon between LEC and the ONTT in the Stage 3 report (LEC 2022).

3.0 RECORD OF FINDS

The Stage 4 mitigation was conducted employing the methods described in Section 2.0 of this report. An inventory of the documentary record generated by fieldwork is provided in Table 4 and the results of the Stage 4 mitigation is discussed in greater detail below. Maps indicating the exact site location and all UTM coordinates recorded during the assessment are included in the Supplementary Documentation to this report.

Table 4: Inventory of Documentary Record: Stage 4 Mitigation of Location 17 (AfHg-376)

Document Type	Current Location of Document Type	Additional Comments
7 Pages of Field Notes	LEC office in London	Photocopied and stored digitally in project file
1 Map Provided by Client	LEC office in London	In original field book and photocopied in project file
54 Digital Photographs	LEC office in London	Stored digitally in project file
1 hand drawn map	LEC office in London	In original field book and photocopied in project file
933 pre-contact artifacts	LEC office in London	Stored in individual bags in 1 banker's box
Artifact Catalogue	LEC office in London	Stored digitally in project file

All the material culture collected during the Stage 4 mitigation of Location 17 (AfHg-376) is contained in one Bankers box. It will be temporarily housed at the LEC London office until formal arrangements can be made for a transfer to an MCM collections facility.

3.1 CULTURAL MATERIAL

The Stage 4 archaeological mitigation of development impacts of Location 15 (AfHg-376) consisted of the hand block excavation of 136 one metre by one metre units and resulted in the recovery of 933 Pre-Contact lithic artifacts, consisting mainly of chipping detritus (927), with only three retouched flakes, one utilized flake, and two bifaces were also recovered. The subsoil surface of each unit was shovel shined, troweled and examined for any evidence of subsurface cultural features prior to backfilling, none of which were identified. The test units ranged in depth from 26 centimeters to 35 centimeters. Each test unit contained a single stratigraphic layer (ploughzone) and was excavated into the first five centimeters of subsoil. A sample of artifacts recovered from the Stage 4 mitigation is depicted in Section 8.2. Table 5 summarizes the artifacts recovered during the Stage 4 mitigation of Location 17 (AfHg-376) and a full catalogue is provided in Appendix A.

Table 5: Location 17 (AfHg-376) Artifact Breakdown

Artifact Class	Frequency	%
Chipping Detritus	927	99.46
Retouched Flake	3	<1
Utilized Flake	1	<1
Biface	2	<1
Total	**933**	**100**

3.1.1 Chipping Detritus

A total of 931 pieces of chipping detritus were recovered, including 3 retouched flakes and one utilized flake and were subject to morphological analysis following the classification scheme described by Andrefsky (1998), Thomas (1992), and Odell (2004). Table 6 outlines the results of the detailed morphological analysis of the chipping detritus and is the full artifact catalogue.

Table 6: Chipped Stone Debitage Analysis

Material	Primary Thinning Flake		Secondary Retouch Flake		Secondary Knapping Flake		Biface Thinning Flake		Flake Fragment		Shatter		Total Analyzed	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Onondaga	0	0	0	0	399	42.86	0	0	375	40.28	102	10.96	**876**	**94.09**
Till	0	0	0	0	22	2.36	0	0	31	3.33	2	<1	**55**	**5.91**
Total	**0**	**0**	**0**	**0**	**421**	**45.22**	**0**	**0**	**406**	**43.61**	**104**	**11.17**	**931**	**100**

The morphological analysis of the chipped stone debitage indicates that secondary knapping flakes (421) comprise, and flake fragments (406) comprise the majority of the assemblage while 104 pieces that were identified as shatter were also recovered. Though the shatter likely represents natural chert. An abundance of natural chert was identified in the field and numerous pieces were discarded in the lab, being 100% natural.

Primary flakes are produced during the initial reduction phases of raw material blanks and tend to exhibit minimal dorsal flake scarring. These flakes are also characterized by the presence of cortex, or original un-flaked area, on their dorsal surfaces and proximal ends. Secondary knapping flakes are long and thin and have three or more flake scars on the dorsal face and little or no cortex (Thomas 1992). Secondary Reduction flakes are the result of precise flake removal through pressure flaking, where the maker applies direct pressure onto a specific part of the tool to facilitate flake removal. Pressure flaking generally produces smaller, thinner flakes than does percussion flaking.

The morphological analysis of the flake assemblage from Location 17 (AfHg-376) suggests that the lithic practices at this site consisted mainly of the re-sharpening and maintenance of expedient tools from existing inventory or debitage.

The majority of the recovered flakes are manufactured from Onondaga chert while the remainder are a local till chert and likely represent natural occurrences rather than cultural material. Chert type identifications were accomplished visually using reference materials located in the LEC London office.

Onondaga formation chert is from the Middle Devonian age, with outcrops occurring along the north shore of Lake Erie between Long Point and the Niagara River (Eley and von Bitter 1989). It is a high-quality raw material frequently utilized by pre-contact people and often found at archaeological sites in southern Ontario. Onondaga chert occurs in nodules or irregular thin beds. It is a dense non-porous rock that may be light to dark grey, bluish grey, brown or black and can be mottled with a dull to vitreous or waxy lustre (Eley and von Bitter 1989).

The use of mainly Onondaga cherts indicates that the people at the site were relying on one source of raw material. Primary outcrops of Onondaga chert are found along Lake Erie. Thus, lithic procurement strategies at Location 17 (AfHg-376) mainly involved some long-distance travel or trade.

3.1.2 Expedient and Informal Tools

Only three retouched flakes and a utilized flake were recovered form Location 17 (AfHg-376). All the expedient tools manufactured of Onondaga chert, from secondary flakes or flake fragments. Two bifaces were also recovered, and they too consisted of secondary knapping flakes that had been worked on both faces into expedient tools. The expedient and informal tools do little for sit interpretation. A sample is depicted in Plate 1.

3.1.3 Summary

Location 17 (AfHg-376) was said to have an Early Woodland component based on biface fragments identified during the Stage 2 that were interpreted as Meadowwood point fragments. Though no other diagnostic artifacts were recovered from this site and the Stage 2 fragments are, in reality, indeterminate.

The site lies much lower than all adjacent sites and is the lowest point on the property. It exists as a flat meadow which was once agricultural field and is now a small tree plantation. A large retention pond exists to the South and it is thought likely that this area was once a marsh land and has been drained into he adjacent retention pond, making it undesirable for a significant site or settlement. Location 17 (AfHg-376) is a series of small, short-term campsites of indeterminate temporal affiliation where lithic maintenance occurred. An abundance of natural chert was also noted during Stage 3 test unit excavation and Stage 4 block excavation.

4.0 ANALYSIS AND CONCLUSIONS

The Stage 4 archaeological mitigation of development impacts of Location 15 (AfHg-376) consisted of the hand block excavation of 136 one metre by one metre units and resulted in the recovery of 933 Pre-Contact lithic artifacts, consisting mainly of chipping detritus (927), with only three retouched flakes, one utilized flake, and two bifaces were also recovered. No cultural features were identified.

Location 17 (AfHg-376) was said to have an Early Woodland component based on biface fragments identified during the Stage 2 that were interpreted as Meadowwood point fragments. Though no other diagnostic artifacts were recovered from this site and the Stage 2 fragments are, in reality, indeterminate.

The site lies much lower than all adjacent sites and is the lowest point on the property. It exists as a flat meadow which was once agricultural field and is now a small tree plantation. A large retention pond exists to the South and it is thought likely that this area was once a marsh land and has been drained into he adjacent retention pond, making it undesirable for a significant site or settlement. Location 17 (AfHg-376) is a series of small, short-term campsites of indeterminate temporal affiliation where lithic maintenance occurred. An abundance of natural chert was also noted during Stage 3 test unit excavation and Stage 4 block excavation.

The mitigation resulted in the complete excavation and removal of the archaeological site, which no longer exists in the ground and has been fully documented. The archaeological value of the site now lies solely with the artifact assemblage, high precision mapping and field documentation. As such, in accordance with Section 3.4.2 and Section 3.4.3 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011b), Location 17 (AfHg-376) no longer retains cultural heritage value or interest and does not require further archaeological investigation. **No further assessment of Location 17 (AfHg-376) is recommended.**

5.0 RECOMMENDATIONS

The Stage 4 mitigative excavations were carried out from July 29th, 2020 to August 4th, 2020, in accordance with the Ministry of Tourism, Culture, and Sport's *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Location 17 (AfHg-376) was excavated in consultation with the Oneida Nation of the Thames.

The mitigation resulted in the complete excavation and removal of the archaeological site, which no longer exists in the ground and has been fully documented. The archaeological value of the site now lies solely with the artifact assemblage, high precision mapping and field documentation. As such, in accordance with Section 3.4.2 and Section 3.4.3 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011b), Location 17 (AfHg-376) no longer retains cultural heritage value or interest and does not require further archaeological investigation. **No further assessment of Location 17 (AfHg-376) is recommended.**

The MCM is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Ministry of Heritage, Sport, Tourism, and Culture Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, 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 Heritage, Sport, Tourism, and Culture Industries, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.

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 Government and Consumer Services.

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 license.

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8.0 IMAGES

8.1 SITE PHOTOS

Image 1: Block Excavation in Progress at Location 17 (AfHg-376) Facing North

Image 2: Block Excavation in Progress at Location 17 (AfHg-376) Facing West

Image 3: Block Excavation in Progress at Location 17 (AfHg-376) Facing East

Image 4: Block Excavation in Progress at Location 17 (AfHg-376) Facing North

Image 5: Block Excavation in Progress at Location 17 (AfHg-376) Facing West

Image 6: Excavated Block at Location 17 (AfHg-376) Facing Northeast

Image 7: Excavated Block at Location 17 (AfHg-376) Facing North

Image 8: Typical Soil Profile at Location 17 (AfHg-376) Facing North

8.2 ARTIFACTS

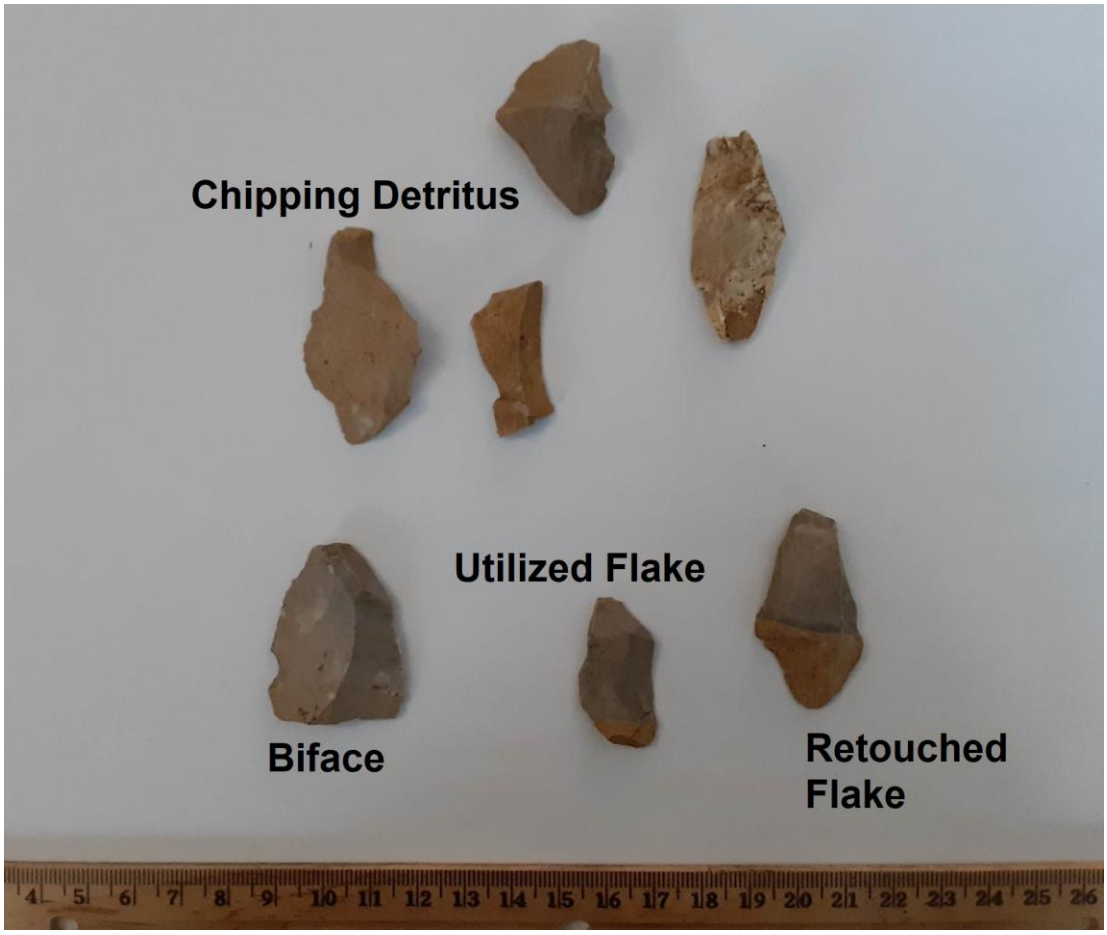
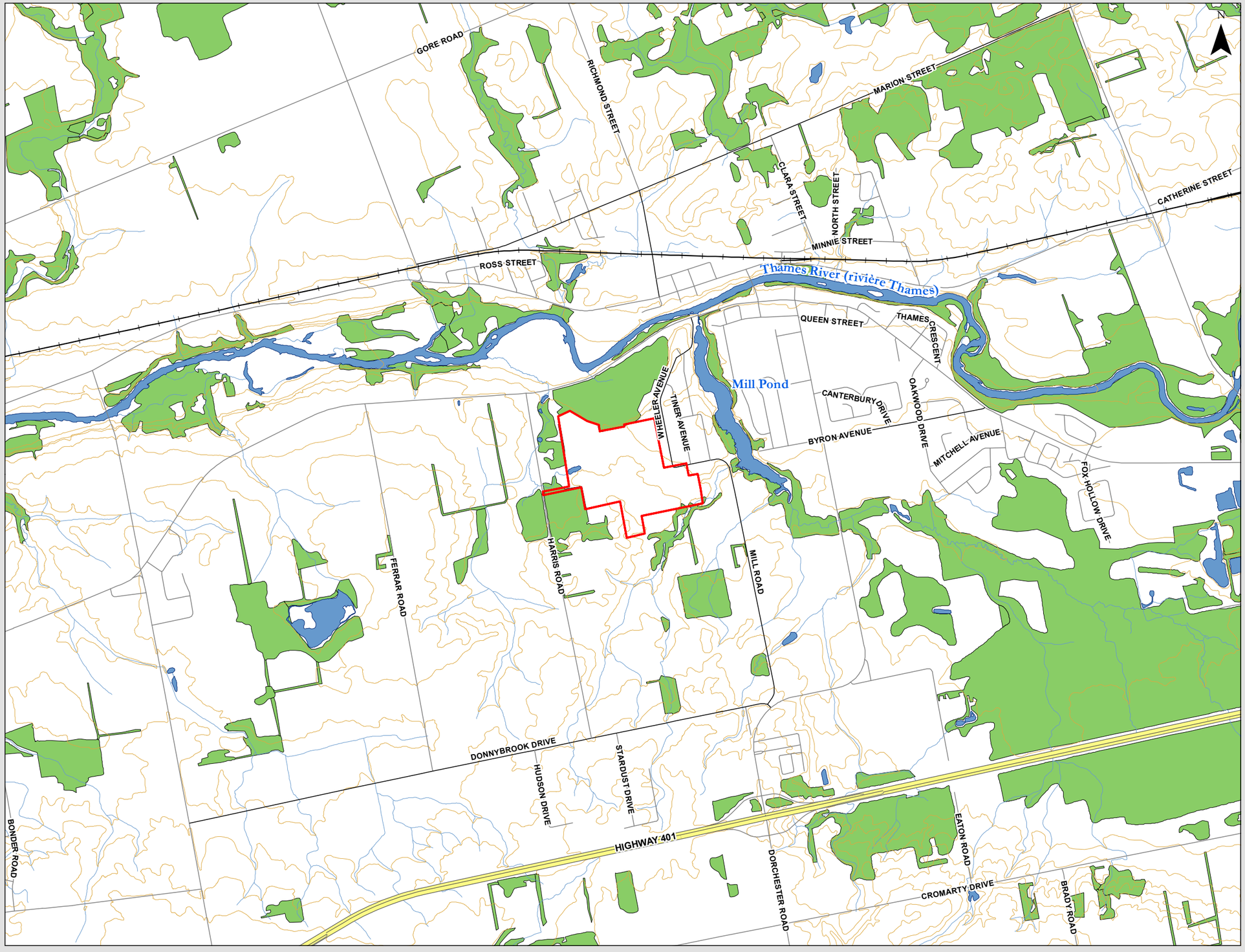


Plate 1: Sample of Artifacts Recovered from Location 17 (AfHg-376)

9.0 MAPS

All maps will follow on succeeding pages. Maps identifying exact site locations do not form part of this public report; they may be found in the Supplementary Documentation.



LINCOLN ENVIRONMENTAL CONSULTING

Stage 4 Mitigation of Location 17 (AfHg-376), Dorchester, Ontario

Figure 1: Topographic Map of Study Area

Date: March, 2023

Source: OBM
http://www.geographynetwork.ca/website/obm/viewer.htm

Scale 1:25,000

Datum: NAD 1983 UTM Zone 17N

Legend

- Study Area
- Local Road
- Major Road
- Highway
- Railroad
- Contour Lines
- Water
- Waterbody
- Wooded Area

Metres
0 500 1,000

LINCOLN ENVIRONMENTAL CONSULTING

Stage 4 Mitigation of Location 17 (AfHg-376), Dorchester, Ontario

Figure 2: Study Area

Date: March, 2023

Source: Bing Maps

Scale 1:5,000

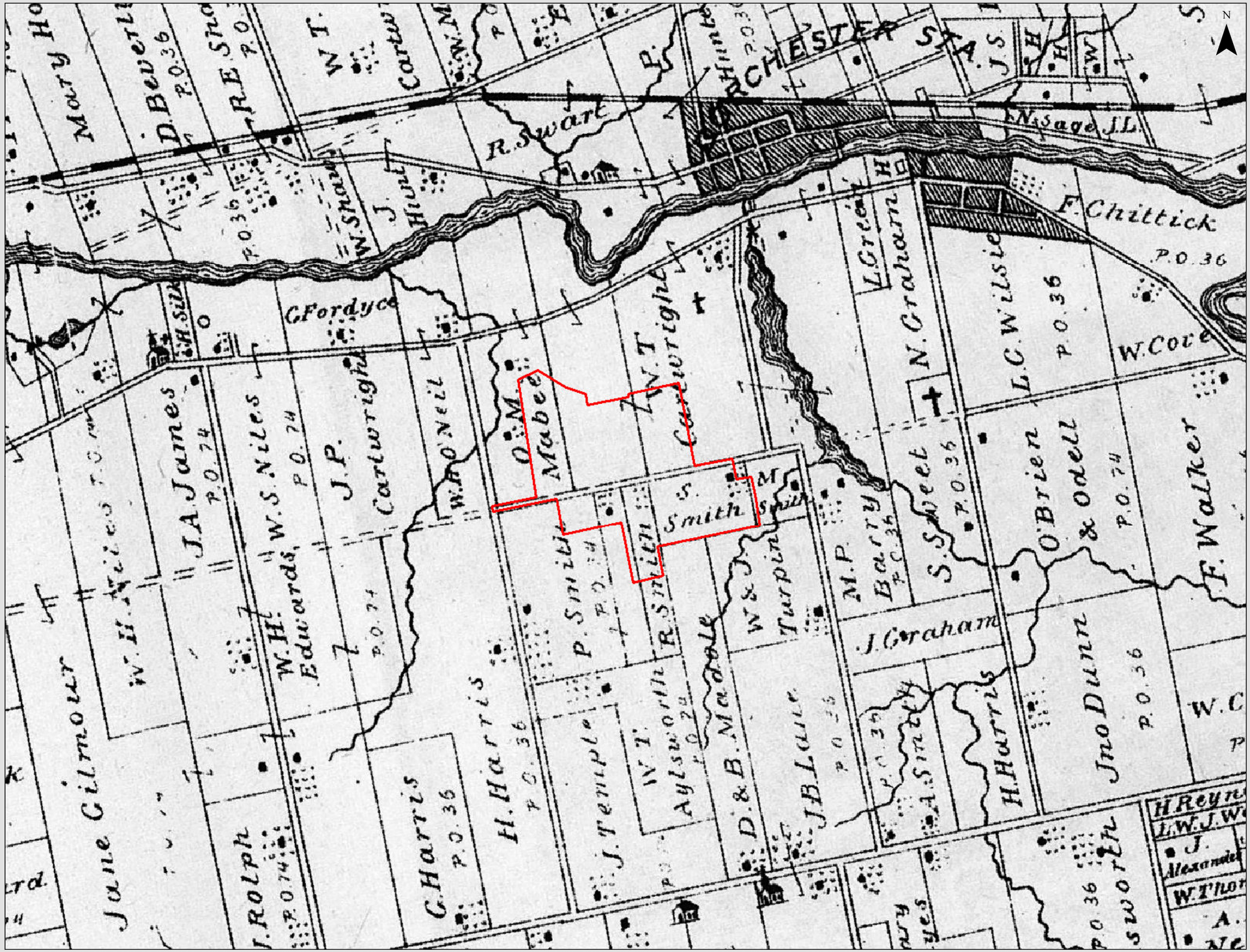
Datum: NAD 1983 UTM Zone 17N

Legend

Study Area

Metres

0 100 200



LINCOLN ENVIRONMENTAL CONSULTING

Stage 4 Mitigation of Location 17 (AfHg-376), Dorchester, Ontario

Figure 3: Portion of the Illustrated Historical Atlas of the County of Middlesex, 1878, Dorchester Township

Date: March, 2023

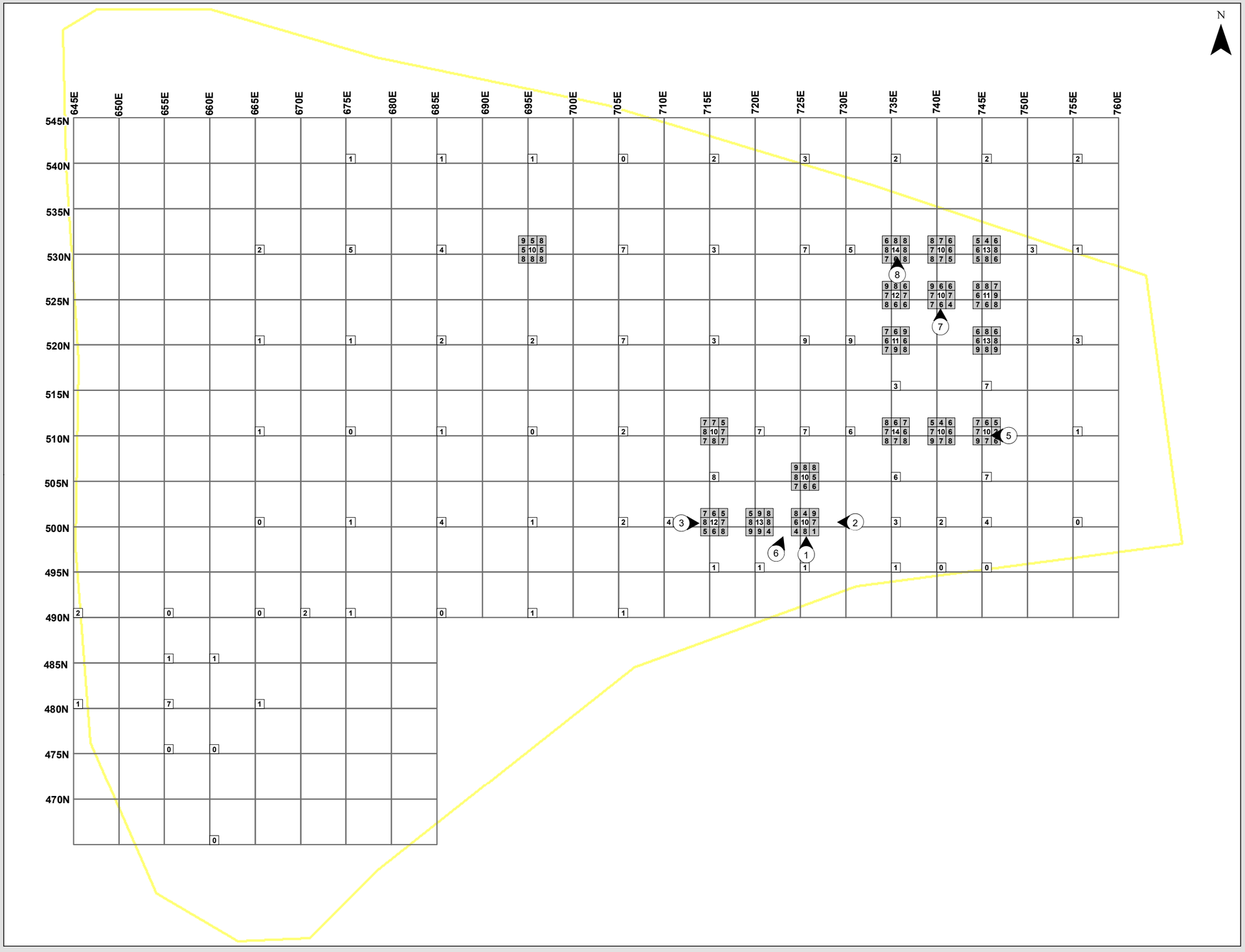
Source: Illustrated Historical Atlas of the County of Middlesex, Ont. Toronto: H.R. Page & Co., 1878.

NOT TO SCALE

Datum: NAD 1983 UTM Zone 17N

Legend

Study Area



LINCOLN ENVIRONMENTAL CONSULTING

Stage 4 Mitigation of Location 17 (AfHg-376), Dorchester, Ontario

Figure 4: Stage 4 Results

Date: March, 2023

Scale 1:425

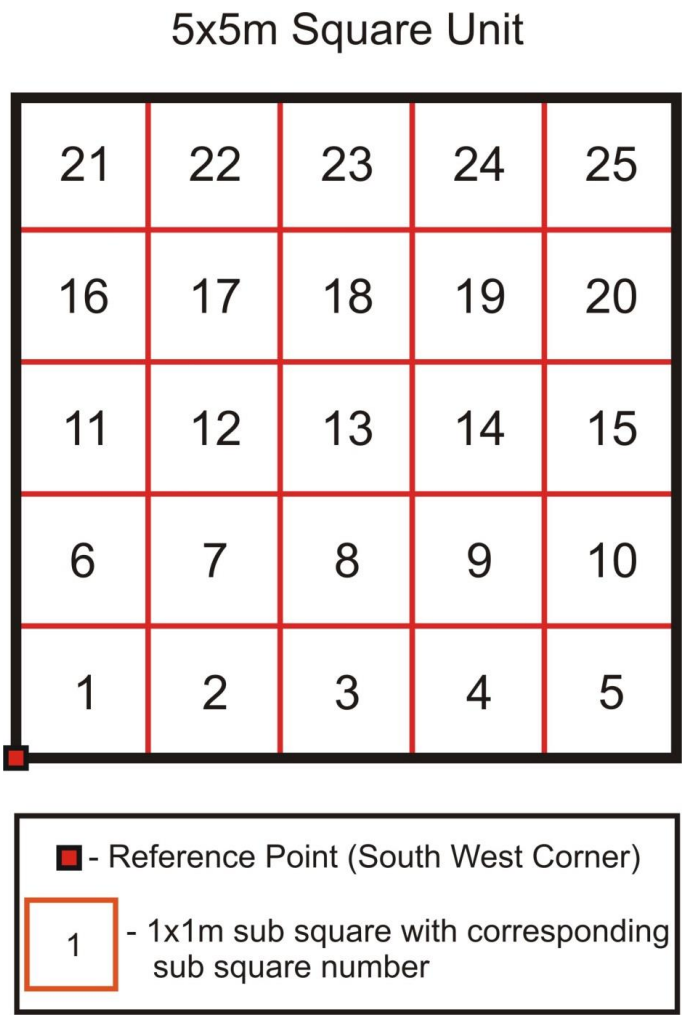
Datum: NAD 1983 UTM Zone 17N

Legend

- Photo Location
- Stage 4 Excavation Unit (1m)
- Stage 2 Site Area
- Stage 3 Test Unit (1m)
- Excavation Grid (5m)

Metres
0 10 20

Figure 5: Grid Orientation



APPENDIX A: LOCATION 17 (AFHG-376) ARTIFACT CATALOGUE

Cat. #	East	North	SS	Artifact	Qty	Chert	Morphology	Comments
1	715	505	22	chipping detritus	4	onondaga	secondary knapping flake	
2	715	505	22	chipping detritus	2	onondaga	shatter	
3	715	505	22	chipping detritus	1	till	flake fragment	
4	720	500	6	chipping detritus	4	onondaga	secondary knapping flake	
5	720	500	6	chipping detritus	2	onondaga	flake fragment	
6	720	500	6	chipping detritus	2	onondaga	shatter	
7	720	500	6	chipping detritus	1	till	flake fragment	
8	720	500	2	chipping detritus	4	onondaga	flake fragment	
9	720	500	2	chipping detritus	2	onondaga	secondary knapping flake	
10	720	500	2	chipping detritus	2	onondaga	shatter	
11	735	530	7	chipping detritus	3	onondaga	flake fragment	
12	735	530	7	chipping detritus	3	onondaga	secondary knapping flake	
13	735	530	7	chipping detritus	1	onondaga	shatter	
14	735	530	7	chipping detritus	1	till	shatter	
15	740	525	21	chipping detritus	4	onondaga	secondary knapping flake	
16	740	525	21	chipping detritus	3	onondaga	flake fragment	
17	740	525	6	chipping detritus	2	onondaga	secondary knapping flake	
18	740	525	6	chipping detritus	2	onondaga	shatter	
19	740	525	6	chipping detritus	2	till	secondary knapping flake	
20	735	520	2	chipping detritus	4	onondaga	flake fragment	
21	735	520	2	chipping detritus	1	onondaga	secondary knapping flake	
22	735	520	2	chipping detritus	1	onondaga	shatter	
23	735	520	6	chipping detritus	3	onondaga	flake fragment	
24	735	520	6	chipping detritus	3	onondaga	secondary knapping flake	
25	735	510	2	chipping detritus	3	onondaga	flake fragment	
26	735	510	2	chipping detritus	2	onondaga	secondary knapping flake	
27	735	510	2	retouched flake	1	onondaga	flake fragment	2 retouch marks along broken edge, dorsal face, possibly natural
28	735	510	5	chipping detritus	3	onondaga	flake fragment	
29	735	510	5	chipping detritus	3	onondaga	secondary knapping flake	
30	735	510	5	chipping detritus	1	onondaga	shatter	
31	735	510	6	chipping detritus	4	onondaga	secondary knapping flake	
32	735	510	6	chipping detritus	2	onondaga	flake fragment	
33	720	495	22	chipping detritus	4	onondaga	flake fragment	
34	735	510	7	chipping detritus	5	onondaga	secondary knapping flake	
35	735	510	7	chipping detritus	1	onondaga	flake fragment	
36	735	510	7	chipping detritus	1	onondaga	shatter	
37	730	515	25	chipping detritus	3	onondaga	secondary knapping flake	
38	730	515	25	chipping detritus	3	onondaga	flake fragment	

39	730	515	25	chipping detritus	1	onondaga	shatter	
40	695	530	6	chipping detritus	3	onondaga	flake fragment	
41	695	530	6	chipping detritus	2	onondaga	shatter	
42	730	520	5	chipping detritus	4	onondaga	secondary knapping flake	
43	730	520	5	chipping detritus	1	onondaga	shatter	
44	730	520	5	chipping detritus	1	till	shatter	
45	740	520	22	chipping detritus	3	onondaga	secondary knapping flake	
46	740	520	22	chipping detritus	1	onondaga	flake fragment	
47	740	520	25	chipping detritus	3	onondaga	flake fragment	
48	740	520	25	chipping detritus	2	onondaga	secondary knapping flake	
49	740	520	25	chipping detritus	2	onondaga	shatter	
50	740	520	21	chipping detritus	2	onondaga	secondary knapping flake	
51	740	520	21	chipping detritus	2	onondaga	flake fragment	
52	740	520	21	chipping detritus	2	till	secondary knapping flake	
53	695	525	22	chipping detritus	6	onondaga	flake fragment	
54	695	525	22	chipping detritus	1	onondaga	secondary knapping flake	
55	695	525	22	chipping detritus	1	onondaga	shatter	
56	715	500	6	chipping detritus	4	onondaga	flake fragment	
57	715	500	6	chipping detritus	2	onondaga	secondary knapping flake	
58	715	500	2	chipping detritus	3	onondaga	flake fragment	
59	715	500	2	chipping detritus	3	onondaga	secondary knapping flake	
60	715	500	2	chipping detritus	1	onondaga	shatter	
61	745	520	7	chipping detritus	4	onondaga	secondary knapping flake	
62	745	520	7	chipping detritus	2	onondaga	shatter	
63	745	510	6	chipping detritus	2	onondaga	secondary knapping flake	
64	745	510	6	chipping detritus	2	onondaga	flake fragment	
65	745	510	6	chipping detritus	2	till	flake fragment	
66	735	530	6	chipping detritus	4	onondaga	secondary knapping flake	
67	735	530	6	chipping detritus	2	onondaga	flake fragment	
68	735	530	6	chipping detritus	2	onondaga	shatter	
69	735	525	6	chipping detritus	3	onondaga	secondary knapping flake	
70	735	525	6	chipping detritus	3	onondaga	flake fragment	
71	735	525	6	chipping detritus	2	onondaga	shatter	
72	735	525	5	chipping detritus	4	onondaga	secondary knapping flake	
73	735	525	5	chipping detritus	1	onondaga	flake fragment	
74	735	525	5	chipping detritus	1	till	secondary knapping flake	
75	735	525	5	utilized flake	1	onondaga	secondary knapping flake	usewear along right lateral, distal end
76	735	525	7	chipping detritus	3	onondaga	secondary knapping flake	
77	735	525	7	chipping detritus	3	onondaga	flake fragment	
78	695	525	21	chipping detritus	4	onondaga	secondary knapping flake	
79	695	525	21	chipping detritus	2	onondaga	shatter	
80	695	525	21	chipping detritus	2	till	flake fragment	
81	715	510	7	chipping detritus	3	onondaga	secondary knapping flake	

82	715	510	7	chipping detritus	1	onondaga	flake fragment	
83	715	510	7	chipping detritus	1	onondaga	shatter	
84	730	510	5	chipping detritus	4	onondaga	flake fragment	
85	730	510	5	chipping detritus	3	onondaga	secondary knapping flake	
86	725	500	22	chipping detritus	3	onondaga	secondary knapping flake	
87	725	500	22	chipping detritus	1	onondaga	flake fragment	
88	725	500	22	chipping detritus	1	onondaga	shatter	
89	725	500	22	biface	1	onondaga		Secondary flake retouched on both faces
90	740	530	2	chipping detritus	4	onondaga	flake fragment	
91	740	530	2	chipping detritus	1	onondaga	secondary knapping flake	
92	740	530	2	chipping detritus	1	onondaga	shatter	
93	745	530	6	chipping detritus	2	onondaga	flake fragment	
94	745	530	6	chipping detritus	2	onondaga	secondary knapping flake	
95	745	530	7	chipping detritus	6	onondaga	secondary knapping flake	
96	735	525	21	chipping detritus	4	onondaga	flake fragment	
97	735	525	21	chipping detritus	2	onondaga	secondary knapping flake	
98	735	525	2	chipping detritus	3	onondaga	flake fragment	
99	735	525	2	chipping detritus	3	onondaga	secondary knapping flake	
100	735	525	2	chipping detritus	1	onondaga	shatter	
101	735	525	25	chipping detritus	5	onondaga	flake fragment	
102	735	525	25	chipping detritus	3	onondaga	secondary knapping flake	
103	690	530	10	chipping detritus	7	onondaga	secondary knapping flake	
104	690	530	10	chipping detritus	2	till	flake fragment	
105	710	510	5	chipping detritus	3	onondaga	flake fragment	
106	710	510	5	chipping detritus	3	onondaga	secondary knapping flake	
107	710	510	5	chipping detritus	2	till	flake fragment	
108	745	520	2	chipping detritus	4	onondaga	flake fragment	
109	745	520	2	chipping detritus	2	onondaga	secondary knapping flake	
110	745	520	2	chipping detritus	2	onondaga	shatter	
111	745	520	22	chipping detritus	3	onondaga	shatter	
112	745	520	22	chipping detritus	3	onondaga	flake fragment	
113	745	520	22	chipping detritus	2	onondaga	secondary knapping flake	
114	745	520	21	chipping detritus	4	onondaga	secondary knapping flake	
115	745	520	21	chipping detritus	2	onondaga	flake fragment	
116	745	520	6	chipping detritus	4	onondaga	flake fragment	
117	745	520	6	chipping detritus	2	onondaga	shatter	
118	745	520	6	chipping detritus	1	onondaga	secondary knapping flake	
119	745	520	6	chipping detritus	1	till	secondary knapping flake	
120	740	530	6	chipping detritus	5	onondaga	flake fragment	
121	740	530	6	chipping detritus	2	onondaga	secondary knapping flake	
122	740	530	5	chipping detritus	2	onondaga	secondary knapping flake	
123	740	530	5	chipping detritus	2	onondaga	shatter	
124	740	530	5	chipping detritus	2	till	secondary knapping flake	

125	740	530	10	chipping detritus	5	onondaga	flake fragment	
126	740	530	7	chipping detritus	3	onondaga	secondary knapping flake	
127	740	530	7	chipping detritus	1	onondaga	flake fragment	
128	740	530	7	chipping detritus	1	onondaga	shatter	
129	740	530	7	chipping detritus	1	till	secondary knapping flake	
130	725	500	7	chipping detritus	4	onondaga	flake fragment	
131	725	500	7	chipping detritus	2	onondaga	shatter	
132	725	500	7	chipping detritus	2	onondaga	secondary knapping flake	
133	725	500	7	chipping detritus	1	till	secondary knapping flake	
134	725	500	21	chipping detritus	3	onondaga	shatter	
135	725	500	21	chipping detritus	2	onondaga	secondary knapping flake	
136	725	500	21	chipping detritus	1	onondaga	flake fragment	
137	735	505	25	chipping detritus	4	onondaga	flake fragment	
138	735	505	25	chipping detritus	2	onondaga	secondary knapping flake	
139	735	505	25	chipping detritus	2	onondaga	shatter	
140	735	505	25	retouched flake	1	onondaga	flake fragment	retouching along break
141	735	505	22	chipping detritus	4	onondaga	secondary knapping flake	
142	735	505	22	chipping detritus	4	onondaga	flake fragment	
143	735	515	22	chipping detritus	4	onondaga	flake fragment	
144	735	515	22	chipping detritus	2	onondaga	secondary knapping flake	
145	735	515	22	chipping detritus	2	onondaga	shatter	
146	695	530	2	chipping detritus	3	onondaga	secondary knapping flake	
147	695	530	2	chipping detritus	1	onondaga	shatter	
148	695	530	2	chipping detritus	1	onondaga	flake fragment	
149	730	530	10	chipping detritus	4	onondaga	flake fragment	
150	730	530	10	chipping detritus	1	onondaga	secondary knapping flake	
151	730	530	10	chipping detritus	1	onondaga	shatter	
152	735	530	2	chipping detritus	4	onondaga	secondary knapping flake	
153	735	530	2	chipping detritus	4	onondaga	flake fragment	
154	735	530	10	chipping detritus	4	onondaga	shatter	
155	735	530	10	chipping detritus	2	onondaga	secondary knapping flake	
156	735	530	10	chipping detritus	2	onondaga	flake fragment	
157	740	525	2	chipping detritus	5	onondaga	flake fragment	
158	740	525	2	chipping detritus	1	onondaga	secondary knapping flake	
159	740	525	2	chipping detritus	1	onondaga	shatter	
160	740	525	10	chipping detritus	4	onondaga	secondary knapping flake	
161	740	525	10	chipping detritus	4	onondaga	flake fragment	
162	710	495	25	chipping detritus	3	onondaga	flake fragment	
163	710	495	25	chipping detritus	1	onondaga	secondary knapping flake	
164	710	495	25	chipping detritus	1	onondaga	shatter	
165	715	495	22	chipping detritus	3	onondaga	flake fragment	
166	715	495	22	chipping detritus	3	onondaga	secondary knapping flake	
167	715	495	22	chipping detritus	2	onondaga	shatter	

168	715	495	25	chipping detritus	5	onondaga	flake fragment	
169	715	495	25	chipping detritus	4	till	flake fragment	
170	710	510	10	chipping detritus	3	onondaga	flake fragment	
171	710	510	10	chipping detritus	2	onondaga	secondary knapping flake	
172	710	510	10	chipping detritus	2	onondaga	shatter	
173	690	530	5	chipping detritus	3	onondaga	secondary knapping flake	
174	690	530	5	chipping detritus	1	onondaga	shatter	
175	690	530	5	chipping detritus	1	onondaga	flake fragment	
176	730	525	10	chipping detritus	4	onondaga	secondary knapping flake	
177	730	525	10	chipping detritus	4	onondaga	flake fragment	
178	730	525	10	chipping detritus	1	till	flake fragment	
179	730	525	25	chipping detritus	3	onondaga	secondary knapping flake	
180	730	525	25	chipping detritus	2	onondaga	flake fragment	
181	730	525	25	chipping detritus	1	onondaga	shatter	
182	730	525	25	chipping detritus	1	till	secondary knapping flake	
183	730	510	10	chipping detritus	4	onondaga	secondary knapping flake	
184	730	510	10	chipping detritus	2	onondaga	flake fragment	
185	730	510	10	chipping detritus	2	onondaga	shatter	
186	695	530	7	chipping detritus	4	onondaga	secondary knapping flake	
187	695	530	7	chipping detritus	2	onondaga	flake fragment	
188	695	530	7	chipping detritus	1	onondaga	shatter	
189	695	530	7	chipping detritus	1	till	secondary knapping flake	
190	710	505	25	chipping detritus	4	onondaga	secondary knapping flake	
191	710	505	25	chipping detritus	2	onondaga	flake fragment	
192	710	505	25	chipping detritus	1	onondaga	shatter	
193	715	510	2	chipping detritus	4	onondaga	flake fragment	
194	715	510	2	chipping detritus	1	onondaga	secondary knapping flake	
195	715	510	2	chipping detritus	1	onondaga	shatter	
196	715	510	2	chipping detritus	1	till	flake fragment	
197	715	510	6	chipping detritus	3	onondaga	flake fragment	
198	715	510	6	chipping detritus	3	onondaga	secondary knapping flake	
199	715	510	6	chipping detritus	1	onondaga	shatter	
200	735	520	7	chipping detritus	4	onondaga	shatter	
201	735	520	7	chipping detritus	4	onondaga	secondary knapping flake	
202	735	520	7	chipping detritus	1	onondaga	flake fragment	
203	735	520	21	chipping detritus	3	onondaga	flake fragment	
204	735	520	21	chipping detritus	3	onondaga	secondary knapping flake	
205	740	515	25	chipping detritus	7	onondaga	secondary knapping flake	
206	740	515	25	chipping detritus	2	onondaga	flake fragment	
207	735	520	25	chipping detritus	3	onondaga	flake fragment	
208	735	520	25	chipping detritus	2	onondaga	secondary knapping flake	
209	735	520	25	chipping detritus	2	till	secondary knapping flake	
210	735	515	21	chipping detritus	4	onondaga	secondary knapping flake	

211	735	515	21	chipping detritus	3	onondaga	flake fragment	
212	735	515	21	chipping detritus	2	till	flake fragment	
213	730	530	5	chipping detritus	4	onondaga	flake fragment	
214	730	530	5	chipping detritus	4	onondaga	secondary knapping flake	
215	730	505	25	chipping detritus	6	onondaga	secondary knapping flake	
216	730	505	25	chipping detritus	2	onondaga	flake fragment	
217	725	505	6	chipping detritus	5	onondaga	secondary knapping flake	
218	725	505	6	chipping detritus	1	onondaga	shatter	
219	725	505	6	chipping detritus	1	onondaga	flake fragment	
220	725	505	6	chipping detritus	1	till	flake fragment	
221	725	505	7	chipping detritus	5	onondaga	secondary knapping flake	
222	725	505	7	chipping detritus	3	onondaga	flake fragment	
223	690	525	25	chipping detritus	4	onondaga	flake fragment	
224	690	525	25	chipping detritus	2	onondaga	secondary knapping flake	
225	690	525	25	chipping detritus	1	onondaga	shatter	
226	690	525	25	chipping detritus	1	till	flake fragment	
227	715	505	21	chipping detritus	4	onondaga	flake fragment	
228	715	505	21	chipping detritus	2	onondaga	secondary knapping flake	
229	715	505	21	chipping detritus	2	onondaga	shatter	
230	710	500	10	chipping detritus	7	onondaga	flake fragment	
231	745	525	7	chipping detritus	5	onondaga	flake fragment	
232	745	525	7	chipping detritus	1	onondaga	secondary knapping flake	
233	745	525	7	chipping detritus	1	onondaga	shatter	
234	745	525	22	chipping detritus	4	onondaga	secondary knapping flake	
235	745	525	22	chipping detritus	2	onondaga	flake fragment	
236	735	530	5	chipping detritus	3	onondaga	flake fragment	
237	735	530	5	chipping detritus	3	onondaga	secondary knapping flake	
238	735	530	5	chipping detritus	1	onondaga	shatter	
239	740	510	7	chipping detritus	2	onondaga	secondary knapping flake	
240	740	510	7	chipping detritus	2	onondaga	flake fragment	
241	740	510	7	chipping detritus	2	till	flake fragment	
242	740	510	10	chipping detritus	5	onondaga	secondary knapping flake	
243	740	510	10	chipping detritus	2	onondaga	flake fragment	
244	730	520	10	chipping detritus	4	onondaga	flake fragment	
245	730	520	10	chipping detritus	1	onondaga	secondary knapping flake	
246	730	520	10	chipping detritus	1	onondaga	shatter	
247	730	520	10	biface	1	onondaga		Fragment, worked on both faces
248	745	505	21	chipping detritus	3	onondaga	flake fragment	
249	745	505	21	chipping detritus	2	onondaga	secondary knapping flake	
250	745	505	21	chipping detritus	2	onondaga	shatter	
251	745	505	22	chipping detritus	4	onondaga	secondary knapping flake	
252	745	505	22	chipping detritus	2	onondaga	flake fragment	
253	745	515	22	chipping detritus	2	onondaga	secondary knapping flake	

254	745	515	22	chipping detritus	7	onondaga	flake fragment	
255	745	515	21	chipping detritus	8	onondaga	flake fragment	
256	720	505	5	chipping detritus	4	onondaga	flake fragment	
257	720	505	5	chipping detritus	4	onondaga	secondary knapping flake	
258	720	505	10	chipping detritus	4	onondaga	flake fragment	
259	720	505	10	chipping detritus	3	onondaga	secondary knapping flake	
260	720	505	10	chipping detritus	2	onondaga	shatter	
261	720	500	10	chipping detritus	6	onondaga	secondary knapping flake	
262	720	500	10	chipping detritus	2	onondaga	flake fragment	
263	720	500	7	chipping detritus	3	onondaga	flake fragment	
264	720	500	7	chipping detritus	3	onondaga	secondary knapping flake	
265	720	500	7	chipping detritus	2	onondaga	shatter	
266	720	500	25	chipping detritus	4	onondaga	flake fragment	
267	720	500	25	chipping detritus	3	onondaga	secondary knapping flake	
268	720	495	21	chipping detritus	5	onondaga	flake fragment	
269	720	495	21	chipping detritus	3	onondaga	secondary knapping flake	
270	720	495	21	chipping detritus	1	onondaga	shatter	
271	710	500	5	chipping detritus	4	onondaga	flake fragment	
272	710	500	5	chipping detritus	2	onondaga	secondary knapping flake	
273	710	500	5	chipping detritus	2	till	secondary knapping flake	
274	740	510	5	chipping detritus	4	onondaga	secondary knapping flake	
275	740	510	5	chipping detritus	1	onondaga	shatter	
276	740	510	5	chipping detritus	1	onondaga	flake fragment	
277	740	510	5	retouched flake	1	onondaga	flake fragment	retouching along one lateral, dorsal face
278	745	525	2	chipping detritus	5	onondaga	flake fragment	
279	745	525	2	chipping detritus	2	onondaga	secondary knapping flake	
280	745	525	2	chipping detritus	2	onondaga	shatter	
281	745	525	6	chipping detritus	8	onondaga	flake fragment	
282	745	525	21	chipping detritus	6	onondaga	flake fragment	
283	745	525	21	chipping detritus	2	onondaga	secondary knapping flake	
284	735	525	22	chipping detritus	4	onondaga	flake fragment	
285	735	525	22	chipping detritus	4	onondaga	secondary knapping flake	
286	735	525	10	chipping detritus	3	onondaga	secondary knapping flake	
287	735	525	10	chipping detritus	3	onondaga	shatter	
288	735	525	10	chipping detritus	3	onondaga	flake fragment	
289	715	500	7	chipping detritus	3	onondaga	secondary knapping flake	
290	715	500	7	chipping detritus	1	onondaga	flake fragment	
291	715	500	7	chipping detritus	1	onondaga	shatter	
292	715	500	5	chipping detritus	8	onondaga	secondary knapping flake	
293	725	500	2	chipping detritus	5	onondaga	secondary knapping flake	
294	725	500	2	chipping detritus	2	till	flake fragment	
295	740	505	22	chipping detritus	5	onondaga	flake fragment	
296	740	505	22	chipping detritus	3	onondaga	secondary knapping flake	

297	740	505	21	chipping detritus	7	onondaga	secondary knapping flake	
298	740	505	25	chipping detritus	6	onondaga	flake fragment	
299	740	505	25	chipping detritus	3	onondaga	secondary knapping flake	
300	745	530	2	chipping detritus	6	onondaga	secondary knapping flake	
301	745	530	2	chipping detritus	2	onondaga	flake fragment	
302	735	505	21	chipping detritus	7	onondaga	secondary knapping flake	
303	730	520	25	chipping detritus	4	onondaga	secondary knapping flake	
304	730	520	25	chipping detritus	2	onondaga	flake fragment	
305	730	520	25	chipping detritus	2	onondaga	shatter	
306	725	495	21	chipping detritus	5	onondaga	secondary knapping flake	
307	725	495	21	chipping detritus	3	onondaga	flake fragment	
308	725	495	22	chipping detritus	1	onondaga	secondary knapping flake	
309	715	495	21	chipping detritus	4	onondaga	secondary knapping flake	
310	715	495	21	chipping detritus	2	onondaga	flake fragment	
311	720	495	25	chipping detritus	3	onondaga	flake fragment	
312	720	495	25	chipping detritus	1	onondaga	secondary knapping flake	
313	725	505	2	chipping detritus	3	onondaga	secondary knapping flake	
314	725	505	2	chipping detritus	1	onondaga	flake fragment	
315	725	505	2	chipping detritus	1	onondaga	shatter	
316	730	525	5	chipping detritus	3	onondaga	secondary knapping flake	
317	730	525	5	chipping detritus	2	onondaga	flake fragment	
318	730	525	5	chipping detritus	2	till	secondary knapping flake	
319	740	520	10	chipping detritus	6	onondaga	secondary knapping flake	
320	745	510	2	chipping detritus	2	onondaga	flake fragment	
321	745	510	7	chipping detritus	3	onondaga	flake fragment	
322	745	510	7	chipping detritus	2	till	flake fragment	
323	725	500	6	chipping detritus	2	onondaga	shatter	
324	725	500	6	chipping detritus	2	onondaga	secondary knapping flake	
325	735	520	22	chipping detritus	3	onondaga	secondary knapping flake	
326	735	520	22	chipping detritus	3	till	secondary knapping flake	
327	740	525	7	chipping detritus	4	onondaga	flake fragment	
328	740	525	7	chipping detritus	2	onondaga	secondary knapping flake	

329	740	525	25	chipping detritus	5	onondaga	secondary knapping flake	
330	740	525	22	chipping detritus	3	onondaga	flake fragment	
331	740	525	22	chipping detritus	1	onondaga	secondary knapping flake	
332	740	525	22	chipping detritus	1	till	secondary knapping flake	
333	740	525	5	chipping detritus	4	onondaga	flake fragment	
334	740	525	5	chipping detritus	2	till	flake fragment	
335	735	510	10	chipping detritus	4	onondaga	flake fragment	
336	735	510	10	chipping detritus	1	onondaga	secondary knapping flake	
337	740	510	6	chipping detritus	2	onondaga	secondary knapping flake	
338	740	510	6	chipping detritus	1	onondaga	flake fragment	
339	740	510	6	chipping detritus	1	onondaga	shatter	
340	715	500	10	chipping detritus	5	onondaga	secondary knapping flake	
341	740	520	5	chipping detritus	4	onondaga	secondary knapping flake	
342	740	520	5	chipping detritus	2	onondaga	flake fragment	
343	740	510	2	chipping detritus	4	onondaga	secondary knapping flake	
344	740	510	2	chipping detritus	2	till	flake fragment	
345	720	500	5	chipping detritus	4	onondaga	flake fragment	
346	720	500	5	chipping detritus	1	onondaga	secondary knapping flake	
347	720	500	5	chipping detritus	1	till	flake fragment	