ARCHAEOLOGICAL POTENTIAL STUDY
CITY OF SAULT STE. MARIE

PLANNING REPORT

FINAL

Prepared for:

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EXECUTIVE SUMMARY

An approach to archaeological planning employing a comprehensive potential model is an effective response to an old problem ─ how to deal with evidence of the past that is, for the most part, not visible because it is buried underground (or under water). The City of Sault Ste. Marie has a long cultural history that begins thousands of years ago and continues to the present. The archaeological sites that are the physical remains of this lengthy settlement history represent a fragile and non-renewable cultural heritage resource.

The common response of "out of sight, out of mind," however, is no longer possible in today's political and legal climate. Recent court cases involving Aboriginal land claims, not to mention stop-work orders issued when human remains are uncovered on a development site, are but two examples of the ways in which archaeological resources affect property owners and the municipalities in which they are located. Policy initiatives, such as those found in the report of the Ipperwash inquiry, recommending that every municipality in Ontario adopt a master plan for archaeological resources so as to identify their flashpoints and put in place a way of dealing with them before they happen, coupled with more stringent heritage resource conservation policies in the Provincial Policy Statement (Planning Act), the Ontario Cemeteries Act, and the Ontario Heritage Act, require municipalities to more wisely plan for the conservation of archaeological resources. In other words, cities such as Sault Ste. Marie have no choice but to address archaeology, preferably by preparing studies of this nature.

The good news is that such studies are an excellent tool for municipalities. First, they tell you what has been found by providing an inventory and evaluation of known archaeological resources. Second, they tell you where undiscovered archaeological resources are most likely to be found by identifying areas of archaeological resource potential. Both of these inventories are mapped onto the City's GIS database, making them very accessible to staff and the public alike. Third, they tell you what to do with both the known and probable places in which archaeological resources are likely to be encountered, by providing the step by step process for managing such resources. Fourth, they structure this advice within a clear, logical framework based on an historical analysis of the city and using international best practices for preparing cultural resource management plans. In this way, they are effective and robust, able to withstand challenges and suited to updating as new information emerges.

Once a study of this nature is in place, the risk of unfortunate surprises occurring (such as disturbing a burial site) is significantly reduced, and public awareness of archaeological resources considerably increased. Property owners, developers, and prospective buyers know beforehand whether they will have to conduct archaeological investigations if they want to develop or redevelop a site. Citizens will know their community's history better and, it is hoped, appreciate its heritage more fully. And with more cultural heritage resources identified and interpreted within Sault Ste. Marie, tourists will have a greater selection of places to visit. Indeed, careful planning for the conservation and interpretation of cultural heritage resources will promote economic growth and offer opportunities for improving local quality of life.

In recognition of these facts, the City of Sault Ste. Marie retained Archaeological Services Inc. (ASI) to undertake this study.

The Potential Model for the City of Sault Ste. Marie had three major goals:

1) the compilation of inventories of registered and unregistered archaeological sites within the City and the preparation of an overview of the area's settlement history as it may be expected to pertain to archaeological resources;

2) the development of an archaeological site potential model, based on known site locations, past and present land uses, and environmental and cultural-historical data; and

3) a review of the current federal, provincial, and municipal planning and management guidelines for archaeological resources, as well as the identification of a new recommended management strategy for known and potential archaeological resources within the City.

To date, 36 archaeological sites have been registered within the City, which date from 10,000 years ago through to the nineteenth and early twentieth centuries.

In order to understand the manner in which additional, as yet undocumented archaeological sites may be distributed within the City, an archaeological potential model was developed using the City's Geographic Information System (GIS) to map various sets of information as separate, but complementary, layers of spatial data on 1:10,000 scale digital base maps. The zones of pre-contact archaeological potential were determined only after a detailed consideration of the past natural and cultural environments in the City. The zones were then based on distance to various forms of potable water, the locations of glacial beach ridges and slope attributes. Examination of the early historic mapping of the City, together with consideration of the basic historical themes that have been most influential in the development of the historic core of the City and the former townships of the City, led to the identification of areas of early settlement, commercial, industrial and transportation development and the mapping of these zones as areas of historic archaeological potential.

The final task in the analysis was to eliminate areas where previous development has resulted in extensive landscape disturbance. The remaining lands falling within the zones of pre-contact and historic potential encompass approximately 51% of the total landmass of the City. The tool that the City currently uses to require assessments, provided by the Ministry of Tourism and Culture, currently captures over 90% of the City.

The role of the municipality in the conservation of these resources is crucial. Planning and land use control are predominantly municipal responsibilities and the impact of municipal land use decisions on archaeological resources is significant, especially since municipally-approved developments constitute the majority of land disturbing activities in the Province. The primary means by which these resources may be protected is through the planning application process. Furthermore, review of development applications for archaeological resource concerns are made directly by the City. In recognition of these facts, the final task of this study was the identification of a series of policies for incorporation in the Official Plan and of practices within the development applications process that will ensure the conservation of these valuable cultural heritage resources within the overall process of change and growth in the City.

The results of this work were compiled in two reports entitled *Archaeological Potential Model for the City of Sault Ste. Marie, Technical Report* and *Planning for the Conservation of Archaeological Resources in the City of Sault Ste. Marie*, both dated June 2010.

The major recommendations resulting from this study include:

- That the policies attached as Appendix A be incorporated into the Official Plan.

- It is recommended that the archaeological potential mapping be used in determining requirements for archaeological assessments.

- It is recommended that the Engineering and Planning Department work with City departments to establish protocols that ensure that in all appropriate circumstances, construction projects undertaken by developers, ratepayers and the City of Sault Ste. Marie that may impact archaeological resources on public lands (e.g., trail, playground, playing field, public washroom, parking lot construction, road widening/extension, trunk sewer and watermain construction, stormwater management facility construction, municipal building and structure construction, etc.) and which are located in areas of archaeological potential are subject to archaeological assessment prior to any land disturbing activity.

- It is recommended that when there are any new designations of heritage properties (which include constructions dating before 1920) under Part IV of the Ontario Heritage Act, that the property footprint be added to the final potential mapping (Appendix B). If the newly designated property is surrounded by greenfields, the newly designated property should be buffered by 100 metres for archaeological potential.

- No Stage 4 archaeological investigations on Aboriginal sites should be undertaken within the City of Sault Ste. Marie without first filing an Aboriginal consultation report with the Engineering and Planning Department.

- Archaeological assessment reports should contain advisories on the steps to be taken should unanticipated deeply buried archaeological remains or human remains be found on a property during construction activities.

- In order to ensure the long term viability of the Archaeological Potential Model, it should be subject to periodic comprehensive review and should be carried out by a licensed archaeologist in co-ordination with the periodic review of the City's Official Plan

- Procedures outlined in the Memorandum of Understanding between the Ministry of Tourism and Culture and the City of Sault Ste. Marie should be followed regarding the sharing of information concerning archaeological site locations.

- It is recommended that the City develop and adopt, in consultation with the Ministry of Tourism and Culture, relevant Aboriginal communities, other agencies, landowners, and the public, a "Contingency Plan for the Protection of Archaeological Resources in Urgent Situations."

- The City of Sault Ste. Marie should implement a public awareness initiative by which the general public might be made more knowledgeable of the wide range of archaeological resources present within the City.

- The City of Sault Ste. Marie should consider preparing both an accurate and comprehensive inventory of the archaeological collections currently held by museums and consulting archaeologists and a guideline encouraging the curation of material from archaeological sites within Sault Ste. Marie at local museums.

In summary, cities can no longer avoid dealing with archaeological resources especially since provincial planning policy has been strengthened in this regard. More importantly, there are clear precedents in law that demonstrate the severe financial and political costs of avoiding this responsibility. Sault Ste. Marie is making a wise choice in building on their past commitment and joining with other major municipalities in Ontario (e.g., Muskoka, Ottawa-Carleton, Howland Township on Manitoulin Island, London, Toronto, Kingston, Region of Waterloo, to name only a few) in adopting progressive policies for the wise use and conservation of their archaeological records.

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1.0 INTRODUCTION

The role of the municipality in the conservation of archaeological resources is crucial. Planning and land use control are predominantly municipal responsibilities and the impact of municipal land use decisions on archaeological resources is significant, especially since municipally-approved developments constitute the majority of land disturbing activities in the Province. The primary means by which these resources may be protected is through the planning application process. Moreover, the review of development applications for archaeological resource concerns is now made directly by the City. In recognition of these facts, the City of Sault Ste. Marie retained *Archaeological Services Inc.* to prepare an archaeological potential study for the City. The ultimate objective of the project was the preparation of a planning study which identifies, analyses, and establishes priorities concerning archaeological sites located within the boundaries of the City.

The City has no comprehensive mapping for the amalgamated City or database for identifying areas of archaeological potential and for rationalizing requirements for archaeological assessments in advance of development. Indeed, it now relies on the application of generic Ministry of Tourism and Culture criteria which covers more than 90% of the City's lands.

Change and growth within the City must be guided by sound planning and management policies, all of which must be consistent with recent changes to provincial archaeological resource conservation legislation and policy. In the case of pre-contact archaeological sites, any efforts undertaken by the City to identify and protect such sites will be viewed very positively by Aboriginal communities. Any attempt to avoid this responsibility would be viewed very dimly by Aboriginal communities.

The study was designed within a framework that comprised three phases of research, the results of each of which are presented in two separate reports. Phases 1 and 2 entailed the collection, assessment and synthesis of information from various public and private sources. The major goals of this research were:

1) the compilation of inventories of registered and unregistered archaeological sites and of lands that no longer have archaeological integrity due to previous development activity;

2) the preparation of an overview of the settlement history of the City, as it may be expected to pertain to archaeological resources; and

3) the development of an archaeological site potential model based on known site locations, past and present land uses, and environmental and cultural-historical data.

The final task of the research was the identification of a series of policies for incorporation in the Official Plan, and of practices within the development applications process that will ensure the conservation of these valuable cultural heritage resources within the overall process of change and growth in the City.

The results of the technical research and modeling are fully presented in the companion volume to this document, which is entitled *Master Plan of Archaeological Resources, City of Sault Ste. Marie, Technical Report*. This document presents a discussion of the implications of the archaeological potential modeling exercise and a review of the current planning and management guidelines for archaeological resources that have been developed by various jurisdictions. It further identifies a recommended management strategy for known and potential archaeological resources within the City.

1.1 Defining Archaeological Resources

The 2005 Provincial Policy Statement defines archaeological resources (Section 6, Definitions) as including "artifacts, archaeological sites and marine archaeological sites." Individual archaeological sites (that collectively form the archaeological resource-base) are distributed in a variety of locational settings across the landscape, being locations or places that are associated with past human activities, endeavours, or events. These sites may occur on or below the modern land surface, or may be submerged under water. The physical forms that these archaeological sites may take include: surface scatters of artifacts; subsurface strata which are of human origin, or incorporate cultural deposits; the remains of structural features; or a combination of these attributes. As such, archaeological sites are both highly fragile and non-renewable.

The *Ontario Heritage Act* (Ontario Regulation 170/04) defines "archaeological site" as "any property that contains an artifact or any other physical evidence of past human use or activity that is of cultural heritage value or interest'; "artifact" as "any object, material or substance that is made, modified, used, deposited or affected by human action and is of cultural heritage value or interest"; and "marine archaeological site" as "an archeological site that is fully or partially submerged or that lies below or partially below the high-water mark of any body of water". Archaeological fieldwork is defined as "any activity carried out on, above or under land or water for the purpose of obtaining and documenting data, recovering artifacts and remains or altering an archaeological site and includes monitoring, assessing, exploring, surveying, recovering, and excavating."

2.0 AN OVERVIEW OF THE ARCHAEOLOGICAL POTENTIAL MODEL

2.1 Introduction

Archaeological sites in the City of Sault Ste. Marie represent an important heritage resource for which only limited locational data exist. While access to such distributional information is imperative to land-use planners and heritage resource managers, the undertaking of a comprehensive archaeological survey of the city in order to compile a complete inventory was clearly not feasible. As an alternative, therefore, planners and managers must depend on a model which predicts how sites are likely to be distributed throughout the municipality. Such a model can take many forms depending on such factors as its desired function, the nature and availability of data used in its development, the geographic scope of the project, and the financial resources available. Ideally these constraints are balanced in order to produce a model of maximum validity and utility.

The following sections provide an overview of the layers that together form the model of archaeological site potential. Details for each of these layers including all of the supporting research are presented in the companion volume to this document entitled, *Master Plan of Archaeological Resources, City of Sault Ste. Marie, Technical Report*.

2.2 Pre-contact Aboriginal Site Potential Layer

Throughout most of pre-contact history, the inhabitants of the City of Sault Ste. Marie were hunter-gatherers who practiced an annual subsistence round to exploit a broad range of natural resources for food and raw materials for such needs as shelter construction and tool fabrication. Assuming, therefore, that access to natural resources influenced and constrained the movement and settlement of Aboriginal peoples, our goal was to understand what these resources were, how they may have been distributed, how their use and

distribution may have changed over time, and how the landscape itself may have constrained movement and access to resources as well as settlement location.

2.2.1 Glacial Beach Ridges

From a settlement and land-use perspective, the most salient characteristic of Sault Ste. Marie throughout the period of Aboriginal occupation has been its frontage on the body of water which connects the Superior and Huron-Michigan basins, variably the St. Marys River or St. Marys Strait, depending on the relative elevation of those Great Lakes water planes at particular times in the past. The earliest documented and probably first occupations occurred during the Late Paleo-Indian period, as a series of recessional beaches defined an expanding lowland below the Gros Cap Highland between roughly 210 and 260 metres asl. Following the subsequent Stanley-Hough low-water phase, during which the St. Marys River first appeared, refilling of the Huron-Michigan basin during the Nipissing Transgression (ca. 5500 to 4000 B.P.) created a substantial beach bluff at about 197 metres asl and restored the St. Marys Strait. This transgression would have inundated any Late Paleo-Indian or Early Archaic period occupations that may have existed below the bluff base, while creating a new shoreline which evidently attracted Middle Archaic occupation. Late Holocene retreat from the Nipissing beach has produced another series of recessional beaches, two of which have been identified for the purposes of this study on the basis of significant bluffs at 193 and 188 metres asl. Around 2200 B.P. the receding Lake Huron waters once again fell below the bedrock sill at Sault Ste. Marie, transforming the St. Marys Strait into the St. Marys River for the last time. Several Late Archaic and Woodland period occupations of these recessional and modern shorelines have been documented.

2.2.2 Watercourses

Larger watercourses, such as the St. Mary's River, served a variety of functions, such as navigable waterway, fish and game habitat, source of plant foods and fibre from riparian wetlands, source of potable water, etc. Smaller streams may have served only one or a few such functions. Thus, the importance of watercourses, as predictors of archaeological site potential, decreases with their relative size. To address this fact, watercourses can be classified and ranked through a process called stream ordering according to their relative position in the drainage network from headwater stream to river mouth. This is a method for identifying and classifying types of streams based on their number of tributaries. The method of stream ordering that was used in this study provides an indication of the relative size of each watercourse and assigns a new order at every stream intersection adding valuable information about the number of tributaries in the network.

The project digital elevation model was the basis for stream order analysis. Once the analysis was undertaken, the watercourses were selected for buffering based on the numeric order. For the purposes of identifying streams considered to be large enough to have attracted Aboriginal settlement, it has been decided that any watercourses in Sault Ste. Marie higher than third order would be included in the potential model buffers. This analysis resulted in a 45% reduction (measured by length) of the watercourses to be considered significant and buffered for archaeological potential.

The analysis allowed for consideration of the middle reaches of the inland drainage systems that may have comprised late fall and winter microband hunting and fishing territories analogous to those recorded historically throughout the Great Lakes-St. Lawrence region. Throughout these waterways, stream confluences may have been routinely used as stop-over spots, leaving traces in the archaeological record. While wintertime land use would not have been constrained by access to well-drained campsites or the limits of navigable waterways, such routes would have still provided familiar, vegetation-free corridors for travel.

2.2.3 Summary

In light of these considerations, three criteria were combined to create the pre-contact archaeological potential layer. First, the St. Mary's River shore, all lakes, wetlands and all other river and major stream segments above third order were buffered at 150 metres. Secondly, the upland margins and bases of major glacial ridge/shorelines were buffered by 150 metres. Third, using the digital elevation model, areas of slope exceeding 10 degrees were excluded from this potential zone.

2.3 Historic Archaeological Site Potential Layer

Before the first European contact, Sault Ste. Marie, known as *Bawating* by the Ojibway, was a seasonal gathering place utilized for its proximity to water and abundance of fish. The first European to reach the settlement was in 1607 when Étienne Brûlé visited the area, soon followed by French Jesuit missionaries and further expansion into the area through out the remainder of the seventeenth century. Fur trading flourished in the area during the eighteenth century as the British and the French were heavily invested in the trade. The Northwest Company and later the Hudsons Bay Company were the dominant forces as evidenced by the infrastructure built such as the canoe lock and the establishment of the post. Fur trading in the area began to decline after the amalgamation of the two companies and by the middle of the nineteenth century, the trading post was closed.

The settlement saw brief periods of transient growth when the mining industry was booming along the north shores of Lake Superior and Lake Huron. The signing of the Robinson Treaty and the establishment of the Judicial District of Algoma were some of the steps taken to aid the development of the area. Improvements to the transportation system, such as the building of the railway and the International Bridge, allowed Sault Ste. Marie to become a gateway of communication towards the end of the nineteenth century. The area was also heavily industrialized during the last decade of the nineteenth century, largely due to Francis H. Clergue. His industries included the Tagona Water & Light Company, Algoma Central and Hudson's Bay Railway and the Sault Ste. Marie Pulp and Paper Company.

By the beginning of the twentieth century, Sault Ste. Marie was well on its way to becoming a successful community with flourishing industries and a commercial core along Queen Street. The settlement, incorporated as a village in 1871 and a town in 1887, became a city in 1912. The current City of Sault Ste. Marie boundary encompasses several former townships, including the Townships of Tarentorus, Awenge, Parke and Korah.

The mapped layer of historical features is based largely on primary source documents including maps which range in date from 1797 to 1899. It is recognized that these maps did not always illustrate historic features that may be of interest, therefore, it can in no way be considered definitive and all of the mapped locations should be considered to be approximate.

The boundaries of all of the early settlement centres were plotted using the same maps. It is recognized that some of the more massive features associated with many historic archaeological sites are likely to have survived as deeply buried deposits in areas that have been developed. This is reflected in the earliest occupied cores of settlements where historic archaeological potential overrides the integrity layer. Indeed, the settlement centre overlay is indicative of those areas that exhibit potential for the presence of meeting halls, school houses, blacksmith shops, stores, hotels, taverns, and other commercial service buildings.

Transportation routes such as early settlement roads (buffered by zones of 100 metres either side), and early railways (buffered by zones of 50 metres either side) have been mapped to draw attention to potential heritage features adjacent to their rights-of-way.

Cemeteries and family burial grounds have been included in the historic theme layer due to their particularly sensitive nature and the fact that these sites may become invisible in the modern landscape. Information concerning pioneer cemeteries was obtained from the nineteenth century maps, the Ontario Genealogical Society (OGS), and in some instances from Land Registry records. Their locations were plotted based on an examination of the historic maps and OGS transcriptions. These locations were not field verified. The active municipal and private cemeteries that were in the City GIS layer have also been plotted.

All features already designated under the *Ontario Heritage Act*, situated inside the historic core had their property footprints added to the final archaeological potential mapping. They are not subject to exclusion through the integrity layer. Those designated properties outside of the historic core were also plotted and buffered by a radius of 100 metres for archaeological potential.

Isolated rural homesteads, schools, places of worship and commercial buildings, such as inns, that occur outside of the major settlement centre were not mapped as their locations were not shown on the historic maps. Should the archaeological remnants of any such features be encountered during the course of development, they will need to be evaluated in association with the Ministry of Tourism and Culture to determine their worthiness for systematic archaeological investigation given their quantity and ubiquity.

2.4 Known Archaeological Site Layer

There are 36 documented archaeological sites within the City boundaries, all of which were mapped and entered into the project GIS as a discrete layer. All of these are registered by the provincial site database. For site potential modeling purposes, each registered site plotted as a point was buffered by 100 metres.

2.5 Integrity Layer

An integrity layer was compiled based on a review of present land uses within the City. The objective of this task was to distinguish between those lands upon which modern development activities have likely destroyed any archaeological resources, and those lands, such as parking lots, schoolyards, and parks, where resources potentially remain wholly or primarily undisturbed.

This layer was compiled using the built-up layer from the National Topographic Data Base together with high-resolution ortho-imagery provided by the City.

Areas deemed to have no remaining archaeological integrity were subsequently excluded from the zone of archaeological potential. The only exceptions to this were registered archaeological sites and designated heritage features. This layer is best viewed on the City's GIS platform.

Alterations to the evaluation of integrity may result from a detailed Stage 1 report which demonstrates clearly that a study area has been severely disturbed thereby negating archaeological potential.

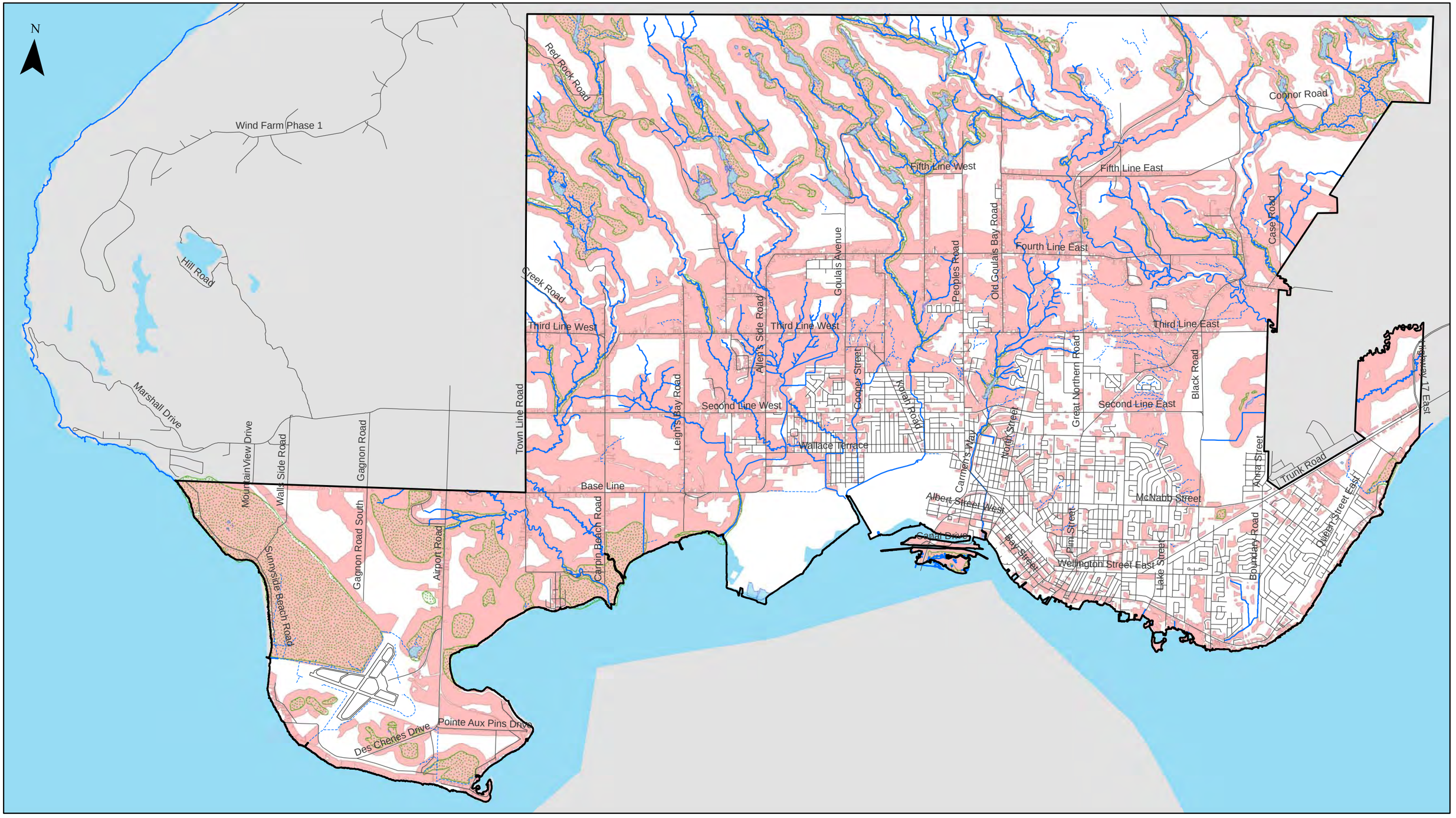
2.7 Composite Archaeological Potential Layer

The final GIS layer, which is the map of the composite zone of archaeological potential within the City of Sault Ste. Marie, was compiled by merging the zones of pre-contact archaeological potential and zones of historic archaeological potential, as defined through application of the various modeling criteria (Table 1). All areas lacking landscape integrity were then excluded from this layer. The resultant potential mapping presents an approximation of the overall distribution of archaeological resources in the City of Sault Ste. Marie. On the basis of this mapping, it may be suggested that 51% of the area within the City of Sault Ste. Marie Municipal boundary, exhibits potential for the presence of hitherto undocumented archaeological sites. For purposes of comparison, it was determined that the Ministry of Tourism and Culture's generic proximity to water and historic transportation route model (MTC 1997) captures over 90% of the city.

Table 1: Summary of Site Potential Modelling Criteria

Environmental or Cultural Feature	Buffer Distance (metres)	Buffer Qualifier
	Pre-contact Aboriginal Site Potential	
lakes	150	none
third order and above watercourses	150	none
wetlands	150	none
valley lands (top of bank)	150	none
select glacial beach ridges	150	upland margins and bases
slopes ≥ 10 degrees	excluded from potential	
	Historic Euro-Canadian Site Potential	
designated sites	point data or lot polygon as mapped	no buffer, override integrity
domestic sites	100	none
breweries and distilleries	100	none
hotels/taverns	100	none
historic schools and churches	100	none
historic industries	100	none
early settlement roads	100	none
early railways	50	both sides
train stations	100	both sides
cemeteries	100	none
	General Criterion	
all registered archaeological sites	100	override integrity

Figure 1 illustrates the composite potential layer for the City.



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LEGEND

- Archaeological Potential with integrity and no slope exceeding 10degrees
- Intermittent Water Course
- Open Water Course
- Wetland
- Waterbody

BASE:

The Corporation of the City of Sault Ste. Marie
Engineering & Planning Division
Feb 8, 2010

0 3km

SCALE

ASI PROJECT NO.: 09SP-81
DATE: SEPT 27, 2010

DRAWN BY: S.F.
FILE: 09SP-81_Final Potential

Figure 1: Final Zone of Archaeological Potential

3.0 ARCHAEOLOGICAL RESOURCES AS CULTURAL HERITAGE: DEFINITIONS

3.1 Introduction: Conservation, Change and Planning - Some Key Concepts

> The Province's natural resources, water, agricultural lands, mineral resources, and cultural heritage and archaeological resources provide important environmental, economic, and social benefits. The wise use and management of these resources over the long term is a key provincial interest. The Province must ensure that its resources are managed in a sustainable way to protect essential ecological processes and public health and safety, minimize environmental and social impacts, and meet its long-term needs (Vision for Ontario's Land Use Planning System, Provincial Policy Statement, Ministry of Municipal Affairs and Housing 2005, pp. 2-3).

In Ontario, cultural heritage conservation is accepted as a legitimate objective of planning activity, as it is in many other provinces and countries. Conservation planning provides an important mechanism for ensuring that future development (e.g., residential, industrial and infrastructure construction) respects the cultural heritage of the City.

Conservation planning and management is generally concerned with ensuring that valued cultural heritage resources are conserved and protected, in a sound and prudent manner, in the continuing and unavoidable process of change in the environment. A key issue is that the role of the custodian and steward of these resources generally falls to the private property owner. It is neither possible nor desirable that all resources be brought into public ownership. Therefore, conservation management is undertaken by a variety of actors, and it is necessary, through legislation and education, to bring all of these actors together in pursuit of a common goal. In many instances, it is traditional planning mechanisms that now seek to ensure that cultural heritage resources are conserved and/or maintained within the process of change.

In the process of change, cultural heritage resources may be affected in several ways. Change may be some action that is purposefully induced in the environment, such as development activities (e.g., road building, residential construction). This may result in both adverse and beneficial impacts, depending on the degree to which the change is sensitively managed. Change may also be a gradual and natural process of aging and degeneration, independent of human action, which affects artifacts, building materials, human memories or landscapes. Thus cultural resource management must ensure that change, when it does occur, is controlled. Its negative impacts upon cultural heritage resources must be either averted or minimized, through either ensuring that change has no adverse impacts whatsoever, or that intervention in the process will result in the promotion of beneficial effects.

In the protection of archaeological sites from land use disturbances or infrastructure facilities, the major characteristics of both archaeological sites and "planning" have a bearing on success. Archaeological resources have many distinct attributes that make their protection a challenging task. Not only are they fragile and non-renewable, but from a planning perspective one of their most important characteristics is that they are frequently located on private property. Thus, any policy must attempt to satisfy the dual and sometimes conflicting objectives of respecting certain private property rights while at the same time, protecting a resource valued by society. "Planning" is generally undertaken in an effort to seek a common or public good that market forces and private interests do not seek. Within the context of Planning approval, archaeological sites are similar to ecological features in that they may not have a tangible market value. Moreover, traditional benefit-cost valuation techniques are unable to price the resource accurately in market terms, since there is no legitimate market for archaeological artifacts. Consequently, individuals responsible for the disruption of archaeological sites may not comprehend the value of preservation to society, a factor which has an obvious impact on protection policies.

On the other hand, the nature of the decision-making process constitutes one of the major and unique characteristics of planning in Ontario. Indeed, properly documented heritage criteria are often considered in the determination of the form, spatial extent and character of land disturbances. Also, the involvement of public and interest groups is encouraged or mandatory, such that decisions are sensitive to community concerns and are discussed openly. Moreover, the review and approvals process permits administrative hearings on matters at issue, with an independent decision. Thus, there is the opportunity to protect or conserve heritage features by selecting least damaging alternatives, through participation in planning decisions and in the review and approvals process.

3.2 Defining Cultural Heritage

The utility of this study as a guide that will assist to incorporate archaeological resources within the overall Planning process, fundamentally rests upon a clear understanding of the physical nature of cultural heritage resources in general, the variety of forms they may assume, and their overall significance and value to society.

In common usage, the word heritage tends to be vaguely equated with "things of the past." While it may be arguable that such an interpretation of the term is true, it is so only in the very narrowest sense. An interest in heritage does indeed indicate an awareness of, and concern for, "things of the past," yet at the same time it recognizes that these "relics" are worthy of such interest primarily because they provide insights into the processes that have helped to shape the contemporary world in which we live, and that will continue to exert an influence into the future. Examination of our heritage, therefore, not only allows us to learn about our origins and our history, but it also provides a means of understanding who we are now, and a means of glimpsing who we may become.

In recognition of the essentially timeless quality of these "things of the past," Ontario's heritage has been defined as:

> all that our society values and that survives as the living context — both natural and human — from which we derive sustenance, coherence and meaning in our individual and collective lives (Ontario Heritage Policy Review [OHPR] 1990:18-19).

Such an all-encompassing definition has the additional advantage of recognizing that our heritage consists of both natural and cultural elements. As human beings, we do not exist in isolation from our natural environment. On the contrary, there has always been a complex interrelationship between people and their environment and each has shaped the other, although the nature and direction of these mutual influences has never been constant. This definition further recognizes that heritage not only includes that which is tangible, but also that which is intangible.

All of those elements that make up this heritage are increasingly being viewed in the same manner as are "natural resources," in that they are scarce, fragile, and non-renewable. These cultural heritage resources, therefore, must be managed in a prudent manner if they are to be conserved for the sustenance, coherence and meaning of future generations, even if their interpretations of the significance and meaning of these resources in contributing to society may be different from our own.

The development of the means by which to manage these cultural resources depends, in turn, on the recognition that on a practical level it is necessary to categorize them by type, yet at the same time these basic types also form a continuum. Both the distinctiveness of the individual categories of cultural resources and the

overlap between these categories has been recognized by the Ontario Heritage Policy Review. This work (OHPR 1990:23) defined three broad classes of cultural resources:

IMMOVABLE HERITAGE – land or land-based resources, such as buildings or natural areas that are "fixed" in specific locations; for example:

structures – buildings, ruins, and engineering works, such as bridges;

sites – archaeological sites, battlegrounds, quarries, earth science sites such as rock formations, and life science sites such as rare species habitats;

areas – streetscapes, neighbourhoods, gardens, lakes, rivers and other natural, scenic, and cultural landscapes;

MOVABLE HERITAGE – resources, such as artifacts and documents, that are easily "detachable" and can be transported from place to place; for example:

objects – artifacts such as artworks, utensils and adornments, and earth and life science specimens, such as fossils and crystals;

documents – including newspapers, letters, films, and recordings;

INTANGIBLE HERITAGE – such as traditional skills and beliefs; for example:

values – attitudes, beliefs and tastes;

behaviours – including skills, games, dances and ceremonies;

speech – stories and narratives, songs, sayings, and names.

Each of these categories, however, often overlaps with others. Archaeological sites, for example, are "immovable" resources, yet in most cases these sites are formed by concentrations of man-made or man-modified objects that are "movable" resources. Similarly, "movable" or "immovable" resources, such as buildings or documents often derive their significance through their intangible cultural associations, as they may reflect or typify specific skills or beliefs.

Despite the fact that all cultural heritage resources should be viewed as components of a single continuum, there remains a need to distinguish between the three basic categories outlined above. This is because the approaches to the examination of resources within the different categories must be specifically tailored to their characteristics and needs. Not only does the study of the different types of resources require different and often highly specialized techniques, but the threats that these resources face are often different as well. Thus planning decisions related to the conservation of different types of resources are informed by different sets of considerations. Likewise, the means by which such planning decisions are implemented will also vary.

3.3 The Ontario Archaeological Site Database

Since 1974 all archaeological sites for the Province of Ontario have been registered with the Ontario Archaeological Sites Database (OASD) maintained by the Heritage Branch and Libraries Branch of the Ontario Ministry of Tourism and Culture, Toronto. This data base is the official, central repository of all site information for the province collected under the *Ontario Heritage Act* (1974, 1980). An associated Geographic Information System has been developed by Ministry of Tourism and Culture.

Within the OASD registered archaeological sites are organized within the "Borden" system, which is based on blocks of latitude and longitude, each measuring approximately 13 kilometres east-west by 18.5 kilometres north-south. Each block is assigned a unique four letter designator and sites within each block are numbered sequentially as they are found.

The inventory of registered archaeological sites that formed the initial basis for the present study was compiled by the Data Co-ordinator of the Archaeology Unit, Heritage Branch and Libraries Branch, Ministry of Tourism and Culture, and by the City of Sault Ste. Marie's Engineering and Planning Department.

3.4 The Threats to Archaeological Resources

Protecting archaeological sites has become especially important in Ontario, where landscape change has been occurring at an ever increasing rate since 1950, resulting in substantial losses to the non-renewable archaeological record.

The scale of the threats facing the archaeological record of southern Ontario were considered in a study in which rates of demographic and agricultural change were examined over the last century, and estimates generated of the number of archaeological sites that have been destroyed (Coleman and Williamson 1994). While the period of initial disturbance to sites was from 1826 to 1921, when large tracts of land were deforested and cultivated for the first time, that disturbance typically resulted in only partial destruction of archaeological data as most subsurface deposits remained intact. However, extraordinary population growth in the post-World War I period, resulted in a more disturbing trend as large amounts of cultivated land were consumed by urban growth.

The nature and potential magnitude of the threat that continued landscape change posed to a finite and non-renewable archaeological feature base between 1951 and 1991 is staggering; it is possible that more than 10,000 sites were destroyed during that period of which 25% represented significant archaeological features that merited some degree of archaeological investigation, since they could have contributed meaningfully to our understanding of the past (Coleman and Williamson 1994: Tables 2 and 3). It can be assumed that the reduction of the archaeological feature base of the City of Sault Ste. Marie also took place at a serious rate.

Archaeological sites also face a less direct, but equally serious form of threat, in which man-made changes to the landscape inadvertently alter or intensify destructive natural processes in adjoining regions. Increased run-off of surface water in the wake of forest clearance, for example, or hydrological fluctuations associated with industrial and transportation development may result in intensified rates of erosion on certain sites due to processes such as inundation. The amount of land (and hence the potential number of archaeological sites) which has been subjected to these destructive forces is impossible to quantify, but is likely to be considerable.

While there has recently been a marked reduction in the rate of archaeological site destruction throughout much of the province, since certain municipalities adopted progressive planning policies concerning

archaeological site conservation, the potential for the loss of archaeological resources in the future remains great, due to continuing growth and development.

4.0 JURISDICTION OVER ARCHAEOLOGICAL RESOURCES

In terms of direct conservation and protection, the lead provincial government role has been filled by the Minister of Tourism and Culture. The Minister is responsible for encouraging the sharing of cultural heritage and for determining policies, priorities and programs for the conservation, protection and preservation of the heritage of Ontario (Cuming 1985). Under the *Ontario Heritage Act*, a process is defined that ensures that "once a property is designated of archaeological or historical significance and is likely to be adversely affected by commercial, industrial, agricultural, residential, or other development," the appropriate measures are taken. In order to maintain a professional standard of archaeological research and consultation, the Minister is responsible for issuing licenses to qualified individuals, without which archaeological activities involving exploration, survey or field work are illegal. All reports submitted to the Ministry, as a condition of an archaeological license are reviewed by Ministry staff to ensure that the activities conducted under a license meet current technical guidelines, resource conservation standards, and the regulations of the *Ontario Heritage Act*. The regulation of archaeological activities carried out within the development context requires that all approval authorities must integrate the requirements of the *Ontario Heritage Act* within their land use planning process.

The rationale for a greater sharing of responsibilities between provincial and local governments for all types of heritage including archaeological resources was explained most effectively in a document entitled *A Strategy for Conserving Ontario's Heritage* (Ontario Heritage Policy Review 1990). This document suggested a re-allocation of roles, in which the provincial government would maintain an advisory function and the municipal governments would assume the day-to-day responsibility for monitoring those archaeological features in their jurisdiction.

4.1 Provincial Legislation

The specific provincial legislation governing planning decisions is complex, but provides for a number of opportunities for the integration of archaeological conservation. The two principal pieces of legislation are the *Planning Act* (2005) and the *Environmental Assessment Act* (1997). Despite the on-going provincial transfer of review responsibilities, well over 1000 formal development applications throughout the province, under both Environmental Assessment and Planning Act processes, are reviewed annually by the Ministry of Tourism and Culture. Consequently, approximately 500 to 800 archaeological sites have been documented annually in Ontario since 1990 as a result of planning mechanisms.

4.1.1 The Ontario Planning Act (2005) and the Provincial Policy Statement (2005)

With respect to archaeological resources, the most recent Provincial Policy Statement, which came into effect March 1, 2005, states that:

> Development and site alteration shall only be permitted on lands containing archaeological resources or areas of archaeological potential if the significant archaeological resources have been conserved by removal[1] and documentation, or

[1] "Removal" of an archaeological resource is accomplished through mitigative documentation and/or excavation.

> by preservation on site. Where significant archaeological resources must be preserved on site, only development and site alteration which maintain the heritage integrity of the site will be permitted (Section 2.6, Cultural Heritage and Archaeology).

For the above policy statement, significant archaeological resources are defined as those "that are valued for the important contribution they make to our understanding of the history of a place, an event, or a people." The identification and evaluation of such resources are based upon archaeological fieldwork undertaken in accordance with the *Ontario Heritage Act*".

Provincial interests in land use planning are also detailed in the Provincial Policy Statement provided in Section 3(1) of the *Planning Act*, as amended by the *Strong Communities Act* (2004), whereby:

> a decision of the council of a municipality, a local board, a planning board, a minister of the Crown and a ministry, board, commission or agency of the government, including the Municipal Board, in respect of the exercise of any authority that affects a planning matter, "**shall be consistent**" with this policy statement.

Thus all decisions made during the development process, regardless of the identity of the development proponent or the relevant approval agency, must address potential heritage resource impacts. Given the provincial interest, any planning activity referred to in the *Planning Act*, including the preparation of Official Plans or any planning application, should have regard for matters of provincial interest. The statements in the Act are sufficient for a municipality to require that an archaeological assessment be completed prior to the approval of a planning application.

It should be noted that an archaeological assessment must now be completed and submitted with an application for approval of a plan of subdivision. Section 51 (17) of the *Planning Act*, Part VI Subdivision of Land, now delineates under Schedule 1 the information and material to be provided by an applicant for approval of a plan of subdivision (O. Reg. 544/06, s. 2). This section states the applicant shall provide the approval authority with the following prescribed information and material:

> 23. Whether the subject land contains any areas of archaeological potential.
>
> 24. If the plan would permit development on land that contains known archaeological resources or areas of archaeological potential,
>
> a) an archaeological assessment prepared by a person who holds a license that is effective with respect to the subject land, issued under Part VI (Conservation of Resources of Archaeological Value) of the *Ontario Heritage Act*; and
>
> b) a conservation plan for any archaeological resources identified in the assessment.

Note that the PPS defines "archaeological resources" as "includes artifacts, archaeological sites and marine archaeological sites" (see Section 1.1 above).

In the case of a zoning by-law, the *Planning Act* allows a municipality to use the option of attaching a holding "H" symbol to a zoning by-law and require that as a condition of removing the holding symbol, and before development can proceed, an archaeological assessment or other matter be completed. Archaeological zoning by-laws may also be developed by a municipality under Section 34 of the *Planning Act* to protect significant archaeological resources and sites. The municipality must have due regard to matters of provincial interest,

which means that archaeological assessments must be undertaken in support of development applications where identified as necessary.

In regard to municipal projects, the *Planning Act* states that where there is an Official Plan in effect, no public work shall be undertaken that does not conform to the Plan.

The Act also permits municipalities to pass zoning by-laws: "for prohibiting any use of land and the erecting, locating or using of any class or classes of buildings or structures on land that is the site of a significant archaeological resource".

In summary, a municipality is obligated, within the existing legislative framework, to require archaeological concerns be addressed in connection with any planning application and is able to pass zoning by-law(s) regulating the use of land that is the site of a significant archaeological resource. Moreover, a municipality is prevented from undertaking any public work that does not comply with its Official Plan. Heritage protection policies are appropriate in Official Plans, if developed and incorporated properly. If a municipality has a sound basis in its policies (Official Plan), it is possible to ensure that applications conform to heritage requirements.

The Programs and Services Branch of the Ministry of Tourism and Culture has the primary responsibility under the *Ontario Planning Act* and *Ontario Heritage Act* for matters relating to cultural heritage including archaeological resources. This branch has developed an "Ontario Heritage Tool Kit" that includes guides for interpreting the Ontario Heritage Act as well as InfoSheets on applying the cultural heritage and archaeology provincial policies. One of their primary responsibilities is to oversee the Municipal Plans Review process. The first component of this process is the determination of the potential for a development application to impact archaeological resources, based on a range of environmental and historic criteria. Should it be determined that there is potential for impacts to archaeological resources resulting from the approval of the development application, then the second component is the requirement that the development proponent undertake an archaeological assessment, the results of which are subject to Ministry of Tourism and Culture review and acceptance. Such assessments may be required for official plan amendments or plans of subdivision, and may also be required for smaller-scale developments reviewed under consent and zoning by-law amendment applications. In all of those cases where potential is identified on all or a portion of a subject property, a standard archaeological condition is attached to the development application.

The current condition recommended by the Ministry of Tourism and Culture reads:

> The proponent shall carry out an archaeological assessment of the subject property and mitigate, through preservation or resource removal and documentation, adverse impacts to any significant archaeological resources found. No grading or other soil disturbances shall take place on the subject property prior to the City of Sault Ste. Marie and the Ministry of Tourism and Culture confirming that all archaeological resource concerns have met licensing and resource conservation requirements.

While a generic primer has been developed by the Ministry of Tourism and Culture (1997) for informing municipal planners about evaluating archaeological potential, those municipalities that have undertaken detailed archaeological potential studies or master/management plans have access to much more detailed information, that provides more effective and accurate means of determining archaeological potential and whether or not an assessment will be required. The review of site specific development applications, for the purpose of determining if archaeological resources or areas of archaeological potential are present within any particular subject plan, may now be made directly by the City of Sault Ste. Marie through the use of this potential study, consisting of potential mapping, explanatory text, and suggested procedures for

implementation of the study's conclusions. Review of the resulting archaeological investigations, in order to determine that *Ontario Heritage Act* requirements have been satisfied, remains the responsibility of the Ministry of Tourism and Culture, which provides notification to the consulting archaeologist of the results of their review. The Ministry of Tourism and Culture may notify the approval authority and development proponent of their review. That Ministry also administers all matters related to the management of the resources documented, mitigation strategies proposed, and any disputes arising from the conservation of archaeological resources under the land use planning process.

4.1.2 The Ontario Environmental Assessment Act (1997)

The *Environmental Assessment Act* (1997) applies to public sector projects and designated private sector projects. Private sector projects that are designated by the Province as subject to the Act are usually major projects such as landfills. The purpose of the Act is "the betterment of the people ... by providing for the protection, conservation and wise management in Ontario of the environment" (Section 2). Environment is very broadly defined to include "the social, economic and cultural conditions that influence the life of man or a community" [Section 1(c) (iii)] and "any building, structure ... made by man" [Section 1(c) (iv)]. Thus, environment is broadly interpreted to include heritage artifacts, structures or events.

The *Environmental Assessment Act* requires the preparation of an environmental assessment document, containing inventories, alternatives, evaluations and mitigation. It is subject to formal government review and public scrutiny and, potentially, to a tribunal hearing. Heritage studies of these major undertakings are a common component. There are also Municipal Engineers Association (MEA) Class environmental assessments for municipal projects that require similar considerations, but entail a simplified review and approval process.

Various provincial ministries are establishing protocols related to activities subject to the environmental assessment process, in order to ensure that heritage concerns in their respective jurisdictions are addressed. The Ontario Ministry of Transportation (2004), for example, ensures that archaeological surveys are undertaken in advance of all new road construction in order to ensure that no archaeological sites will be unknowingly damaged or destroyed, and the Ontario Ministry of Natural Resources prepared a set of guidelines on the conservation of heritage features as part of the Timber Management Planning Process (1991).

4.1.3 The Ontario Heritage Act

The Ministry of Tourism and Culture[2] is charged under Section 2 of the *Ontario Heritage Act* with the responsibility to "determine policies, priorities and programs for the conservation, protection and preservation of the heritage of Ontario" and so fills the lead provincial government role in terms of direct conservation and protection of cultural resources. The Minister is responsible for encouraging the sharing of cultural heritage and for determining policies, priorities and programs for the conservation, protection and preservation of the heritage of Ontario (Cuming 1985). These goals are generally accomplished through other legislated processes, such as those required by the *Planning Act* and *Environmental Assessment Act*, rather than directly through the *Ontario Heritage Act* itself.

[2] Provincial management of cultural resources has been carried out by operations units attached variously to the Ministry of Citizenship, Culture and Recreation (1993-1998), the Ministry of Tourism, Culture and Recreation (1998-2002), the Ministry of Tourism and Culture (2002-2010) and now the Ministry of Tourism and Culture.

The *Ontario Heritage Act* does, however, govern the general practice of archaeology in the province. In order to maintain a professional standard of archaeological research and consultation, the Minister is responsible for issuing licenses to qualified individuals. In 2005, changes to the *Ontario Heritage Act* in Subsection 48(1), made it illegal for any person or agency to knowingly alter an archaeological site without a license (see Section 1.1 for definition of archaeological site). "Alteration" of an archaeological site is deemed to include any form of unsanctioned disturbance or destruction of an archaeological resource brought about by any means (i.e., either archaeological excavation, site looting, or development). This in effect offers automatic protection to all archaeological sites and the City should exercise due diligence in all planning contexts to ensure that archaeological features are protected from disturbance of any nature. Under Subsections 69(1-3) of the *Ontario Heritage Act*, an individual or a director of a corporation found in violation of the Act or the regulations is liable to a fine of up to $50,000 or imprisonment for up to one year or both. A corporation found in violation of the Act or the regulations is liable to a fine of up to $250,000, and more specifically, if a person or director or officer of a corporation is convicted of knowingly contravening Subsection 48(1), the maximum fine that may be imposed is $1,000,000.00.

All reports submitted to the Ministry, as a condition of an archaeological license are reviewed by Ministry staff to ensure that the activities conducted under a license meet current technical guidelines, resource conservation standards, and the regulations of the *Ontario Heritage Act*. The regulation of archaeological activities carried out within the development context requires that all approval authorities must integrate the requirements of the *Ontario Heritage Act* within their land use planning process.

4.1.3.1 Cultural Heritage Landscapes

Cultural heritage resource management practice in the Province of Ontario has been at the forefront of acknowledging and defining cultural heritage landscapes as distinct and unique cultural heritage resources. During the 1970s, the World Heritage Committee began to recognize cultural heritage landscapes and by the early 1980s, the Province of Ontario began to embed this new concept into its cultural heritage resource management practice. Formal protection of cultural heritage landscapes was formally established in the early 1980s when the first heritage conservation district was recognized. Part V of the *Ontario Heritage Act* enables designation of *areas* which as a whole, retain cultural heritage value. Within this context, cultural heritage landscapes can include:

> an area with a group or complex of buildings, or a larger area with many buildings and properties. It may also comprise entire municipalities… potential districts can be found in urban and rural environments. They may include residential, commercial, and industrial areas, rural landscapes or entire villages or hamlets with features or land patterns that contribute to a cohesive sense of time or place (Ministry of Tourism and Culture 2006:5-6).

In 2005, cultural heritage landscapes were further recognized in the Province of Ontario's Provincial Policy Statement. This document establishes that "significant built heritage resources and significant cultural heritage landscape shall be conserved". In this policy context, a cultural heritage landscape

> means a defined geographical area of heritage significance which has been modified by human activities and is valued by a community. It involves a grouping(s) of individual heritage features such as structures, spaces, archaeological sites and natural elements, which together form a significant type of heritage form, distinctive from that of its constituent elements or parts. Examples may include but are not limited to, heritage conservation districts designated under the *Ontario Heritage Act;* and villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, and industrial complexes of cultural heritage value (Provincial Policy Statement: 29)

This definition confirms that the combined presence of structures, spaces, archaeological sites, and natural elements may constitute a cultural heritage landscape. It also confirms that cultural heritage landscapes may exist within a wide variety of land holding types. A cultural heritage landscape may consist of single or multiple property parcels that contain "a grouping of individual heritage features such as structures, spaces, archaeological sites, and natural elements" (PPS 2005). While many cultural heritage landscapes tend to include land holdings such as parks and cemeteries, they may also include open spaces such as hydro corridors and brown fields that have aboveground or below ground features of cultural heritage interest, or clusters of buildings such as an industrial complexes or settlement centres.

Cultural heritage landscapes may be protected through designation under Part IV or Part V of the *Ontario Heritage Act*. Generally, and historically, Part IV designations have been used to protect individual properties whereas Part V designations have been used to protect heritage conservation districts – areas which may consist of several properties which together retain cultural heritage significance. Both Parts of the *Act* may be used to protect a cultural heritage landscape and the choice between which varies on a case by case basis. However, to make an appropriate decision that meets the needs of the particular site, the differences between Part IV and Part V need to be considered. The following provides a brief description of the specific protective powers and requirements associated with each:

Provisions relating to municipal designation of properties of cultural heritage value under Part IV of the *Ontario Heritage Act* (Act hereafter) are contained within Sections 26 to 34.4., and 35 – 39. Provisions relating to municipal designation of heritage conservation districts of cultural heritage value under Part V of the *Ontario Heritage* are contained within Sections 39.1 to 46. The following provides a concise description of key differences in protective power between both Part IV and Part V of the *Ontario Heritage Act:*

Part IV designation provides the municipality with the tools to delineate a property and designate without the need to conduct public consultation. The designation process may be less costly and time consuming to implement, as compared to Part V designations.

Part IV designation can be easier to bring before council for review, consideration and designation.

Part IV designations may be considered a secure form of protection as the Conservation Review Board serves as the highest level of appeal.

Part IV designations can be quickly undertaken as there are no requirements for extensive study and/or consultation.

Alterations to properties designated under Part IV, and which are likely to affect the property's heritage attributes, are to be reviewed and approved by municipal council.

Part V affords the municipality with better long-term stewardship through requirements for management and conservation plans.

Part V affords a more holistic approach to protection through the recognition of built, natural, archaeological and intangible history and significance of a property.

Interim controls can be implemented for up to one year, to protect an area that is being studied for designation under Part V. Council can pass a by-law designating the area specified in the by-law as a heritage conservation district study area for a period of up to one year. This bylaw may set limitations on alteration of properties and may set limitations with respect to erection, demolition, or removal of

buildings or structures or classes of buildings or structures in the heritage conservation district study area.

Part V designation requires adoption of a plan to ensure that the community's heritage conservation objectives and stewardship will be respected during the decision-making process.

4.1.4 Other Provincial Legislation

Other land use legislation in the province provides opportunities for archaeological resource protection. The *Aggregate Resources Act*, governing approval of pits and quarries and administered by the Ministry of Natural Resources, recognizes the potential impact quarrying activities may have on cultural features such as archaeological resources. Furthermore, the development of a pit or quarry will often require an official plan amendment or zoning by-law amendment, and thus would require involvement by the municipality at either the upper or lower tier level. The process for addressing archaeological concerns is similar to that outlined for *Planning Act* related projects. A background study, field survey and detailed archaeological investigations are all identified as required Technical Reports under Part 2.2 of the Provincial Standards for Bill 53 under the *Aggregate Resources Act*.

The *Cemeteries Act* also addresses the need to protect human burials, both marked and unmarked, which is yet another valuable link to the past. Burial locations uncovered on archaeological sites constitute "unregistered cemeteries" that are, in essence, in violation of the *Cemeteries Act*. The discovery of such burials will require further investigation in order to define the extent and number of interments, and either the registration of the burial location as a cemetery, or the removal of the remains for re-interment in an established cemetery. The actual workings of this process are complex and vary depending upon whether the burial(s) are an isolated occurrence, or part of a more formal cemetery, and whether the remains in question are Aboriginal or Euro-Canadian. In all cases, the success of the process is dependent upon the co-operation of the landowner, the next of kin (whether biological or prescribed), and the Cemeteries Registrar (Ministry of Consumer and Business Services). The Ministry of Tourism and Culture's role in the process is to assist in co-ordinating contact and negotiation between the various parties, and ensuring that archaeological investigations of such burial sites meet provincial standards.

With this legislative planning context, success in protecting heritage features depends on sufficient resource information, sound policies, the capability to implement requirements, and participation by both local and provincial heritage planners in the process.

4.2 Federal Legislation

The major federal statutes applicable to archaeology include the *Canadian Environmental Assessment Act* and the *Cultural Property Export and Import Act.* There is no federal legislation which specifically governs archaeological research and planning. In cases where archaeological issues on federal lands do not fall into the category of exports or the confines of an environmental impact assessment, federal land managers are expected to rely on federal policies applicable to all departments or to the specific directives of their own departments.

In terms of the protection of archaeological resources, the federal government's role would be confined primarily to land that it owns or operates, such as national historic sites and parks (e.g., Sault Ste. Marie Canal National Historic Site), lands belonging to federal departments, such as National Defence or Agriculture,

lands where there is a federally regulated undertaking, such as railways or airports, and lands where a federally regulated development project is proposed.

The federal government's *Archaeological Heritage Policy Framework* (Department of Canadian Heritage 1990) states that:

> As heritage protection is an essential element of our Canadian identity, and as our archaeological heritage is a source of inspiration and knowledge, it is the policy of the Government of Canada to protect and manage archaeological resources.

In order to realize these objectives on all lands and waters under federal jurisdiction, the Parks Canada Agency has an advisory role for the protection and management of all archaeological resources on all lands and waters under federal jurisdiction.

Several federal departments have specific rules to protect archaeological heritage, such as the Department of National Defence and the Parks Canada Agency.

4.2.1 Canadian Environmental Assessment Act

The Federal Archaeology Office is also recognized as an "expert department" for matters involving implementation of specific legislation in the *Canadian Environmental Assessment Act* (CEAA), where it is outlined that the Government of Canada seeks to conserve and enhance environmental quality and to ensure that the environmental effects of projects receive careful consideration before responsible authorities take actions in connection with them. An "environmental effect", in respect of a project, is defined to include:

> Any change that the project may cause in the environment, including any effect of any such change on health and socio-economic conditions, on physical and cultural heritage, on the current use of lands and resources for traditional purposes by Aboriginal persons, or any structure site or thing that is of historical, archaeological, paleontological or architectural significance (Section 2(1)).

The *Reference Guide on Physical and Cultural Heritage Resources* (1996:2) for the CEAA goes on to describe a cultural heritage resource as:

> …a human work or a place that gives evidence of human activity or has spiritual or cultural meaning, and that has historic value… This interpretation of cultural resources can be applied to a wide range of resources, including cultural landscapes and landscapes features, archaeological sites, structures, engineering works, artifacts and associated records.

Legally, a project that would prompt an environmental assessment under the *Canadian Environmental Assessment Act* also triggers a requirement to research archaeology.

4.2.2 Cultural Property Export and Import Act

The regulations under the federal *Cultural Property Export and Import Act* offer a specific list of objects or artifacts that are protected under the Canadian Cultural Property Export Control List. The list incorporates:

> archaeological object[s] of any value recovered from the soil of Canada, the territorial sea of Canada or the inland or other international waters of Canada not less than 75 years after its burial, concealment

> or abandonment if the object is an artifact or organic remains, including human remains, associated with or representative of historic cultures.

The document then goes on to list specific artifacts relating to the "Aboriginal peoples of Canada" (2a), to the "progressive exploration, occupation, defense and development of the territory that is now Canada by non-aboriginal peoples" (2b) and "organic remains associated with or representative of historic or prehistoric cultures" (2c).

4.2.3 Parks Canada

Part of the mandate of Parks Canada, as per the Parks Canada Charter, is to "protect and present nationally significant natural and cultural heritage…" Not only is the Archaeological Services Branch of the Parks Canada Agency responsible for all issues pertaining to archaeology on Parks Canada lands, it also has an advisory role, upon request, to other federal departments. The Agency has developed a number of policies and guidelines, as well as directives, bulletins and manuals, concerning the preservation of cultural heritage. Here are some examples:

4.2.3.1 Parks Canada Guidelines for the Management of Archaeological Resources (2005)

Using the principles and practices of the *Cultural Resource Management Policy (1994)*, this document presents Parks Canada's approach to archaeological resource management as a component of cultural resource management. It provides guidelines on the undertaking of projects and activities that may affect terrestrial or underwater archaeological resources in heritage areas under the jurisdiction of the Parks Canada Agency. These include National Parks of Canada, National Historic Sites of Canada, National Marine Conservation Areas of Canada, National Park Reserves of Canada, and National Marine Conservation Area Reserves. These guidelines can also be used by other federal land managers seeking advice on the management of archaeological resources.

4.2.3.2 Standards and Guidelines for the Conservation of Historic Places in Canada (2003)

This document serves to guide heritage conservation projects, including projects on archaeological sites that have an impact on archaeological resources. Section 3 deals with the Guidelines for Archaeological Sites, Landscapes, Buildings, and Engineering Works. It is intended that the separate guidelines for these four subjects be used in conjunction with one another to ensure that all heritage values of a historic place be protected.

Recently, Parks Canada has released the latest draft Standards and Guidelines for the Conservation of Archaeological Sites. It resulted from extensive consultation with government, academic, and consulting archaeologists and benefited from their application in a number of pilot projects across Canada. It is suggested that archaeologists consider this document as a guide to best practice when designing and undertaking their archaeological work within the City of Sault Ste. Marie on lands subject to federal jurisdiction.

4.2.3.3 Guide to the Preparation of Commemorative Integrity Statements (2002)

The Parks Canada Management Plan requires that Commemorative Integrity Statements (CIS) be prepared for all heritage sites owned and managed by Parks Canada. This policy includes a component of all CIS policies addressing both terrestrial and marine archaeological heritage sites.

Usually, any intervention is preceded by archaeological investigation in accordance with recognized professional standards, a basic archaeological survey is undertaken, and the values of archaeological resources are effectively communicated to the public.

4.2.4 Other Federal Legislation

Under the *Canada Shipping Act* (CSA, 2001), all material recovered from a wreck (ships and aircraft) during any activity, such as fishing, diving or during an archaeological excavation, must be reported to the district Receiver of Wreck, an officer of Transport Canada. The *Canada Shipping Act* (2001) provides for the regulation of wrecks that, on the recommendation of Parks Canada, have heritage value.

4.3 International Treaties and Charters

Canada supports and/or adheres to a number of treaties which impose a duty on the governments of Canada, its provinces and territories, to take action for archaeological management.

4.3.1 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property

Promoted by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in 1970 and formally acceded by Canada in 1978, this Convention declares that "cultural property acquired by archaeological, ethnological or national science missions" is recognized as belonging "to the cultural heritage of each State" (article 4). To ensure the protection of their cultural property, under article 5, participating countries are obliged to (among other obligations):

- contribute to the formation of draft laws and regulations designed to secure the protection of the cultural heritage…
- establish and keep up to date, on the basis of a national inventory of protected property, a list of important public and private cultural property…
- promote the development or the establishment of scientific and technical institutions (museums, libraries, archives, laboratories, workshops…)…
- organize the supervision of archaeological excavations, ensuring the preservation "in situ" of certain cultural property, and protecting certain areas reserved for future archaeological research…

4.3.2 Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention)

Under article 1 of this Convention, which Canada formally adhered to in 1976, "cultural heritage" may consists of "sites – works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view." To ensure the protection of their cultural property, under article 5 participating countries are obliged to (among other obligations):

- adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and integrate the protection of that heritage into comprehensive planning programs…
- develop scientific and technical studies and research to work out such operating methods as will make the State capable of counteracting the dangers that threaten its cultural or natural heritage
- to take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage.

4.3.3 Convention on the Protection of the Underwater Cultural Heritage

This convention, which was adopted by UNESCO in 2001, requires participating countries to adopt necessary measures to preserve their underwater cultural heritage. Canada has not yet made a decision concerning ratification.

Professionals in Canada are also guided by principles set by international organizations such as the International Council on Monuments and Sites (ICOMOS). Four Charters in particular provide guidance on archaeological resources management:

- *Charter for the Conservation and Restoration of Monuments and Sites (Venice Charter),* describes the principles of appropriate conservation;
- *Charter on the Conservation of Places of Cultural Significance (Burra Charter)*, outlines the principles and practices of conservation based on the cultural significance of historic places;
- *Charter for the Protection and Management of the Archaeological Heritage (Lausanne Charter),* reflects basic principles and guidelines relating to the management of archaeological resources and is a reference for policies and practice;
- *Charter for the Protection and Management of the Underwater Cultural Heritage* outlines the principles for the appropriate protection and management of cultural sites underwater.

4.4 City of Sault Ste. Marie Official Plan Policies

The following summary was taken from the Official Plan (1996) of the City of Sault Ste. Marie. These will be replaced in the new Official Plan by the policies generated during this study.

In Section 2.4, entitled Heritage, it is noted that each major theme in Canadian History is represented in the Sault Ste. Marie and that these locations and structures (e.g., Ermatinger Old Stone House and the Sault Ste. Marie Lock) serve as a link to the past. Their preservation is encouraged. Heritage resources are stated to include archaeological sites.

It is recommended that the City identify, map and maintain an inventory of heritage resources including areas of archaeological significance (medium to high archaeological potential) as well as significant cultural or natural landscapes, which have been employed by some municipalities to protect archaeological sites (see Cultural Heritage Landscapes above).

It is specifically noted that Council may designate nationally and provincially significant historic or pre-contact archaeological sites pursuant to the Ontario Heritage Act. Where it is not possible to preserve sites of archaeological worth, the Plan states that their significance shall be assessed and recorded prior to demolition or alteration. All development applications shall be reviewed for their impact on existing heritage resources.

An archaeological impact assessment meeting the Ministry of Citizenship, Culture, and Recreation (now Tourism and Culture) guidelines shall be required for development that impacts areas of medium to high archaeological potential or known archaeological sites and the preservation or rescue excavation of significant architectural resources shall be encouraged.

4.5 Summary

With all of these planning requirements, success in protecting heritage features depends on sufficient resource information, sound policies, the capability to implement requirements, and participation by all City staff in the process. These objectives are also being realized, in the case of archaeological resources, through the preparation and updating of this archaeological potential modeling study and the inclusion of policies in the Official Plan of the City of Sault Ste. Marie. Heritage protection policies are appropriate in Official Plans, if developed and incorporated properly, if only to draw attention to the fragility of archaeological sites. Moreover, as the Official Plan is implemented, it is possible to reinforce provincial, federal and local interests by requiring certain information to be supplied, conditions to be satisfied or actions to be taken.

5.0 OWNERSHIP

The question of ownership of archaeological resources, whether they be sites or individual artifacts has never been adequately resolved in Ontario. Consequently, issues of ownership have often complicated the protection or conservation of the resource.

This situation led the Ministry of Tourism and Culture's Advisory Committee on New Heritage Legislation to the suggestion that:

> Ontario should follow the lead of many provincial governments in asserting Crown ownership of archaeological objects. This cuts out all claims but those of true owners. In the case of material of Aboriginal origin, however, such an approach may be inconsistent with current steps toward First Nations' self-government and jurisdiction over certain matters. Resolution of this matter should be negotiated with First Nations (Minister's Advisory Committee 1992:42).

If the Crown is to become the custodian of such materials, however, it will first be necessary to make better provision for their storage, curation and access to interested individuals or groups, than currently exists (OHPR 1990:59). Furthermore, it will be essential to resolve the equally legitimate, but frequently conflicting, interests of Aboriginal people, the scientific community and of society in general, regarding the ultimate disposition of precontact archaeological remains. Such an objective will only be met through a long process of negotiation and consultation among these groups.

The first steps, however, have been taken in this regard. In the late 1980s, the Assembly of First Nations and the Canadian Museums Association together sponsored a Task Force on Museums, the purpose of which was to develop an ethical framework and strategies by which Aboriginal peoples and cultural institutions can work together to represent Aboriginal history and culture. The results of extensive consultations carried out by the Task Force are available in the *Task Force Report on Museums and First Peoples*. Also, the Canadian Archaeological Association together with the Federal Department of Communications sponsored an extensive program of consultation with Aboriginal communities across Canada resulting in a *Statement of Principles for Ethical Conduct Pertaining to Aboriginal Peoples*, which should serve to guide the actions of Canadian archaeologists (Nicholson et al. 1996). While neither of these documents asserts singular ownership of artifacts, they both provide guidelines regarding their interpretation and presentation to the public.

The *Ontario Heritage Act* also governs matters related to the care and curation of artifacts. Under Section 66 (1), this legislation stipulates that "The Minister may direct that any object taken under the authority of a license or a permit be deposited in such public institution as he may determine to be held in trust for the people of Ontario" (1974, c.122, s.66). Moreover, under Regulation 881 (6a), pertaining to licensing under the *Ontario Heritage Act*, "It is a term and condition of a license that the licensee keep in safekeeping all objects of archaeological significance that are found under the authority of the license and all field records that are made in the course of the work authorized by the license, except where the objects and records are donated to Her Majesty the Queen in right of Ontario or are directed to be deposited in a public institution under subsection 66 (1) of the Act."

The application of this section of the Act and this regulation typically involves the curation of recovered artifacts by the archaeologist until such time that the analyses are complete and that a place for ultimate disposition can be arranged, usually a fully accredited public repository. It is also generally assumed that archaeologists will consult with the landowner to decide upon the location for the ultimate disposition of artifacts. In general, it is desirable that material from a particular archaeological site is ultimately deposited in a public institution located in the same community (either a local museum or an Aboriginal cultural centre), provided that adequate storage, curatorial facilities for both artifacts and field records are available, that the institution's collections are accessible to researchers, and that the material is not transferred or disposed of without provincial approval.

6.0 IMPLEMENTATION

6.1 Introduction

As discussed above, the role of municipalities in the conservation of heritage features is crucial. Planning and land use control are predominantly municipal government responsibilities and the impact of municipal land use decisions on archaeological resources is significant, especially since municipally-approved developments constitute the majority of land disturbing activities in the Province (Hansen 1984). Without adequate screening at a municipal level, the provincial government is unable to ensure protection for valued archaeological resources. Viewed from this perspective, archaeological protection cannot be implemented without municipal involvement.

The primary means by which cultural heritage resources are best protected is through the planning process. This requires the development of appropriate policies for the City of Sault Ste. Marie and incorporation into the review process. The municipality also plays a crucial role in ensuring that the archaeological site protection measures of the *Ontario Heritage Act* are recognized and valued. The mapping prepared for this study is designed to be used by City of Sault Ste. Marie staff to make decisions regarding requirements for

archaeological resource assessments and/or monitoring in advance of development and/or site alteration.

Education is an important part of this process. While the public is generally supportive of environmental causes, we must also educate our community that the record of our cultural environment is slowly vanishing. As a science, archaeology often suffers from the attitudes and actions which result from public misconceptions about its motives, aims and methods. It is encouraging to note that when members of the public are made aware of archaeological sites, there exists a genuine interest not only in the pre-contact history and history of a City, but also in archaeology itself as an academic discipline. The City should support programs and endeavours related to involving the public in the investigation of the City's archaeological record.

6.2 Archaeological Resource Management Procedures

The archaeological review procedure, as it relates to development, requires close co-operation between the Engineering and Planning Department and other City of Sault Ste. Marie Departments, the staff of the Programs and Services Branch (Culture Programs Unit) of Ministry of Tourism and Culture, as well as both the development and the archaeological/historical research communities. In the case of all land-use alterations, the determination of whether or not there is a need for archaeological assessment will form part of the pre-consultation process between the development proponent and the City prior to the submission of an application.

An archaeological condition should be applied for any consent application that creates a new building lot (on land that is presently vacant) if:

- the application (or any part of it) is situated within the zone of archaeological potential, or
- the application contains or will directly affect a federal, provincial, or municipal historic landmark, monument, site or designated property or conservation district, battlefield cemetery, and industrial complexes of cultural heritage value.

Establishing these procedures will address the policies of the *Ontario Planning Act* and the related components of both the *Ontario* and *Canadian Environmental Assessment Acts*.

The new archaeological procedures will also apply to municipal development and/or infrastructure projects that involve construction, erection or placing of a building or structure. In addition, other activities such as site grading, excavation, removal of topsoil, or peat and the placing and dumping of fill; drainage works, except for the maintenance of existing municipal and agricultural drains, should be subject to the same.

In order to apply the new archaeological procedures on all public lands managed by the City, the Engineering and Planning Department should hold internal discussions with staff from other departments to establish protocols that ensure that in all appropriate circumstances, construction projects undertaken by those departments that are located in areas of archaeological potential, are subject to archaeological assessment prior to any land disturbing activity. Through such discussions, the Engineering and Planning Department will be better able to establish some guidelines on the kind of work that needs to be reviewed for possible archaeological concerns and work which would not require review.

6.3 The Planning Review Process: A Summary

Recommended guidelines for the approach used in the review process for all land disturbance applications within the City have been developed and are summarized below.

As part of the pre-consultation process, City staff will determine if an archaeological assessment is required for a proposed application by means of review of the archaeological potential mapping. Should any portion of the property fall within a zone of archaeological potential or should the property contain a previously registered archaeological site, the City will require that the applicant undertake an archaeological assessment as a supportive document for planning application.

The development applicant will then retain a licensed archaeologist to conduct a Stage 1 or Stage 1-2 archaeological assessment of the entire subject property, not simply the portion(s) that falls within the zone of archaeological potential. All work conducted by the licensed archaeologist must conform to the standards set forth in the most current (draft or approved) Archaeological Assessment Technical Guidelines authorized by the Ministry of Tourism and Culture.

In the case of rural severances, only the land disturbance footprint need be assessed unless that footprint exceeds 50% of the area of the created lot. In the case that the footprint of land disturbance exceeds 50% of the lot area, the entire lot upon which construction is proposed will be assessed.

Once the archaeological assessment, consisting of background research and field survey (if required), has been completed, the archaeological consultant must submit a report to the Programs and Services Branch of the Ministry of Tourism and Culture.

The Ministry of Tourism and Culture may copy the City on any compliance letter issued to an archaeological consultant. This letter will serve to notify both parties that all provincial concerns with respect to archaeological resource conservation and archaeological licensing have been met. Upon receipt of this letter and supporting documentation (e.g., copies of archaeological site registration forms and reports) from the archaeological consultant, the City may then clear the planning application of any further archaeological concern.

The following wording for a standard archaeological condition should be used in planning agreements, building permits, site alteration permits, engineering agreements, OHA approvals or any other document where the need for an archaeological assessment has been identified. This wording shall be amended from time to time to reflect necessary changes.

SUGGESTED WORDING FOR THE ARCHAEOLOGICAL CONDITION

The proponent shall carry out an archaeological assessment of the entire development property and mitigate, through preservation or resource removal and documentation, adverse impacts to any significant archaeological resources found. No demolition, grading or other soil disturbances shall take place on the subject property prior to the approval authority confirming that all archaeological resource concerns have met resource conservation requirements.

The property will be assessed by a consultant archaeologist, licensed by the Ministry of Tourism and Culture under the provisions of the *Ontario Heritage Act* (R.S.O. 1990); and any significant sites found will be properly mitigated (avoided or excavated), prior to the initiation of construction, servicing, landscaping or other land disturbances.

The consultant archaeologist will submit 1) 1:10,000 scale mapping that clearly outlines the limits of the property subject to assessment and the locations of any new archaeological site locations; and 3) a copy of the relevant assessment report(s) all to the Engineering and Planning Department.

The following standard clauses (amended from time to time) must be included in all assessment reports, as required by the Ministry of Tourism and Culture:

(a) In the event that deeply buried or previously undiscovered archaeological deposits are discovered in the course of development or site alteration, all work must immediately cease and the site must be secured. The Cultural Program Branch of the Ministry of Tourism and Culture (416-314-7123) and the City of Sault Ste. Marie Engineering and Planning Department must be immediately contacted.

(b) In the event that human remains are encountered, all work must immediately cease and the site must be secured. The Sault Ste. Marie Police, the Registrar of Cemeteries Regulation Section of the Ontario Ministry of Consumer Business Services (416-326-8494), the Cultural Program Branch of the Ministry of Tourism and Culture (416-314-7123), and the City of Sault Ste. Marie Engineering and Planning Department must be immediately contacted.

The following information should also be provided to applicants concerning the archaeological assessment process.

THE ASSESSMENT PROCESS

A **Stage 1** assessment consists of background research concerning registered sites on the subject lands or within close proximity, as well as the environmental character of the property and its land use history. A **Stage 2** assessment consists of field survey to document any sites that may be present on a property. It should be noted that completion of an archaeological field assessment of a particular development property, no matter how rigorous, does not fully guarantee that all significant archaeological resources on that property will be identified prior to land disturbance. This is particularly the case in areas where processes such as filling, flooding or erosion have resulted in the burial of original ground surfaces, or with respect to isolated human burials that are typically small features that can escape detection. **Stage 3** investigations are designed to secure a detailed understanding of the nature and extent of a site and may involve complete or partial

systematic surface collection and test excavation. **Stage 4** undertakings comprise extensive excavation; comparative analysis and interpretation of content and contextual information.

If one or more significant archaeological sites that will require further mitigation are documented during the course of an assessment, it is generally possible to secure partial clearance for the property, in that the archaeological requirement may be removed from the balance of the subject lands not encompassed by the archaeological site(s) and suitable protective buffer zones. Although the final report of comprehensive archaeological mitigation work may take many months to complete, final clearance for the property may be available upon the archaeological consultant completing the fieldwork, submitting a brief executive summary to Ministry of Tourism and Culture staff and the proponent providing information regarding any outstanding concerns (e.g., commitment to production of the final report).

Should a proponent choose not to proceed with all necessary assessment and/or site mitigations prior to, and in support of the application, the completion of these activities to the satisfaction of Ministry of Tourism and Culture and the Engineering and Planning Department must be made a condition of draft approval.

6.4 The Municipal Project Review Process

In order to ensure consistency of approach with that of the development industry and to follow best practice, municipal projects, whether or not they fall under the *Environmental Assessment Act,* will be subject to the same process. Should the project impact areas of archaeological potential, the completion of an assessment and any necessary mitigation, subject to the approval of Ministry of Tourism and Culture, will be required.

6.5 Assessing Resource Impacts and Identifying Mitigation Strategies

If no adverse impacts to an archaeological resource will occur, then development may proceed as planned.

Should a significant archaeological resource be discovered during the course of an assessment, the development proponent, the archaeological consultant, Ministry of Tourism and Culture, and the City of Sault Ste. Marie as the approval authority must assess the potential impact to an archaeological resource and arrive at rational decisions regarding integration of that resource into the site or development plan or the implementation of mitigative options.

The review process at this stage requires the input of the proponent in order to make the decisions regarding potential adverse effects to a site. Should a site be threatened, the two available options are to immediately integrate the site into the development plan such as through re-allocation of open space/community park space or provide for mitigative procedures. The decision-making process with respect to mitigative procedures may be subject to a cost benefit analysis where the mitigative option involves input from all of the stakeholders (i.e., the City, Ministry of Tourism and Culture, the heritage community and the development proponent - either public sector or private sector).

The Aboriginal community must also be consulted throughout the site mitigation process. This is particularly true in the case of Late Woodland sites, which regardless of their size have the potential to contain human burials. It is often assumed that the Aboriginal community that is geographically closest to the project is the most suitable group with whom to consult, particularly when the issues at stake are those of archaeological resources and human remains. Under all circumstances, however, there should be an effort to identify the

group or more likely groups that are the most appropriate (on cultural-historical grounds) to act as the designated descendants of those who occupied the project area in the past, and who are willing to participate and ensure that cultural heritage remains are treated in an appropriate and seemly manner. This identification process is best achieved through negotiation with a variety of communities in order that they may themselves arrive at the final decision. It should also be noted that the Ministry of Tourism and Culture has issued new draft Standards and Guidelines for Archaeological Assessment, which includes a requirement for engagement with Aboriginal Communities for Stages 3 and 4 archaeological investigations on Aboriginal sites and recommended engagement before Stage 2. While these guidelines have not yet been finalized, such consultation is now expected by most Aboriginal communities.

In any situation, there are a number of mitigative options, including avoidance, modifications to construction techniques, and various degrees of documentation and/or excavation, as discussed below. Similarly, in all cases, thought should be given to the interpretive and educational potential of the site.

Detailed information regarding a site is frequently required in order to make a more accurate assessment of significance and to determine the potential for adverse effects. This may involve different levels of on-site investigations.

Many of the sites routinely encountered will prove to be of little or no significance and will not require further investigation, beyond the mapping, measuring and photographing of the surface attributes of the archaeological site that has already occurred during the course of the initial archaeological assessment.

Where more extensive archaeological mitigation is required, recommended mitigative options may take numerous forms, including:

- *Preservation*: the preferred mitigative option. Preservation may involve long-term protective measures such as project design changes (site avoidance) that integrate the resource within the overall development plan. To further avoid both accidental impact and intentional vandalism and looting, additional protective measures may include fencing, screening, or capping (only in special circumstances). The City must determine whether preservation is to occur on the landscape scale (i.e., areas of high cultural landscape heritage integrity combined with high archaeological potential are to be preserved as a whole), or at the scale of individual sites that are deemed to be particularly significant or sensitive (e.g., human burials).

- *Stabilization*: may be required in the case of eroding archaeological deposits. This may involve the salvage excavation of the eroding area and/or the construction of retaining walls or barriers.

- *Systematic Data Recovery*: involves the recovery of data from significant archaeological sites, when other mitigative options are not feasible. It includes a complete or partial systematic surface collection, excavation, or both; a comparative analysis and interpretation of content and contextual information; and production of an investigative report. This mitigation strategy ultimately results in the destruction of the archaeological site.

- *Monitoring*: monitoring may be undertaken (only in specific circumstances) to ensure that adverse impacts on archaeological sites which could not be predicted or evaluated prior to construction are addressed. Monitoring requires the presence of a licensed archaeologist during the construction phase of a project. This takes the form of scheduled site visits and on-call availability during a long term project.

All decisions regarding mitigative options or preservation strategies are subject to Ministry of Tourism and Culture review and approval.

The site preservation/avoidance option has both short- and long-term components. The short-term component involves both the redesign of the development plan (e.g., lot layouts, parkland, road, and service alignments) and ensuring that the resource(s) in question are physically protected during construction by means of fencing or other visible barriers. The long-term protective measures can include the use of zoning by-laws or other conditions or orders for development that prohibit any future land use activities that might result in soil disturbance. For information regarding the preparation of a *Conservation Plan*, which is a document that details how an archaeological site can be conserved, the proponent and their consultant might consult with *InfoSheet #5*, *Heritage Impact Assessments and Conservation Plans*, Ministry of Tourism and Culture, 2005. Such a plan could only be prepared after a detailed Stage 3 investigation of the site that is necessary to define the nature and extent of the site.

7.0 PLANNING RECOMMENDATIONS

In light of the preceding considerations, the following recommendations are made:

1) That the policies attached as Appendix A be incorporated into the Official Plan.

2) It is recommended that the archaeological potential mapping be used in determining requirements for archaeological assessments.

3) It is recommended that the Engineering and Planning Department work with City departments to establish protocols that ensure that in all appropriate circumstances, construction projects undertaken by developers, ratepayers and the City of Sault Ste. Marie that may impact archaeological resources on public lands (e.g., trail, playground, playing field, public washroom, parking lot construction, road widening/extension, trunk sewer and watermain construction, stormwater management facility construction, municipal building and structure construction, etc.) and which are located in areas of archaeological potential, are subject to archaeological assessment prior to any land disturbing activity.

4) It is recommended that when there are any new designations of heritage properties (which include constructions dating before 1920) under Part IV of the Ontario Heritage Act, that the property footprint be added to the final potential mapping (Appendix B). If the newly designated property is surrounded by greenfields, the newly designated property should be buffered by 100 metres for archaeological potential.

5) No Stage 4 archaeological investigations on Aboriginal sites should be undertaken within the City of Sault Ste. Marie without first filing an Aboriginal consultation report with the Engineering and Planning Department.

   Such a report should contain a description of the engagement with the appropriate Aboriginal community(s) and copies of any documentation arising from the process. The report must include a rationale for identifying which communities were engaged, a description of the engagement procedures were, dates of when the engagement occurred, documentations of the strategies undertaken to incorporate the input of the Aboriginal community(s) in to the fieldwork (e.g., monitoring) and a description of the process for reporting results to the community(s).

6) Archaeological assessment reports should contain advisories on the steps to be taken should unanticipated deeply buried archaeological remains or human remains be found on a property during construction activities.

   The advisory should note that Ministry of Tourism and Culture should be notified immediately. It should further specify that if human remains are encountered during construction, the development proponent should immediately cease work, and contact the police, Ministry of Tourism and Culture, and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Business Services. The City's Engineering and Planning Department must also be contacted.

   If the burials are determined to be of Aboriginal origin, the relevant Aboriginal communities must also be notified and their assistance sought. In any case in which deeply buried archaeological remains (including burials) are encountered, all construction activity in the vicinity of the discovery must be postponed until an appropriate mitigation strategy is identified and executed.

7) In order to ensure the long term viability of the Archaeological Master Plan, it should be subject to comprehensive review on a five year basis by a licensed archaeologist and should be carried out in co-ordination with the five year review of the City's Official Plan.

   Such a review should consider any changes in Ministry of Tourism and Culture criteria for site significance, any data gaps in the site inventory, changes required to the archaeological potential modeling, and all procedures and guidelines related to the implementation of the Plan. Any review regarding site significance should involve a synthesis of archaeological knowledge resulting from the implementation of this plan to define what kind of sites require excavation to further our knowledge of the pre-contact and post-contact past of the City.

8) Procedures outlined in the Memorandum of Understanding between the Ministry of Tourism and Culture and the City of Sault Ste. Marie should be followed regarding the sharing of information concerning archaeological site locations.

   As defined in the Memorandum of Understanding between the Ministry of Tourism and Culture and the City of Sault Ste. Marie, information concerning site locations can be freely used for internal purposes. Such information can only be provided externally for a given property to a party or agent of the party holding title to that property. Any other external requests to the City for information about site locations must be referred to the Ministry of Tourism and Culture. This Memorandum of Understanding should be updated regularly.

9) It is recommended that the City develop and adopt, in consultation with the Ministry of Tourism and Culture, relevant Aboriginal communities, other agencies, landowners, and the public, a "Contingency Plan for the Protection of Archaeological Resources in Urgent Situations."

   The Contingency Plan should specify that if deeply buried archaeological remains are found on a property during construction activities, work should cease, and then the Ministry of Tourism and Culture and the Engineering and Planning Department must be notified immediately. It should further specify that if human remains should be encountered during construction, the proponent should immediately cease work, and contact the City of Sault Ste. Marie Police, the City of Sault Ste. Marie Engineering and Planning Department, the Ministry of Tourism and Culture and the Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Commercial Relations. As noted above, it is illegal for any person or agency to alter an archaeological site without a license. This in effect offers automatic protection to all archaeological sites and the City must exercise due diligence

in all contexts, including emergency situations, to ensure that archaeological features are protected from disturbance of any nature.

Such a Contingency Plan should address:

- a notification process, involving the City of Sault Ste. Marie, the Ministry of Tourism and Culture and any other communities or agencies identified during the consultation process;
- an investigation and reporting process undertaken by a licensed archaeologist;
- financial responsibility, structured according to the ability to pay of public sector, private sector, and individual land owners. In the case of individual land owners, it may be necessary to establish a contingency fund;
- the need to establish greater latitude and flexibility in civic financial and other assistance for private conservation activities. Inducements of various types, extended to the private owner/developer in the community interest, are often seen as the quid pro quo for regulatory restrictions (Minister's Advisory Committee 1992:44). While recognizing that the City may be concerned about the potential effects of property tax inducements (e.g., rebates, temporary assessment freezes, etc.) on existing property assessments and tax revenues, it is suggested that the feasibility of such measures merits further consideration during consultation for the Contingency Plan.

10) The City of Sault Ste. Marie should implement a public awareness initiative by which the general public might be made more knowledgeable of the wide range of archaeological resources present within the City.

    A heightened public awareness of the importance and fragility of archaeological resources can serve as an additional and effective means of protecting those resources. The City should support any programs and endeavours related to involving the public in the investigation of the City's archaeological record.

11) The City of Sault Ste. Marie should consider preparing both an accurate and comprehensive inventory of the archaeological collections currently held by museums and consulting archaeologists and a guideline encouraging the curation of material from archaeological sites within Sault Ste. Marie at local museums.

    There is an identified need to co-ordinate the disposition of artifacts recovered from archaeological sites within the City. It is generally preferable that material from a particular archaeological site is ultimately deposited in a public institution located in the same community, provided that adequate storage and curatorial facilities for both artifacts and field records are available, that the institution's collections are accessible to researchers, and that the material is not transferred or disposed of without provincial approval.

    While many of the existing museum facilities and other agencies such as the Sault Ste. Marie Museum within the City already have collections of material, or may be willing to accept additional material, a large amount of material from sites in the City is currently curated elsewhere. Collections derived from the activities of private archaeological consulting firms, for the most part, remain in the care of those firms. It is recommended that the City consider preparing an accurate and comprehensive inventory of the collections currently held by museums and consulting archaeologists.

    Should the City deem it desirable to establish a guideline encouraging the curation of material

from archaeological sites within Sault Ste. Marie at local museums (existing or proposed), researchers active in the City could be made aware of this City interest.

In order to implement such a process, it would first be necessary to ensure that such institutions possess adequate storage and curatorial facilities, and management policies. Should the City, in consultation with the local museums, wish to adopt a comprehensive policy concerning the curation of artifacts from archaeological sites within the City, and incorporate any such policy within the overall implementation of the archaeological master plan, it is recommended that any such curatorial facilities (existing or proposed) and their practices meet current professional standards with respect to such issues as climate control, security, and researcher access.

As the curation of archaeological materials on Provincial lands falls entirely within the regulatory framework of the Province, the City should request financial assistance from the Province for the study and implementation of the public curation of materials found within its jurisdiction.

8.0 REFERENCES CITED

Canadian Environmental Assessment Agency
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APPENDIX A: PROPOSED OFFICIAL PLAN POLICIES

Goal*:*

To recognize, protect, and conserve archaeological sites within the City.

Policies:

Archaeological Potential Study

7.4.1 An Archaeological Potential Study has been completed for the City of Sault Ste. Marie and the following policies will direct use of the study.

Required Studies

7.4.2. Upon receiving information that lands proposed for *development* may include *archaeological resources* or constitute an *area of archaeological potential,* Council will not take any action to approve the *development,* and the owner of such land will be requested to have studies carried out at the owner's expense by *a licensed archaeologist* to:

a) survey and assess the property;
b) assess the impact of the proposed *development*;
c) indicate methods to mitigate any adverse impact of the proposed *development* on any *archaeological resources,* including methods of recovery and preservation;
d) comply with current Ministry of Tourism and Culture standards and guidelines for consulting archaeologists; and,
e) provide a compliance letter issued by the Province for any completed archaeological study.

Conservation of Archaeological Resources

7.4.3. The City will encourage the conservation of *archaeological resources* as may be identified by the City, the Province or other group or agency, and will continue to enforce municipal and provincial legislation with respect to the discovery of items of archaeological or historic interest on a property.

Designation of Sites

7.4.4. The City intends to cooperate with the Provincial Government to designate archaeological sites in accordance with the Ontario Heritage Act.

Locations Confidential

7.4.5. It is the policy of the City to keep confidential the existence and location of archaeological sites to protect against vandalism, disturbance, and the inappropriate removal of resources, as per the Ministry of Tourism and Culture and the City of Sault Ste. Marie data sharing agreement.

Provincial Approval

7.4.6. All archaeological assessment reports must be reviewed and a compliance letter issued by the province and a copy of the assessment report will be provided and held by the City for information purposes.

Emergency Protection of Resources

7.4.7. A contingency plan must be prepared, with the advice of a licensed archaeologist and/or the Ministry of Tourism and Culture and adopted by by-law, for emergency situations to protect *archaeological resources on* accidental discoveries or under imminent threat(s).

Burial Sites

7.4.8. Where burial sites are encountered during any excavation or other action, the provisions of the Cemeteries Act and its regulations will apply. Where there are Aboriginal burials, they will be addressed by consultation with all relevant Aboriginal communities.