

Stage I Archaeological Assessment

Part Lot 20, Concession IV City of Ottawa (Former Township of March / Goulbourn Regional Municipality of Ottawa-Carleton)

Submitted to
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1 Introduction

Ian Hember was contracted by Robin Doull to conduct a Stage I archaeological assessment for the proposed subdivision on Lot 20, Concession IV, at 2050 Dunrobin Road near Constance Lake in the City of Ottawa (Figure 1, Figure 2).

The assessment, including background research and field survey, was carried out by Ian Hember under archaeological licence P154, issued to Mr Hember, in accordance with the Ontario Heritage Act (2005). Permission to access the property in order to carry out the activities necessary to complete the assessment was granted in October 2009. The property was visited by Ian Hember in November 2009. The weather was sunny but cold, and small scattered patches of snow were observed.

This report presents the results of the Stage I archaeological assessment and makes a number of recommendations. It was prepared by Ian Hember.

2 Physical Description of the Property

2.1 Regional Physiographic History

The Ottawa area emerged from the Wisconsin Ice Cap around 12,000BP. The immense weight of the ice had compressed the earth's crust significantly; almost immediately upon the retreat of the glacier, seawater from the Atlantic Ocean flowed into what is now eastern Ontario, western Quebec and parts of New England and New York State. The resulting body of water was known as the Champlain Sea. (Laliberté, 1998: 5-7)

In the first few thousand years following deglaciation, elastic isostatic rebound pushed the earth's crust rapidly upwards. Estimates place the yearly shift in surface level in the Ottawa Valley at several dozen metres per year. The ground level was effectively rising up out of the sea, pushing the saltwater back into the ocean and exposing new land. (Laliberté, 1998: 6-8)

As the glacier retreated, it gave off immense volumes of meltwater which flowed into the lowlands to the south. This torrent of meltwater, combined with the rising ground levels, both shrank and desalinated the Champlain Sea. The sea was transformed from a vast, saline oceanic environment in 12,000BP to a smaller brackish sea by 10,000BP to a much smaller freshwater lake called Lampsilis Lake by around 9,800BP. The rivers in the region – the Ottawa and the Rideau – are the remains of the channels through which the Champlain Sea and the proglacial lakes drained to the Atlantic via the St Lawrence. (Laliberté, 1998: 6ff)

2.2 Physiography, Topography and Soils

The subject property lies within the physiographic region described as the Ottawa Valley Clay Plains by Chapman and Putman (1984: 205ff.). These plains are characterized by deep grey clay subsoils intercut with bands of bedrock or sand. Atop these, the soil is typically a silty clay loam. Occasional bedrock outcrops of varying size are common in the region.

The most significant physiographic feature in the immediate vicinity of the subject property is Constance Lake to the northeast, between the subject property and the Ottawa River. The lake is shallow, marginally eutrophic to mesotrophic and can suffer from poor water quality, including

contamination with toxin-producing cyanobacteria. Several small creeks and streams drain the immediate area into the lake, including one stream which forms part of the boundary of the subject property.

The property and the surrounding region are quite flat, having been part of the bottom of the Champlain Sea and Lampsilis Lake. In this part of the Ottawa valley, the river was formerly much wider, and laid down a broad flat course before shrinking to its present much narrower channel.

2.3 Vegetation

The subject property lies well within the Upper St Lawrence subregion of the Great Lakes - St Lawrence Forest Region with a natural vegetation cover of southern deciduous hardwoods. (Atlas of Canada, n.d.) the property has been farmed since the early nineteenth century and bears the signs of this activity. The southern portion of the property, adjacent to Dunrobin Road, is a mix of grasses, weeds and scrub brush. Around the old farmhouse and barn a few tall trees remain. Further north, toward Constance Lake, the scrub brush predominates and small trees stand.

2.4 Disturbances

Neither the Land Registry nor any air photograph dating from as early as the 1940s suggest any land use other than agriculture. The farmhouse adjacent to Dunrobin Road has been demolished, and the ground where it stood is uneven and machine-altered, though the stratigraphic extent of the demolition of the house is uncertain. A terminated gas pipe was found to have been recently flagged, suggesting either a gas main running through the property parallel to Dunrobin Road, or a gas feeder line running into the property from a main beneath the road. No other disturbances are known.

3 History of the Property

3.1 Aboriginal History

During much of the Palaeo-Indian period, the Ottawa area was covered by the Champlain Sea, making human occupation impossible. The Sea gradually receded and by the Late Palaeo-Indian Period, most of the region was dry land. Human habitation during this time most frequently took the form of small camps on the shores of the Champlain Sea and subsequent bodies of water. As the sea level dropped and more dry land became exposed, humans would move their camps to remain close to the water so as to exploit the marine resources necessary to their survival. (Archaeological Services, Inc and Geomatics International, Inc, 1999: 7ff)

Archaeological evidence for Aboriginal presence in the region remains scant. There are no registered archaeological sites related to Aboriginal populations within a 2km radius of the subject property. At the time of the preparation of the archaeological master plan for the Regional Municipality of Ottawa-Carleton (now the City of Ottawa), fewer than 50 such sites were known to exist in the entire municipality. The earliest of these dates to the Early Archaic Period, ca 6,000BP. (Archaeological Services, Inc and Geomatics International, Inc, 1999: 7ff)

3.2 Euro-Canadian History

The subject property is made up of part of Lot 20, Concession IV, in the former Township of March (later amalgamated with Goulbourn), in Carleton County. Carleton County was part of the 1783 Crawford Purchase and was created a county in 1800. Like much of eastern Ontario, Carleton was first settled in the late 18th and early 19th centuries, largely by United Empire Loyalists. The oldest settlements in the region were along the Ottawa and Rideau rivers.

The land registry for Lot 20 indicates that the property was divided into northeast and southwest sections at the time of its initial patent in 1828. An arm of Constance Lake served as a clear physical boundary between the two sections of the Lot. The subject property is within the southwestern section of Lot 20, corresponding to approximately one quarter thereof. The southwest half of the Lot was patented to William Rea by the Crown in June 1828. The next entry in the land registry is for June 1901 when the property passed from Robert Phillips to John Phillips by means of a will. While these two records occupy adjacent lines in the register, there is an obvious *lacuna* in the ownership records for the property.

The gap in records is supported by the 1879 Belden map of Carleton County, which indicates that the entire southwest half of Lot 20 was owned by Thomas Armstrong in this year. Armstrong does not appear in the land registry at all. The Belden map also depicts a farmhouse near Dunrobin Road on Lot 20, but it would appear to be northwest of the farmstead observed during the field survey, closer to Constance Lake Road. Air photographs indicate another farmstead at this location. The land registry records a number of subdivisions of the property during the 20th century, with a number of smaller farms established, approximately 20-25 acres (8-10 hectares) each.

Neither the land registry nor the historic map provide any information on when the property was bisected by the railroad. The subject property lies is bounded on the northeast by a railway line that cuts diagonally through Lot 20's southwest half.

4 Archaeological Potential

4.1 Previous Archaeological Research

There is only one archaeological site registered with the Ministry of Culture's Ontario Archaeological Sites Database within a radius of 5km: the O'Hara Site (BiFx-8), at 1775 Dunrobin Road. It is a scatter of 19th century artifacts over the top of a low sandy knoll. There are no registered First Nations archaeological sites anywhere in the area.

In 1999, the *Archaeological Resource Potential Mapping Study of the Regional Municipality of Ottawa-Carleton* (typically referred to as the archaeological master plan) was prepared on behalf of the municipality. It presents at a scale of 1:10,000, a detailed map of areas of known archaeological potential. This information has been incorporated into the City of Ottawa's geographic information system (GIS), and is presented in Figure 3. Areas of archaeological potential are shaded green. Approximately 80% of the subject property has been identified in the master plan as having high archaeological potential.

The model uses the following criteria to determine archaeological potential:

- Known historic features (eg. inns, roads, bridges, mills, railroads) are surrounded by a 100m buffer of high archaeological potential
- Major river banks are buffered by a zone of high archaeological potential 300m wide
- Wetlands are considered to be low potential
- The margins of wetlands are considered to be high potential
- Stream banks are considered to be high potential
- Ancient waterways, eskers and drumlins are buffered with a 300m zone of high potential

However, the authors of the study excluded early farmsteads during the design phase of the potential model, since the precise locations of such farmsteads are difficult to establish. The authors also acknowledge that "...some sites will occur in areas where the model predicts they are not likely to occur; this and any such model must remain open to revision in light of new data." (Archaeological Services, Inc and Geomatics International, Inc, 1999: 35)

The map of archaeological potential provided by the proponent to the archaeologist, and based on the archaeological master plan, includes areas of high potential near Dunrobin Road, encompassing the abandoned and ruined farmstead, along the railroad, and in a wide swatch through the centre of the property, on account of a stream in the northeast corner. This map of archaeological potential is only partially consistent with observed conditions and historical documentation. Specifically, the *Standards and Guidelines for Archaeological Fieldwork* specify a buffer of 200m around secondary water sources such as the creek which forms part of the northeastern boundary of the property. The master plan only mapped a 100m buffer around the creek. Furthermore, the historic farmstead observed during the site visit was not incorporated into the master plan's map of archaeological potential. The *Standards and Guidelines* state that archaeological potential is confirmed in areas of early Euro-Canadian settlement and of early transportation routes, including in this case the railway and Dunrobin Road. Accordingly, since the property is approximately 400m long by 230m wide and given the presence of a secondary water course, two historic transportation routes and an historic farmstead, archaeological potential is confirmed for the property as a whole.

5 Conclusions and Recommendations

A Stage I archaeological assessment of the subject property was conducted for Robin Doull. A review of 19th century land use and local and regional physiography suggest that the subject property exhibits archaeological potential. The field survey indicated that significant portions of the property appear to be undisturbed other than by agricultural clearance in the 19th century, or by the construction of a farmhouse and associated buildings adjacent to the road, and the installation of a gas line thereto.

The archival materials associated with the preparation of this report will be curated by Ian Hember until such time as arrangements for their transfer to Her Majesty the Queen in right of Ontario or a suitable designate are made to the satisfaction of the property owner, the Ministry of Culture of Ontario and any other legitimate stakeholders.

The following recommendations are made:

1. Prior to any activities that will involve further disturbance of the soil, a Stage II archaeological assessment should be made of the property as a whole;
2. If any deeply buried archaeological material is discovered during construction activity, the Heritage Operations Unit of the Ministry of Culture should be immediately notified and construction activities should temporarily cease;
3. Should human remains be encountered during construction, all construction activities should immediately cease and the proponent should immediately contact the local Coroner as well as the Ministry of Culture and, if appropriate, the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Business Services.

These recommendations are subject to approval by the Ministry of Culture, and no further activities that could alter the ground surface are to be undertaken without the written concurrence of the Ministry of Culture.

**It is an offence to alter any archaeological site without the concurrence of the
Ministry of Culture.**

No activities such as excavation or grading that could result in the disturbance or destruction of archaeological resources are permitted without the written consent of the Ministry of Culture.

6 Works Cited

Archaeological Services, Inc. and Geomatics International Inc.

- 1999 *Archaeological Resource Potential Mapping Study of the Regional Municipality of Ottawa-Carleton Planning Report*. Archaeological Services Inc, Toronto.

Atlas of Canada

- n.d. *Forest Regions* (map). Geological Survey of Canada, Ottawa.

Chapman, L.J. and F. Putnam

- 1984 *The Physiography of Southern Ontario*. Ontario Geological Survey, Special Volume 2. Ontario Ministry of Natural Resources, Toronto.

Laliberté, M.

- 1998 *Archaeological Resource Potential – Federal Lands in the National Capital Region, Volume I*. National Capital Commission, Ottawa.

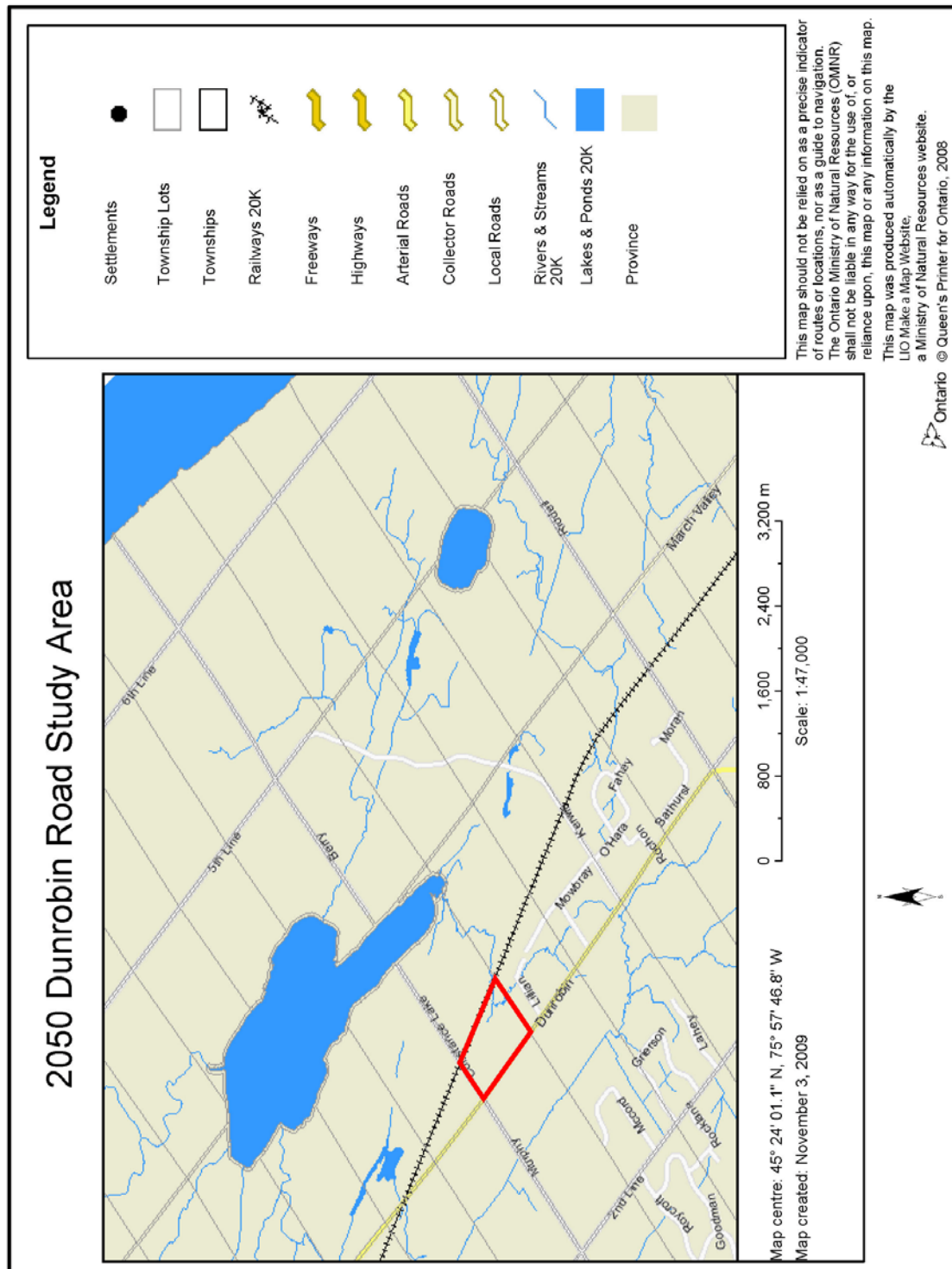


Figure 1: 2050 Dunrobin Road Study Area

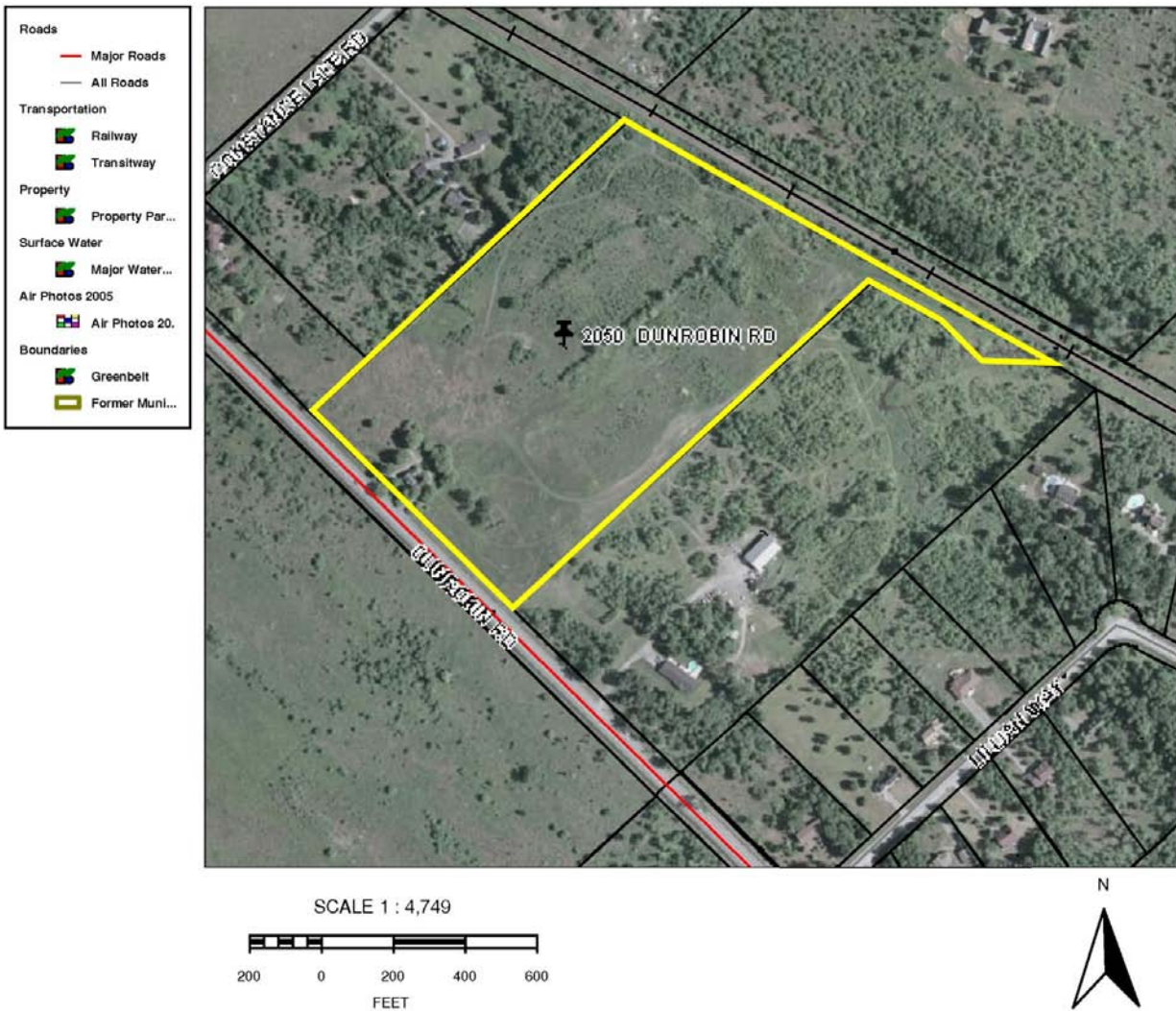


Figure 2: Aerial Photograph of the subject property provided by the proponent to the archaeologist. The boundaries of the subject property within Lot 20 are indicated by the yellow line

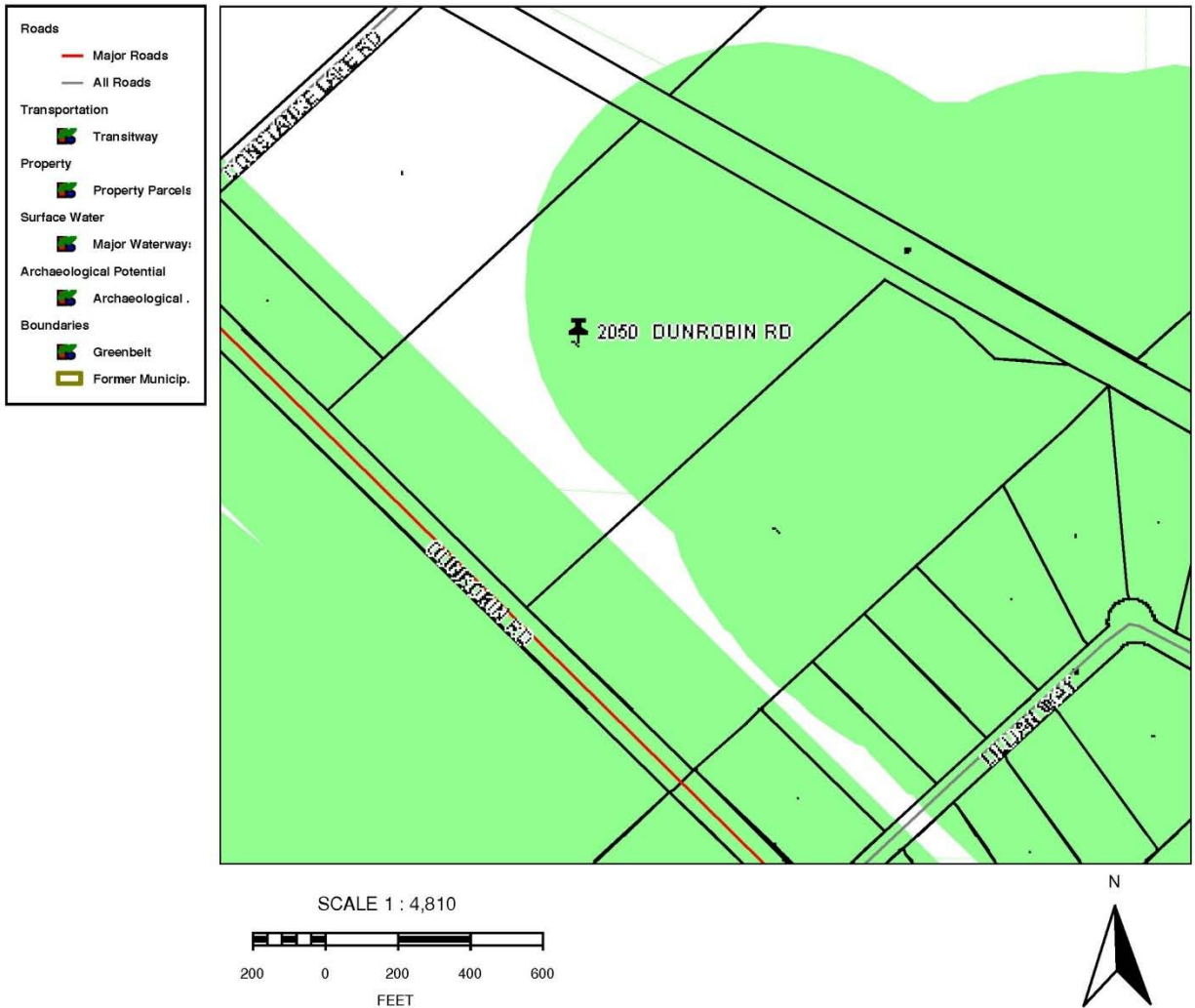


Figure 3: Archaeological potential highlighted in the City of Ottawa's Master Plan. Provided by the proponent

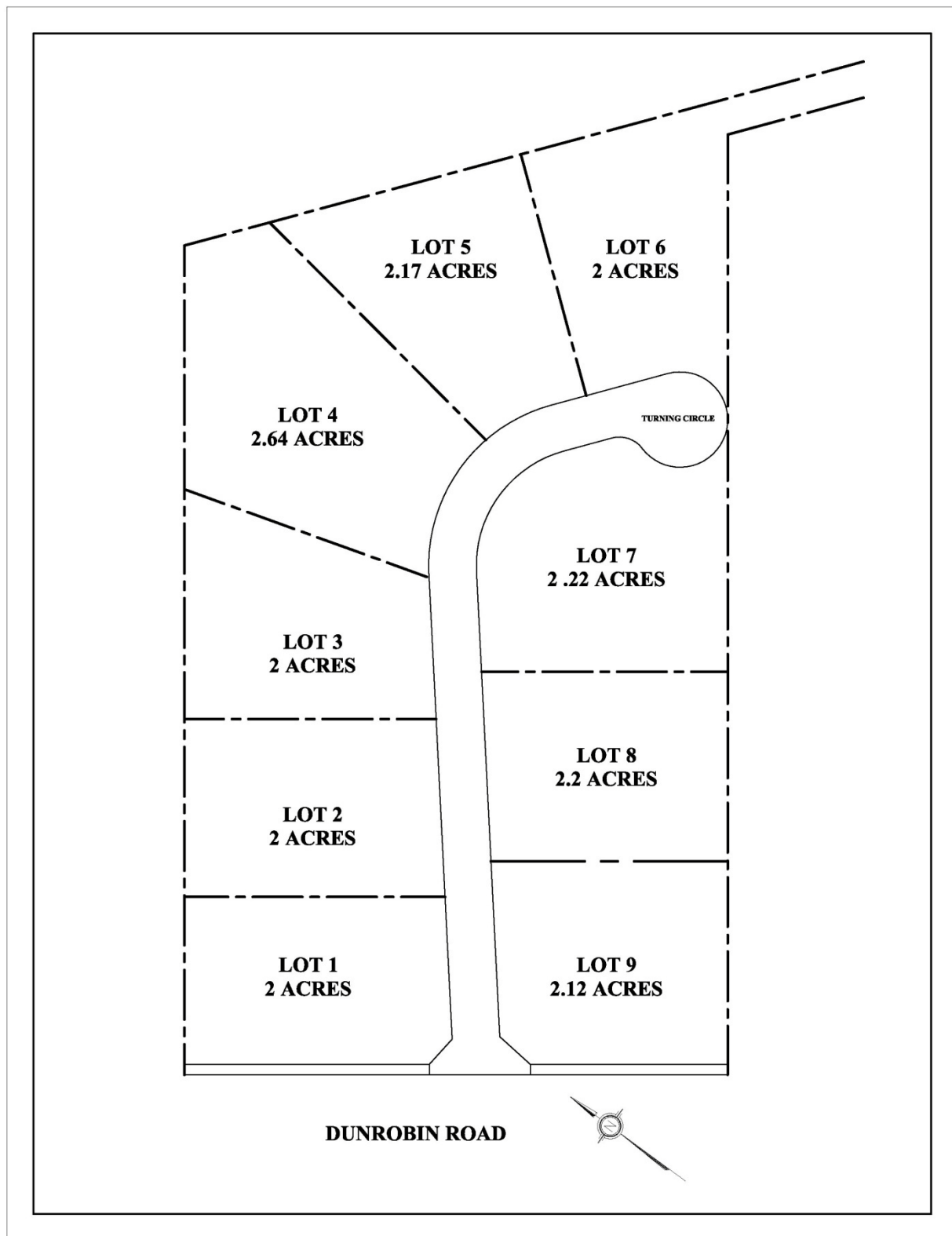


Figure 4: The proposed site plan provided by the proponent to the archaeologist. This map was provided without a scale.



Figure 5: Photograph of the subject property from Dunrobin Road facing northeast.



Figure 6: The laneway leading to the abandoned, ruinous farmstead along Dunrobin Road



Figure 7: The two standing buildings from the farmstead



Figure 8: A pile of railway ties and construction material from the demolition of the farmhouse



Figure 9: The subject property from the farmstead facing northeast