

TO Kevin Brown, P.Eng., Senior Municipal Engineer/Project Manager

DATE March 25, 2015

CC TMIG / The Municipal Infrastructure Group Ltd.

FROM Scott Martin, Ph.D., Project Archaeologist

PROJECT No. 1522930

WATER/WASTEWATER AND STORMWATER MASTER PLAN CLASS ENVIRONMENTAL ASSESSMENT, KING CITY, ONTARIO - HIGH-LEVEL CONSTRAINTS ANALYSIS, CRITERIA FOR EVALUATING ARCHAEOLOGICAL POTENTIAL

This memorandum provides the results of the high-level constraints analysis to support the completion of the Ontario Ministry of Tourism, Culture and Sport's checklist entitled: *Criteria for Evaluating Archaeological Potential: A Checklist for the Non-Specialist*, included in this memorandum.

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. In accordance with the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011) the following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites;
- Water sources:
 - Primary water sources (lakes, rivers, streams, creeks);
 - Secondary water sources (intermittent streams and creeks; springs; marshes; swamps);
 - Features indicating past water sources (e.g. glacial lake shorelines indicated by the presence of raised gravel, sand, or beach ridges; relic river or stream channels indicated by clear dip or swale in the topography; shorelines of drained lakes or marshes; and cobble beaches);
 - Accessible or inaccessible shoreline (e.g. high bluffs, swamps or marsh fields by the edge of a lake; sandbars stretching into marsh);
- Elevated topography (eskers, drumlins, large knolls, plateaux);
- Pockets of well drained sandy soil, especially near areas of heavy soil or rocky ground; Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases (there may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings);
- Resource areas including:
 - Food or medicinal plants;
 - Scarce raw minerals (e.g. quartz, copper, ochre or outcrops of chert);
 - Early Euro-Canadian industry (fur trade, mining, logging);
- Areas of early Euro-Canadian settlement and particularly early military or pioneer settlement; and
- Early historical transportation routes.





It is determined that significant portions of land within the King City community boundary retain moderate to high archaeological potential. This determination is based on the following:

- The presence of 10 recorded archaeological sites within the community boundary;
- The presence of the upper reaches of the East Humber River and its tributaries within the community boundary; and
- The presence of historic structures and transportation corridors that represents early Euro-Canadian settlement within the community boundary (Miles & Co. 1878).

Further to this preliminary determination, the October 2009 TRCA document, *King Township: Evaluation of Archaeological Potential in the Township of King,* argues for archaeological potential throughout the Township.

Given the likelihood of moderate to high archaeological potential within the King City community boundary, a Stage 1 Archaeological Assessment (Archaeological Background Study with Optional Property Inspection) is recommended prior to any development within the community boundary.

References

Government of Ontario. March 25, 2015. Robert von Bitter, personal communication, data request from the Ontario Archaeological Sites Database.

Government of Ontario. 2011. Standards and Guidelines for Consultant Archaeologists.

Miles & Co. 1878. Illustrated Historical Atlas of the County of York, The Township of West Gwillimbury & Town of Bradford in the County of Simcoe, Ont.

TRCA. 2009. King Township: Evaluation of Archaeological Potential in the Township of King.

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Ministry of Tourism and Culture

Programs & Services Branch 401 Bay Street, Suite 1700 Toronto ON M7A 0A7

Criteria for Evaluating Archaeological Potential A Checklist for the Non-Specialist

"Archaeological potential" is a term used to describe the likelihood that a property contains archaeological resources. This checklist is intended to assist non-specialists screening for the archaeological potential of a property where site alteration is proposed.

Note: for projects seeking a Renewable Energy Approval under Ontario Regulation 359/09, the Ministry of Tourism and Culture has developed a separate checklist to address the requirements of that regulation.

Desired Name			
Project Name Water/Wastewater and Stormwater Master Plan Class Environmental Assessment 1	for King C	ity. Ontario)
Project Location		10, 0111111	,
King City, Township of King, Ontario			
Proponent Name TMIG			
Proponent Contact Information			
Kevin Brown, P.Eng. Senior Municipal Engineer. Email: kbrown@tmig.ca Phor	ne: 905 73	8 5700 x 2	47
Known Archaeological Sites	Yes	Unknown	No
Known archaeological sites within 300 m of property			
Physical Features	Yes	Unknown	No
2. Body of water within 300 m of property If yes, what kind of water?			
a) Primary water source (lake, river, large creek, etc.)			
b) Secondary water source (stream, spring, marsh, swamp, etc.)			
c) Past water source (beach ridge, river bed, relic creek, ancient shoreline, etc.)			
Topographical features on property (knolls, drumlins, eskers, or plateaus)			
4. Pockets of sandy soil (50 m ² or larger) in a clay or rocky area on property			
 Distinctive land formations on property (mounds, caverns, waterfalls, peninsulas, etc.) 			
Cultural Features	Yes	Unknown	No
Known burial site or cemetery on or adjacent to the property (cemetery is registered with the Cemeteries Regulation Unit)			
7. Food or scarce resource harvest areas on property (traditional fishing locations, agricultural/berry extraction areas, etc.)			
8. Indications of early Euro-Canadian settlement within 300 m of property (monuments, cemeteries, structures, etc.)			
 Early historic transportation routes within 100 m of property (historic road, trail, portage, rail corridor, etc.) 			
Property-specific Information	Yes	Unknown	No
10. Property is designated and/or listed under the <i>Ontario Heritage Act</i> (municipal register and lands described in Reg. 875 of the <i>Ontario Heritage Act</i>)			
11. Local knowledge of archaeological potential of property (from aboriginal communities, heritage organisations, municipal heritage committees, etc.)			
12. Recent deep ground disturbance [†] (post-1960, widespread and deep land alterations)			

0478E (2011/07) Page 1 of 2

[†] Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to widespread and deep land alterations that have severely damaged the integrity of any archaeological resources. Deep disturbance may include quarrying or major underground infrastructure development. Activities such as agricultural cultivation, gardening, minor grading and landscaping are not necessarily considered deep disturbance. Alterations can be considered to be extensive or widespread when they have affected a large area, usually defined as the majority of a property.

Scoring the results:	
If Yes to any of 1, 2a, 2b, 2c, 6, 10, or 11 → high archaeological potential – assessment is required	
If Yes to two or more of 3, 4, 5, 7, 8, or 9	→ high archaeological potential – assessment is required
If Yes to 12 or No to all of 1 - 10	→ low archaeological potential – assessment is not required
If 3 or more Unknown	→ an archaeological assessment is required (see note below)

[†] **Note**: If information requested in this checklist is unknown, a consultant archaeologist licensed under the *Ontario Heritage Act* should be retained to carry out at least a Stage 1 archaeological assessment to further explore the archaeological potential of the property and to prepare a report on the results of that assessment. The Ministry of Tourism and Culture reviews all such reports prepared by consultant archaeologists against the ministry's Standards and Guidelines for Consultant Archaeologists. Once the ministry is satisfied that, based on the available information, the report has been prepared in accordance with those guidelines, the ministry issues an acceptance letter to the consultant archaeologist and places the report into its registry where it is available for public inspection.

0478E (2011/07) Page 2 of 2



TO Kevin Brown, P.Eng., Senior Municipal Engineer/Project Manager

DATE March 25, 2015

CC TMIG / The Municipal Infrastructure Group Ltd.

FROM Scott Martin, Ph.D., Project Archaeologist

PROJECT No. 1522930

WATER/WASTEWATER AND STORMWATER MASTER PLAN CLASS ENVIRONMENTAL ASSESSMENT, NOBLETON, ONTARIO - HIGH-LEVEL CONSTRAINTS ANALYSIS, CRITERIA FOR EVALUATING ARCHAEOLOGICAL POTENTIAL

This memorandum provides the results of the high-level constraints analysis to support the completion of the Ontario Ministry of Tourism, Culture and Sport's checklist entitled: *Criteria for Evaluating Archaeological Potential: A Checklist for the Non-Specialist*, included in this memorandum.

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. In accordance with the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011) the following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites;
- Water sources:
 - Primary water sources (lakes, rivers, streams, creeks);
 - Secondary water sources (intermittent streams and creeks; springs; marshes; swamps);
 - Features indicating past water sources (e.g. glacial lake shorelines indicated by the presence of raised gravel, sand, or beach ridges; relic river or stream channels indicated by clear dip or swale in the topography; shorelines of drained lakes or marshes; and cobble beaches);
 - Accessible or inaccessible shoreline (e.g. high bluffs, swamps or marsh fields by the edge of a lake; sandbars stretching into marsh);
- Elevated topography (eskers, drumlins, large knolls, plateaux);
- Pockets of well drained sandy soil, especially near areas of heavy soil or rocky ground; Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases (there may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings);
- Resource areas including:
 - Food or medicinal plants;
 - Scarce raw minerals (e.g. quartz, copper, ochre or outcrops of chert);
 - Early Euro-Canadian industry (fur trade, mining, logging);
- Areas of early Euro-Canadian settlement and particularly early military or pioneer settlement; and
- Early historical transportation routes.





It is determined that significant portions of land within the Nobleton community boundary retain moderate to high archaeological potential. This determination is based on the following:

- The presence of 27 recorded archaeological sites within the community boundary;
- The presence of the upper reaches of the Humber River and the East Humber River and their tributaries within the community boundary; and
- The presence of historic structures and transportation corridors that represents early Euro-Canadian settlement within the community boundary (Miles & Co. 1878).

Further to this preliminary determination, the October 2009 TRCA document, *King Township: Evaluation of Archaeological Potential in the Township of King,* argues for archaeological potential throughout the Township.

Given the likelihood of moderate to high archaeological potential within the Nobleton community boundary, a Stage 1 Archaeological Assessment (Archaeological Background Study with Optional Property Inspection) is recommended prior to any development within the community boundary.

References

Government of Ontario. March 25, 2015. Robert von Bitter, personal communication, data request from the Ontario Archaeological Sites Database.

Government of Ontario. 2011. Standards and Guidelines for Consultant Archaeologists.

Miles & Co. 1878. Illustrated Historical Atlas of the County of York, The Township of West Gwillimbury & Town of Bradford in the County of Simcoe, Ont.

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Ministry of Tourism and Culture

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Criteria for Evaluating Archaeological Potential A Checklist for the Non-Specialist

"Archaeological potential" is a term used to describe the likelihood that a property contains archaeological resources. This checklist is intended to assist non-specialists screening for the archaeological potential of a property where site alteration is proposed.

Note: for projects seeking a Renewable Energy Approval under Ontario Regulation 359/09, the Ministry of Tourism and Culture has developed a separate checklist to address the requirements of that regulation.

Project Name Water/Wastewater and Stormwater Master Plan Class Environmental Assessment	for Noblet	on, Ontario	
Project Location Nobleton, Township of King, Ontario			
Proponent Name			
TMIG			
Proponent Contact Information Wayin Propose Region Municipal Engineer Empile Management Contact Information	005.72	9 5700 - 2	47
Kevin Brown, P.Eng. Senior Municipal Engineer. Email: kbrown@tmig.ca Phor			
Known Archaeological Sites	Yes	Unknown	No
Known archaeological sites within 300 m of property			
Physical Features	Yes	Unknown	No
Body of water within 300 m of property If yes, what kind of water?			
a) Primary water source (lake, river, large creek, etc.)			
b) Secondary water source (stream, spring, marsh, swamp, etc.)	\boxtimes		
c) Past water source (beach ridge, river bed, relic creek, ancient shoreline, etc.)			
Topographical features on property (knolls, drumlins, eskers, or plateaus)			
4. Pockets of sandy soil (50 m ² or larger) in a clay or rocky area on property			
Distinctive land formations on property (mounds, caverns, waterfalls, peninsulas, etc.)			
Cultural Features	Yes	Unknown	No
Known burial site or cemetery on or adjacent to the property (cemetery is registered with the Cemeteries Regulation Unit)			
7. Food or scarce resource harvest areas on property (traditional fishing locations, agricultural/berry extraction areas, etc.)			
8. Indications of early Euro-Canadian settlement within 300 m of property (monuments, cemeteries, structures, etc.)			
 Early historic transportation routes within 100 m of property (historic road, trail, portage, rail corridor, etc.) 			
Property-specific Information	Yes	Unknown	No
10. Property is designated and/or listed under the <i>Ontario Heritage Act</i> (municipal register and lands described in Reg. 875 of the <i>Ontario Heritage Act</i>)			
11. Local knowledge of archaeological potential of property (from aboriginal communities, heritage organisations, municipal heritage committees, etc.)	\boxtimes		
12. Recent deep ground disturbance [†] (post-1960, widespread and deep land alterations)			
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0478E (2011/07) Page 1 of 2

[†] Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to widespread and deep land alterations that have severely damaged the integrity of any archaeological resources. Deep disturbance may include quarrying or major underground infrastructure development. Activities such as agricultural cultivation, gardening, minor grading and landscaping are not necessarily considered deep disturbance. Alterations can be considered to be extensive or widespread when they have affected a large area, usually defined as the majority of a property.

Scoring the results:	
If Yes to any of 1, 2a, 2b, 2c, 6, 10, or 11 → high archaeological potential – assessment is required	
If Yes to two or more of 3, 4, 5, 7, 8, or 9	→ high archaeological potential – assessment is required
If Yes to 12 or No to all of 1 - 10	→ low archaeological potential – assessment is not required
If 3 or more Unknown	→ an archaeological assessment is required (see note below)

[†] **Note**: If information requested in this checklist is unknown, a consultant archaeologist licensed under the *Ontario Heritage Act* should be retained to carry out at least a Stage 1 archaeological assessment to further explore the archaeological potential of the property and to prepare a report on the results of that assessment. The Ministry of Tourism and Culture reviews all such reports prepared by consultant archaeologists against the ministry's Standards and Guidelines for Consultant Archaeologists. Once the ministry is satisfied that, based on the available information, the report has been prepared in accordance with those guidelines, the ministry issues an acceptance letter to the consultant archaeologist and places the report into its registry where it is available for public inspection.

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FROM Scott Martin, Ph.D., Project Archaeologist

PROJECT No. 1522930

WATER/WASTEWATER AND STORMWATER MASTER PLAN CLASS ENVIRONMENTAL ASSESSMENT, SCHOMBERG, ONTARIO - HIGH-LEVEL CONSTRAINTS ANALYSIS, CRITERIA FOR EVALUATING ARCHAEOLOGICAL POTENTIAL

This memorandum provides the results of the high-level constraints analysis to support the completion of the Ontario Ministry of Tourism, Culture and Sport's checklist entitled: *Criteria for Evaluating Archaeological Potential: A Checklist for the Non-Specialist*, included in this memorandum.

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 - Accessible or inaccessible shoreline (e.g. high bluffs, swamps or marsh fields by the edge of a lake; sandbars stretching into marsh);
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- Resource areas including:
 - Food or medicinal plants;
 - Scarce raw minerals (e.g. quartz, copper, ochre or outcrops of chert);
 - Early Euro-Canadian industry (fur trade, mining, logging);
- Areas of early Euro-Canadian settlement and particularly early military or pioneer settlement; and
- Early historical transportation routes.





It is determined that significant portions of land within the Schomberg community boundary retain moderate to high archaeological potential. This determination is based on the following:

- The presence of three recorded archaeological sites within the community boundary;
- The presence of the upper reaches of the Holland River and its tributaries within the community boundary; and
- The presence of historic structures and transportation corridors that represents early Euro-Canadian settlement within the community boundary (Miles & Co. 1878).

Further to this preliminary determination, the October 2009 TRCA document, *King Township: Evaluation of Archaeological Potential in the Township of King,* argues for archaeological potential throughout the Township.

Given the likelihood of moderate to high archaeological potential within the Schomberg community boundary, a Stage 1 Archaeological Assessment (Archaeological Background Study with Optional Property Inspection) is recommended prior to any development within the community boundary.

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Project Name Water/Wastewater and Stormwater Master Plan Class Environmental Assessment f	for Schoml	herg. Ontar	io
Project Location	or benome	<u> </u>	10
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Schomberg, Township of King, Ontario			
Proponent Name			
TMIG			
Proponent Contact Information			
Kevin Brown, P.Eng. Senior Municipal Engineer. Email: kbrown@tmig.ca Phor	ne: 905 73	8 5700 x 24	47
Known Archaeological Sites	Yes	Unknown	No
Known archaeological sites within 300 m of property			
Physical Features	Yes	Unknown	No
2. Body of water within 300 m of property If yes, what kind of water?			
a) Primary water source (lake, river, large creek, etc.)	\boxtimes		
b) Secondary water source (stream, spring, marsh, swamp, etc.)			
c) Past water source (beach ridge, river bed, relic creek, ancient shoreline, etc.)			
 Topographical features on property (knolls, drumlins, eskers, or plateaus) 			
4. Pockets of sandy soil (50 m ² or larger) in a clay or rocky area on property			
5. Distinctive land formations on property (mounds, caverns, waterfalls, peninsulas, etc.)			
Cultural Features	Yes	Unknown	No
Known burial site or cemetery on or adjacent to the property (cemetery is registered with the Cemeteries Regulation Unit)			
7. Food or scarce resource harvest areas on property (traditional fishing locations, agricultural/berry extraction areas, etc.)			
8. Indications of early Euro-Canadian settlement within 300 m of property (monuments, cemeteries, structures, etc.)			
 Early historic transportation routes within 100 m of property (historic road, trail, portage, rail corridor, etc.) 			
Property-specific Information	Yes	Unknown	No
10. Property is designated and/or listed under the <i>Ontario Heritage Act</i> (municipal register and lands described in Reg. 875 of the <i>Ontario Heritage Act</i>)			
11. Local knowledge of archaeological potential of property (from aboriginal communities, heritage organisations, municipal heritage committees, etc.)			
12. Recent deep ground disturbance [†] (post-1960, widespread and deep land alterations)			

0478E (2011/07) Page 1 of 2

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Scoring the results:	
If Yes to any of 1, 2a, 2b, 2c, 6, 10, or 11 → high archaeological potential – assessment is required	
If Yes to two or more of 3, 4, 5, 7, 8, or 9	→ high archaeological potential – assessment is required
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0478E (2011/07) Page 2 of 2