
MUNICIPALITY OF HURON EAST

**CLASS ENVIRONMENTAL ASSESSMENT FOR THE
EXTENSION OF DUKE STREET AND CENTENNIAL DRIVE
(TOWN OF SEAFORTH)**

SCREENING REPORT



MUNICIPALITY OF HURON EAST

**CLASS ENVIRONMENTAL ASSESSMENT FOR
EXTENSION OF DUKE STREET & CENTENNIAL DRIVE
(TOWN OF SEAFORTH)**

SCREENING REPORT

September 15, 2015

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File No. 11151

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CLASS ENVIRONMENTAL ASSESSMENT FOR THE
EXTENSION OF DUKE STREET AND CENTENNIAL DRIVE
(TOWN OF SEAFORTH)**

SCREENING REPORT

1.0 INTRODUCTION AND BACKGROUND

1.1 Purpose of Report

The Municipality of Huron East has conducted a Class Environmental Assessment study process to examine the potential impacts associated with the extension of Duke Street and Centennial Drive in the northeast portion of Seaforth. The study process followed the procedures set out in the Municipal Class Environmental Assessment (Class EA) document, dated June 2000, as amended in 2007 & 2011. B. M. Ross and Associates Limited (BMROSS) was engaged to conduct the Class EA process on behalf of the proponent.

The purpose of this report is to document the planning and design process followed during the Class EA process. The report includes the following major components:

- An overview of the general project study area.
- A summary of the deficiencies associated with the existing road and servicing infrastructure.
- A description of the alternative solutions considered for resolving the defined problems.
- A synopsis of the decision-making process conducted to select a preferred alternative.
- A detailed description of the preferred alternative.

1.2 Environmental Assessment (Class EA) Process

Municipalities must adhere to the Environmental Assessment (EA) Act of Ontario when completing road, sewer or waterworks activities. The Act allows the use of Class Environmental Assessments for most municipal projects. A Class EA is an approved planning document which describes the process that proponents must follow in order to meet the requirements of the EA Act.

The Class EA approach allows for the evaluation of alternatives to a project, and alternative methods of carrying out a project, and identifies potential environmental impacts. The process involves mandatory requirements for public input. Class EA's are a method of dealing with projects which have the following important characteristics in common:

- They are recurring
- They are usually similar in nature
- They are usually limited in scale
- They have a predictable range of environmental effects
- They are responsive to mitigating measures

If a Class EA planning process is followed, a proponent does not have to apply for formal approval under the EA Act. The development of this study has followed the procedures set out in the Class EA. Figure 1.1 presents a graphical outline of the procedures.

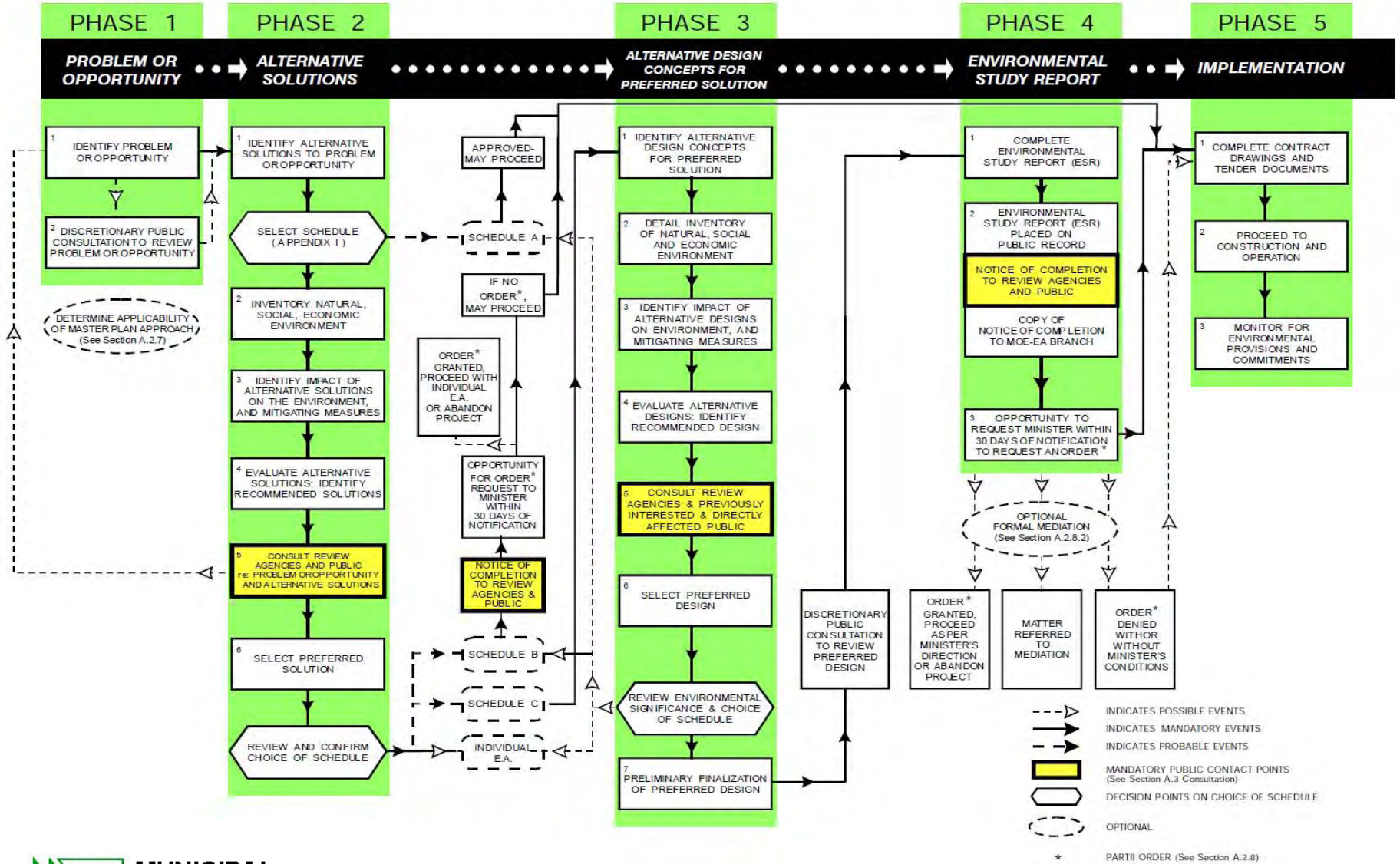
The Class EA planning process is divided into the following phases:

- Phase 1 - Problem identification.
- Phase 2 - Evaluation of alternative solutions to the defined problems and selection of a preferred solution.
- Phase 3 - Identification and evaluation of alternative design concepts in selection of a preferred design concept.
- Phase 4 - Preparation and submission of an Environmental Study Report (ESR) for public and government agency review.
- Phase 5 - Implementation of the preferred alternative and monitoring of any impacts.

Throughout the Class EA process, proponents are responsible for having regard for these principles of environmental planning:

- Consultation with affected parties during the process.
- Examination of a reasonable range of alternatives.
- Consideration of effects on all aspects of the environment.
- Application of a systematic methodology for evaluating alternatives.
- Clear documentation of the process to permit traceability of decision-making.

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



MUNICIPALITY OF HURON EAST
 CLASS EA FOR THE EXTENSION OF DUKE STREET AND
 CENTENNIAL DRIVE (TOWN OF SEAFORTH)
 CLASS EA PROCESS

DATE: SEPT. 9, 2015

PROJECT
 No. 11151

FIGURE
 No. 1.1

1.3 Classification of Project Schedules

Projects are classified to different project schedules according to the potential complexity and the degree of environmental impacts that could be associated with the project. There are three levels of schedules:

- Schedule A – Projects that are approved with no need to follow the Class EA process.
- Schedule A+ – Projects that are pre-approved but require some form of public notification.
- Schedule B – Projects that are approved following the completion of a screening process that incorporates Phases 1 & 2 of the Class EA process, as a minimum.
- Schedule C – Projects that are approved subject to following the full Class EA process.

The Class EA process is self-regulatory and municipalities are expected to identify the appropriate level of environmental assessment based upon the project they are considering.

1.4 Mechanism to Request a Higher Level of Environmental Assessment

Under the terms of the Class EA, the requirement to prepare an individual environmental assessment for approval is waived. However, if it is found that a project going through the Class EA process has associated with it significant environmental impacts, a person/party may request that the Municipality of Huron East voluntarily elevate the project to a higher level of environmental assessment. If the Municipality declines, or if it is believed that the concerns are not properly dealt with, any individual or organization has the right to request that the Minister of the Environment and Climate Change make an order for the project to comply with Part II of the Environmental Assessment Act which addresses individual environmental assessments. This request must be submitted to the Minister within 30 days of the publication of the Notice of Completion of the Class EA process.

2.0 CLASS EA FRAMEWORK

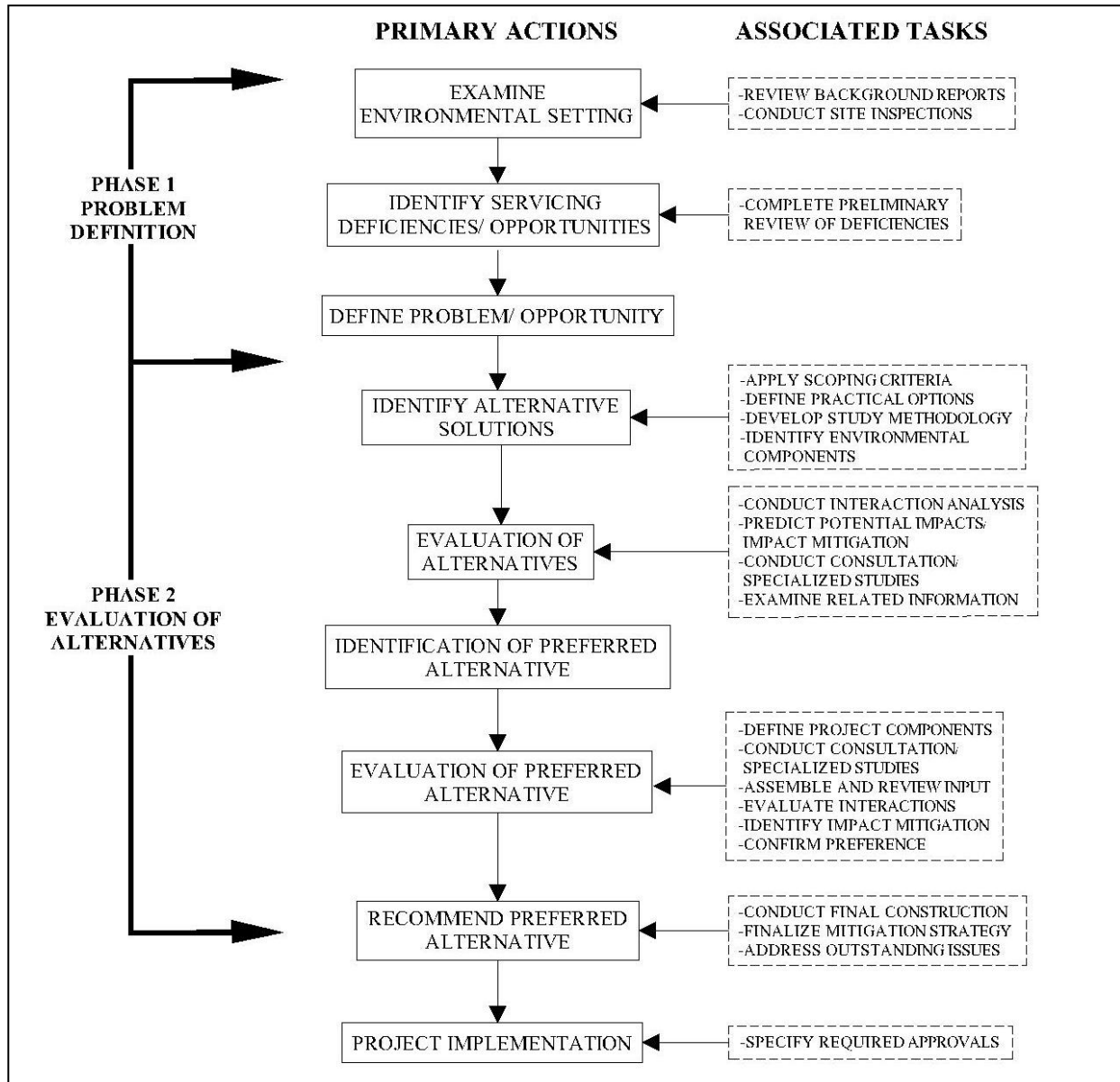
2.1 General Approach

The Municipality initiated a formal Class EA process in September 2013 to define and evaluate impacts associated with the extension of Duke Street and Centennial Drive in the northeast area of Seaforth. The associated investigations followed the environmental screening process prescribed for Schedule B projects under the MEA Class EA document. In general, the screening process required to conduct a Class EA incorporates these primary components:

- i. Background Review and Problem Definition
- ii. Identification of Practical Solutions
- iii. Evaluation of Alternatives
- iv. Project Recommendations and Implementation

The following sections of this report document the findings for each stage of the Class EA. Figure 2.1 illustrates the general tasks associated with the Schedule B screening process.

Figure 2.1
Class EA Schedule B Screening Process and Related Tasks



2.2 Background Review

A background review was carried out to characterize the project area and to identify those factors that could influence the selection of alternative solutions to the defined problems.

The background review for this Class EA process incorporated these activities:

- Development of a general description of the study area and the Municipality of Huron East.
- Assembly of information on the environmental setting and existing servicing.
- Review of previous studies and reports pertaining to the Town of Seaforth and the Duke Street and Centennial Drive area.
- Preliminary assessment of the identified deficiencies and potential remediation.

A desktop analysis of the project setting was completed as part of the background review. The following represents the key sources of information for this analysis:

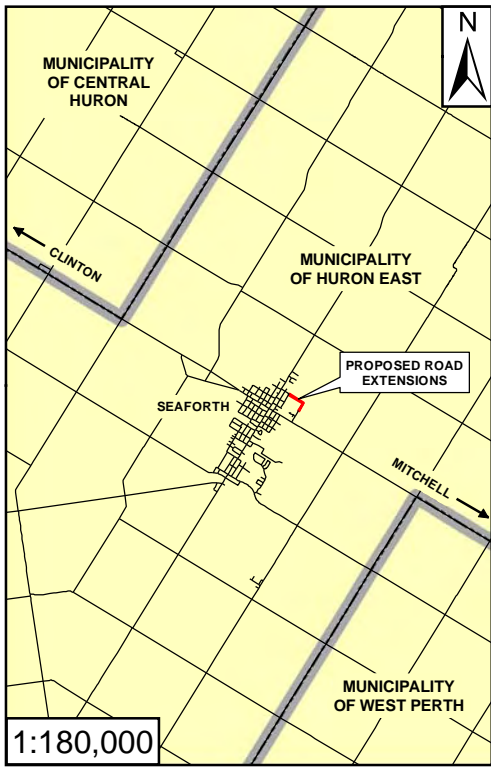
- B. M. Ross and Associates - Files and related studies.
- Ausable Bayfield Conservation Authority - Website and Mapping Services.
- Maitland Valley Conservation Authority – Website and Mapping Services.
- Ausable Bayfield Maitland Valley Source Protection Region. Website.
- Chapman, L.J. and Putnam, D.F. *The Physiography of Southern Ontario*.
- Government of Canada. Species at Risk Public Registry website.
- Ministry of Natural Resources - Natural Heritage Information Centre (website).
- Municipality of Huron East - Files and discussions with staff.

2.3 Project Study Area

a) Municipality of Huron East (Seaforth)

On January 1st, 2001, the Town of Seaforth, the Village of Brussels and the Townships of Grey, McKillop and Tuckersmith amalgamated to form the Municipality of Huron East. The new Municipality has a population of more than 9,000 permanent residents and a land base of approximately 670 km². Seaforth is the largest urban centre in the Municipality of Huron East and is situated on Highway No. 8 (Goderich Street) roughly halfway between the Town of Goderich and the City of Stratford. The settlement is centred on Highway No. 8 and County Road No. 12 and is bisected by Silver Creek to the east and the Bayfield River to the south. Seaforth is characterized as a low-density residential community, which incorporates a traditional downtown commercial core and a limited amount of highway commercial development along the Goderich Street corridor. The community also maintains several industrial operations, various smaller manufacturing and processing activities and a number of institutional facilities. In general, the scale and nature of development evident in Seaforth is consistent with smaller urban communities throughout Midwestern Ontario. Figure 2.2 illustrates the location of Seaforth within the Municipality of Huron East.

Filename: Z:\11151-Huron_East-Duke_and_CentennialProjects\GIS\Figure_2.2-General_Location_Plan.mxd 2015-06-15



LOOKING NORTH ON CENTENNIAL DRIVE EXTENSION



LOOKING NORTHEAST ON CENTENNIAL DRIVE EXTENSION



LOOKING SOUTHEAST ON DUKE STREET EXTENSION



LOOKING SOUTHEAST ON DUKE STREET EXTENSION



MUNICIPALITY OF HURON EAST
 CLASS EA FOR THE EXTENSION OF DUKE STREET
 AND CENTENNIAL DRIVE (TOWN OF SEAFORTH)
GENERAL LOCATION PLAN

DATE
 SEPT. 9, 2015
 SCALE
 AS SHOWN

PROJECT No.
 11151
 FIGURE No.
 2.2

b) Project Study Area

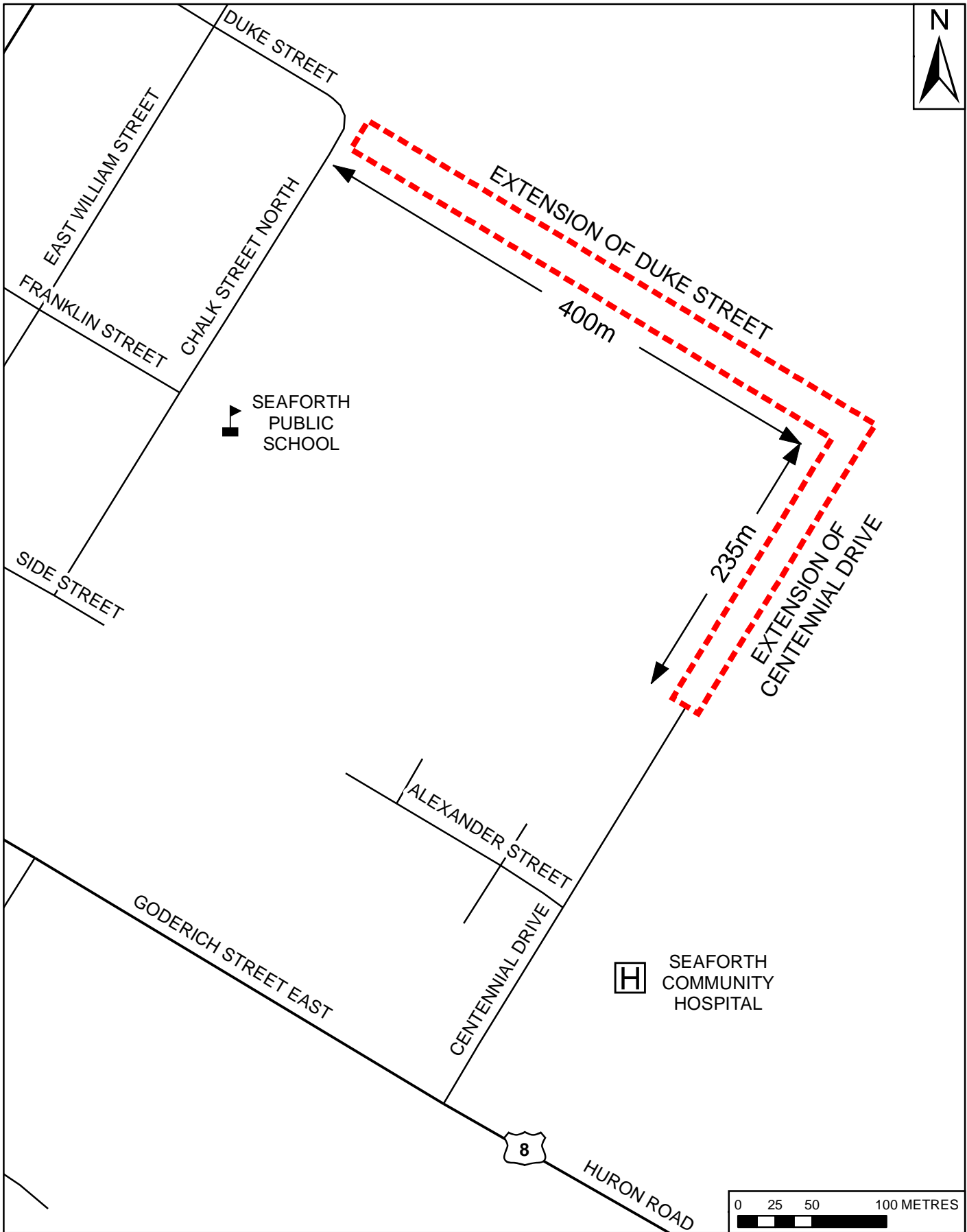
The project study area is situated in the northeast quadrant of Seaforth, north of Provincial Highway No. 8 (Goderich Street), and adjacent to the Seaforth Community Hospital. The lands which comprise a majority of the project study area are owned by the Seaforth Hospital Trust, an organization established in support of the Seaforth Community Hospital. A portion of the road extension lands, as well as the interior lands bounded by the proposed road extensions, are owned by the Trust and will be purchased at the same time as the conveyance of the Duke and Centennial road allowance lands. An additional 50 Acres to the west of Centennial Drive will be retained by the Trust for future development potential. The proposed land transfers have been formally approved by the Ontario Ministry of Health on application by the Hospital Trust supported by the Huron Perth Health Alliance.

Centennial Drive currently extends north from Goderich Street providing vehicular access to the Community Hospital, Community Health Centre and the Community Care Access Centre. A residential street, Alexander Drive, also connects to Centennial Drive approximately 150 metres (500') north of Goderich Street. The road terminates a further 150 metres to the north, just beyond the entrance to the Community Care Access Centre.

Duke Street extends in an east/west orientation forming the southern boundary of the Seaforth & District Community Centre (Arena) site. The proposed Duke Street road extension to the east is located within the south limits of the Seaforth Agricultural Society site and is located adjacent to the Seaforth Public School property to the south. Duke Street currently terminates at Chalk Street North. The Municipality of Huron East plans to extend both roads north and east, respectively to a point where they would meet, providing improved road access in the northeast portion of the community as well as opening up additional lands for urban development. Improved access to the hospital and other health-related facilities located in the vicinity of Centennial Drive, would also result from the proposed road extension construction. Lands which would be serviced by the proposed road extensions are currently utilized for agricultural production, north of Centennial Drive, but are designated for future residential development. Figure 2.3 illustrates the location of both Duke Street and Centennial Drive and the limits of the project study area. Figure 2.4 includes site photographs of the project study area.

2.4 Huron East Official Plan Policies

The lands encompassed by the study area boundary are designated 'Residential', 'Urban', and 'Community Facility' within the Huron East Official Plan, and would be subject to the Urban Settlement and Infrastructure policies of the OP document, which is currently being updated. New developments planned for large urban settlement areas within the Municipality, such as Seaforth, must be serviced by full municipal services (sewage and water) and must front on a municipal road. The planned extension of Centennial Drive and Duke Street will include the provision of full municipal servicing within the limits of the road allowance, in order to service any future residential developments which may be proposed in conjunction with the proposed road extensions. Copies of relevant excerpts from the Huron East Official Plan and Zoning By-Law are included within Appendix 'A'.



MUNICIPALITY OF HURON EAST
CLASS EA FOR THE EXTENSION OF DUKE STREET
AND CENTENNIAL DRIVE (TOWN OF SEAFORTH)
PROJECT STUDY AREA

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PROJECT No.
11151

SCALE
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FIGURE No.
2.3

Figure 2.4 – Site Photographs



View looking north from current termination of Centennial Drive ▲



View looking east along future extension of Duke Street ▲

2.5 Environmental Setting

(a) Significant Natural Features

That portion of the community of Seaforth which encompasses the project study area, is located within the Bayfield River watershed, managed by the Ausable Bayfield Conservation Authority (ABCA). The northwest portion of Seaforth is situated within the Maitland River watershed, which is administered by the Maitland Valley Conservation Authority (MVCA). The boundary between the two watersheds is illustrated on Figure 2.5. As noted previously, the project study area is located in the northeast portion of Seaforth within a predominantly residential area of the community, although the subject lands are currently under agricultural production. Natural habitat features located in the immediate vicinity of the study area are generally limited to a small woodlot located northeast of the study area, and the riparian corridor adjacent to Silver Creek, which is located to the southeast.

A review of sensitive natural heritage features in the vicinity of the project area was carried out through the course of the Class EA process. The Ontario Ministry of Natural Resources and Forestry's (MNRF) Natural Heritage Information Centre (NHIC) database was consulted to verify the current status of significant features in the general vicinity of Seaforth. Utilizing a jurisdictional search method, one Provincially Significant feature was identified within a 10 km radius.

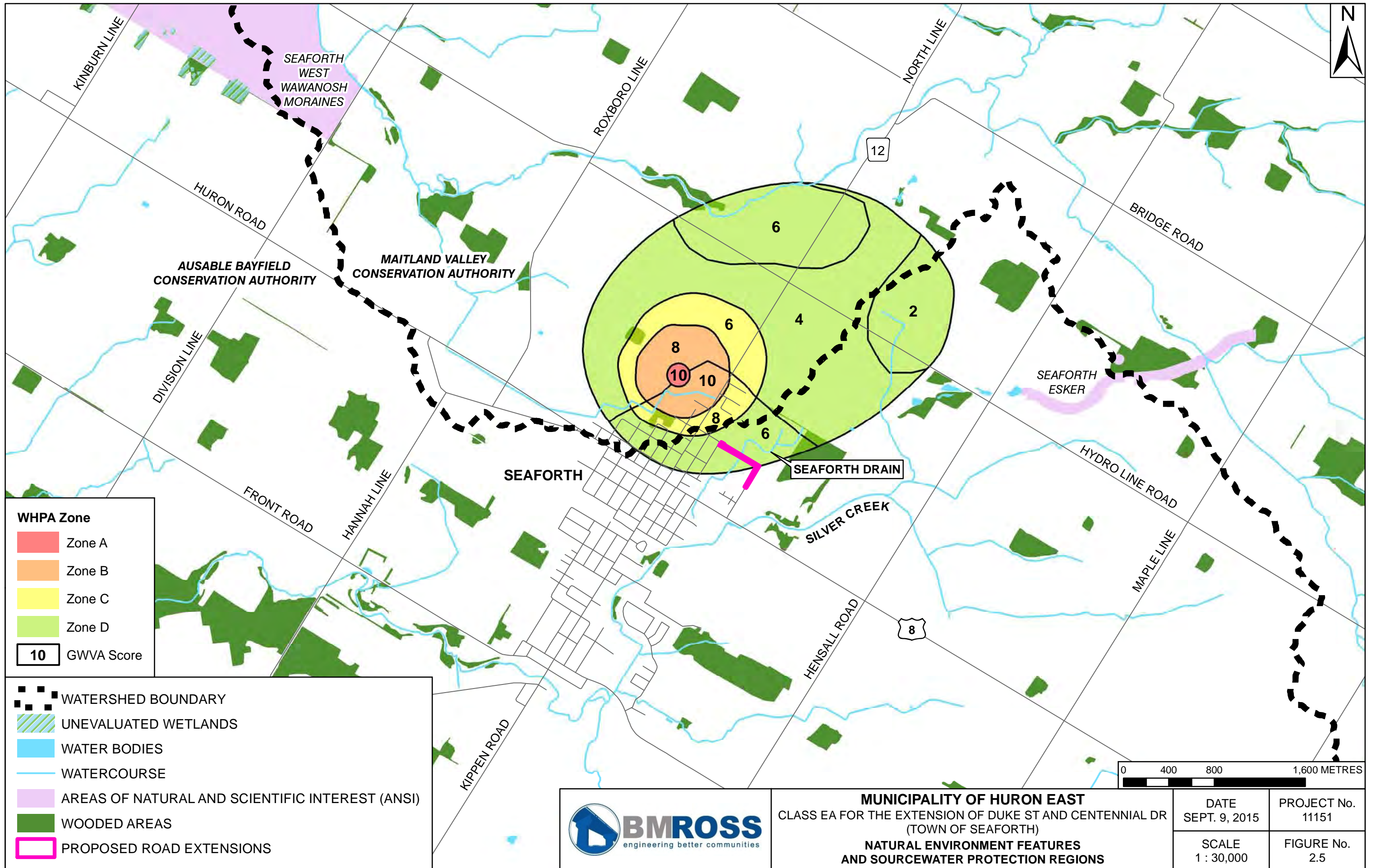
Seaforth Esker: This feature is a Provincially Significant Earth Science Area of Natural and Scientific Interest (ANSI) located northeast of Seaforth. Formed during the last ice age, eskers are described as long, meandering ridges of sand and gravel deposited by glacial streams in the ice.¹

The Seaforth Esker is located approximately 5 km northeast of Seaforth, therefore the proposed work is anticipated to have no impact on this provincially significant physiographic feature. Figure 2.4 illustrates the location of the Seaforth Esker, as well as other natural features located in the general vicinity of Seaforth.

(b) Bayfield Headwaters

The project study area is located within the Bayfield Headwaters sub-watershed, which is managed by the Ausable Bayfield Conservation Authority. Silver Creek and the headwater tributaries of the Bayfield River north of Seaforth are within this watershed and have been identified as cold water streams that support a wide variety of fish species including trout and salmon. Cold water streams provide critical habitat to certain fish species, such as trout and salmon that are dependent upon cooler water temperatures for many of their life cycle processes. There are few cold water streams that remain within the ABCA's watershed, therefore protection and enhancement of the remaining streams is a high priority for the ABCA, MNRF and Fisheries and Oceans Canada (DFO). A copy of the Bayfield Headwaters Watershed Report Card is included within Appendix 'B'.

¹ Natural Heritage Information Centre.



(c) Species at Risk

Two categories of species at risk were researched in conjunction with this project. The first are species protected through Federal Legislation; Canada’s Species at Risk Act (SARA). The second category represents species identified as rare, threatened or endangered by the Province of Ontario. These species are tracked by the MNRF and are documented on the NHIC web site. To protect the exact location of an identified species, both sites utilize range maps for identification purposes, which provide a large buffer around the actual species location. A summary of federal Species at Risk potentially present in the project study area are displayed on Table 2.1. Three provincially ranked species were also identified and are briefly described below.

- Harbinger-of-spring (*Erigenia bulbosa*) is an S3 ranked early flowering spring ephemeral found in rich woodlands and moist deciduous woods, often on floodplains.
- Green Dragon (*Arisaema dracontium*) is an S3 ranked perennial wildflower which grows in wet forests along streams, particularly Maple forest and forests dominated by Red Ash and White Elm. S3 ranked species may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
- Eastern Milk Snake (*Lampropeltis triangulum*) is an S3 ranked reptile which can range in length from 20 to 60 inches. They have a striking appearance of distinctive dorsal blotches which are usually red with black borders. The belly has a black and white checkerboard pattern¹

**Table 2.1
 Possible Federal Species at Risk within the Project Area**

Component	Endangered	Threatened	Special Concern
Mammals	-	Grey Fox	-
Birds	-	Least Bittern	Yellow-Breasted Chat (<i>virens</i> subspecies)
Reptiles & Amphibians	-	-	Milksnake
Fishes	-	-	-
Lepidoterans	-	-	Monarch
Plants, Lichens, Moss	American Ginseng, Butternut	-	-

* Defined by Schedule 1, Species at Risk Act

Given that a majority of the land base within the project study area is either actively cultivated agricultural land or manicured lawn, with very limited natural habitat, it is unlikely that any of the species identified above will be disturbed in conjunction with the proposed road and servicing extension project.

(d) Breeding Bird Habitat

The most recent Ontario Breeding Birding Atlas (2001-2005) designates the study area within the geographic survey area entitled Square 17MJ62 of Region 6 (Huron-Perth). A total of 41 birds, including species such as the Great Blue Heron, American Coot and Wood Duck have confirmed breeding status in this survey region. An additional 22 species were categorized as possible and 45 as probable in regards to their breeding status. The survey square extends over 100 km² and includes key habitat for the identified species, such as forests in all stages of growth, riverine areas and the Hullet Wetland Complex. The study area forms a relatively small portion of this region and includes limited habitat opportunities.

2.6 Source Water Protection

The community of Seaforth is serviced by a groundwater-sourced well supply system currently consisting of three wells (1 test well/2 production). The well field is located in northwest Seaforth adjacent to Welsh Street. Water disinfection equipment is housed within the pump house and chlorine contact time required for disinfection is provided within the existing reservoirs. The watermain distribution system serves the entire Town of Seaforth as well as the community of Egmondville, located immediately south of Seaforth.

Seaforth is located within the Ausable Bayfield Maitland Valley Source Protection Region for the purposes of Source Water Protection. In conjunction with policies and regulations associated with the Safe Drinking Water Act, the Seaforth well supply was modeled in order to identify the limits of well head protection areas (WHPA's), which delineate areas which may be susceptible to contamination from land use activities. Figure 2.5 illustrates the location of the well field servicing Seaforth as well as the limits of the WHPA's associated with the well supply. As seen on the figure, the proposed extension of Duke Street will be located within the WHPA zone delineating the 25 year time of travel to the well supply. Given this, the proposed activity, construction of a gravity sewer in conjunction with road construction, has not been identified as a significant threat in the Source Water Protection Assessment Report.

2.7 Existing Services

a) Sanitary Servicing

A municipally owned and operated sewage system was constructed in Seaforth in the early 1970's consisting of a collection system, pre-fabricated pumping station and a 3-celled facultative lagoon. In 1994, the treatment system was upgraded with a mechanical plant to accommodate higher flows and achieve more stringent effluent criteria. All sewage flows generated within the former Seaforth municipal limits are conveyed by gravity to a sewage pumping station (SPS) located on Oak Street in the southwest portion of Seaforth. From here sewage is pumped via sewage forcemains to the treatment facility located east of the community. Following treatment of the sewage within the facility, wastewater is discharged to the Crozier Drain, which in turn outlets to the Bayfield River west of Egmondville. It is the intention of the Municipality to extend municipal sanitary sewers to the project study area in conjunction with the project.

Existing sanitary sewers are located within the Silver Creek Subdivision, located west of Centennial Drive, but are not currently within the Centennial Drive road allowance. A servicing corridor is proposed for the future development lands located southwest of the road extensions. Sewers will be extended north from their current point of termination in the Silver Creek Subdivision and then extended to portions of Duke and Centennial Drive, as required to service additional development lands located adjacent to the proposed road extensions.

b) Water Servicing

As noted above, the community of Seaforth is serviced by a municipal water system that was first commissioned in 1947. The system is currently comprised of three drilled bedrock well supplies, one pumphouse, an elevated storage facility, an in-ground storage reservoir and a network of distribution watermains. Municipal watermains are currently located within the Centennial Drive right of way and are also located near the intersection of Duke Street and Chalk Street, where Duke terminates. Water servicing would be extended within the proposed road extensions and interior servicing corridor with sufficient capacity to provide for future fire protection.




c) Surface Water Drainage

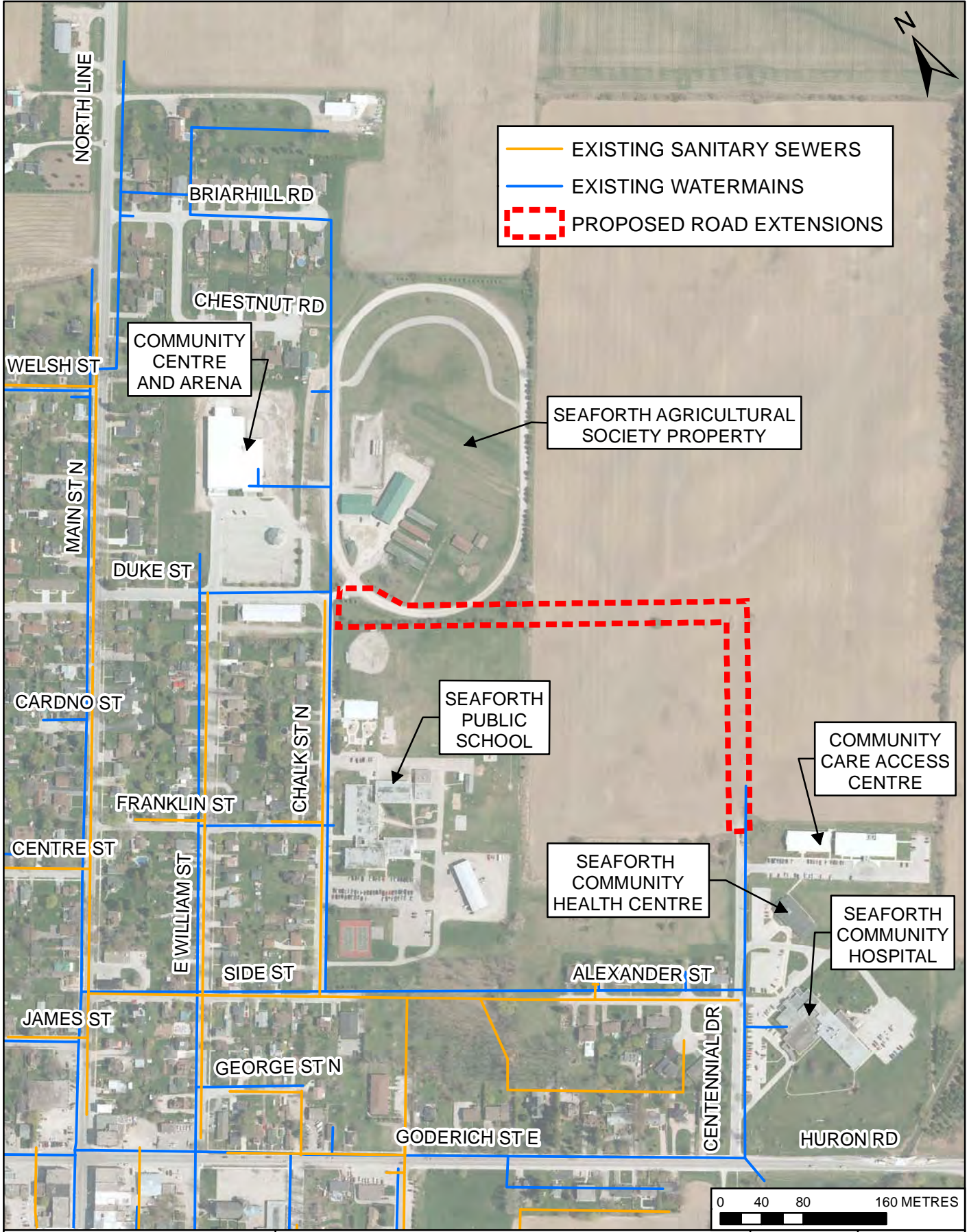
Surface drainage through the subject lands is generally from the northeast to the southwest. The Seaforth Municipal Drain currently extends north and then east through the subject lands providing a drainage outlet for agricultural lands within the proposed road extensions as well as north of the project study area. Municipal stormwater infrastructure is also located within the Silver Creek Subdivision and portions of Centennial Drive, discharging to Silver Creek south of Highway No. 8. Silver Creek has experienced historical flooding problems due to restrictions in place at Highway No. 8 and the CNR rail crossing located further downstream. Additional inputs to the drainage area which might aggravate peak flow events would not be permitted. Accordingly a proposed stormwater containment facility will be constructed at the northwest end of the Silver Creek subdivision which would capture stormwater runoff discharging from lands to the north and releasing them into the existing drainage system at a slower rate. The size and design of the facility would be finalized in conjunction with proposed development plans for this area and would conform to guidelines for these types of facilities which are regulated by the Conservation Authority. Figure 2.6 illustrates the location of existing municipal infrastructure within the project study area limits.

2.8 Cultural Heritage Features

Timmins Martelle Heritage Consultants were engaged to complete an archaeological assessment of the proposed road extensions. The assessment involved a Stage 1 background review which included an examination of historical data on the parcels. It was determined from this assessment that the potential for historical archaeological sites being present on the subject land was high due to proximity to Silver Creek and proximity to an early transportation corridor (Hwy. 8).



 EXISTING SANITARY SEWERS
 EXISTING WATERMAINS
 PROPOSED ROAD EXTENSIONS



MUNICIPALITY OF HURON EAST
 CLASS EA FOR THE EXTENSION OF DUKE STREET
 AND CENTENNIAL DRIVE (TOWN OF SEAFORTH)
EXISTING SERVICES

DATE SEPT. 9, 2015	PROJECT No. 11151
SCALE 1:5,000	FIGURE No. 2.6

Stage 2 of the archaeological assessment process involved the field review of the proposed road extensions which involved a pedestrian survey of each future road allowance. The routes were plowed prior to the survey and allowed to weather, as illustrated in the photo below. There were no findings of historical significance identified through the review and no additional archaeological assessment was recommended. A report, summarizing the process, has been submitted to the Ministry of Tourism, Culture and Sport for clearance prior to development of the proposed road extensions. A copy of the Stage 1 & 2 Archaeological Report is included within Appendix 'C'.



View of proposed road extensions prior to completion of Stage 2 Archaeological Assessment ▲

3.0 CLASS EA PROCESS

3.1 Phase 1 - Identification of Problem/Opportunity

The community of Seaforth is the largest residential settlement area in the Municipality of Huron East and is well situated to take advantage of additional growth opportunities given its location on Highway No. 8 and proximity to other urban centres such as London and Kitchener/Waterloo. The proposed extension of Centennial Drive and Duke Street, in northeast Seaforth would open up additional lands for residential growth and provide better connectivity for road infrastructure and other municipal infrastructure such as sewage and water. The following problem/opportunity statement has therefore been identified in conjunction with this project:

The extension of Duke Street and Centennial Drive in northeast Seaforth, with the provision of full municipal services, is required to facilitate the development of additional residential lands within the community of Seaforth.

3.2 Class EA Schedule

The proposed road extensions would involve construction of a new road, where the right of way is entirely separate from any previous right of way and where no road surface previously existed. From a Class EA perspective, this type of activity is considered a Schedule 'B' activity, approved subject to the completion of a screening process (incorporating Phases 1 and 2 of the Class EA process). This involves screening the project for environmental impacts and developing mitigation strategies. Public and government agency consultation is a component of the screening process.

3.3 Phase 2 - Identification of Alternative Solutions

The second phase of the Class EA process involves the identification and evaluation of alternative solutions to resolve the identified problem or opportunity. The evaluation of alternatives is conducted by examining the technical, economic, and environmental considerations associated with implementing any alternative. Mitigation measures that could lessen environmental impacts are also defined. A preferred solution or solutions is then selected.

(a) Identification of Practical Alternatives

A limited number of practical solutions to the defined problem were identified at the outset of this study. These alternatives, stated below, build upon the findings of the studies and reports discussed previously in this report. They are as follows:

Alternative 1 – Extend Duke Street and Centennial Drive with full municipal services. This option involves the extension of Duke Street east from its current limit and Centennial Drive north, to lands in the northeast quadrant of Seaforth. Full municipal servicing would be incorporated into the proposed road allowance and/or designated servicing easements.

Alternative 2 – Do nothing. This means that the proposed road extensions would not occur. The Do Nothing alternative may be implemented at any time in the design process prior to construction. This decision is typically made when the costs of all alternatives, both financial and environmental, significantly outweigh the benefits.

(b) Assessment Methodology

An evaluation of alternatives process was carried out using a comparative assessment method designed to predict the nature and magnitude of environmental impacts resulting from each defined option and to assess the relative merits of the alternative solutions. The evaluation method involves these principal tasks:

- Identification of existing environmental conditions (baseline conditions, inventories)
- Assessment of existing land use activities, infrastructure, natural features and socio-economic characteristics (i.e., environmental scoping).
- Review of proposed alternatives and related works.
- Identification of environmental components and sub-components that may be affected by the defined alternatives (i.e., define evaluation criteria).
- Prediction of environmental impacts (positive, negative) resulting from the construction and implementation of the preferred alternative.
- Identification and evaluation of measures to mitigate adverse effects
- Selection of a preferred alternative following a comparative analysis of the relative merits of each option.

3.4 Identification of Environmental Components and Sub-Components

(a) Environmental Features

Section 3.3 of this report listed the alternative solutions that were identified in conjunction with the Class EA process. As part of the evaluation procedure, it is necessary to assess what effect each option may have on the environment and what measures can be taken to mitigate the identified impacts. The two main purposes of this exercise are to:

- Minimize or avoid adverse environmental effects associated with a project.
- Incorporate environmental factors into the decision-making process.

By definition, the EA Act generally separates the “environment” into five general elements:

- Natural environment
- Social environment
- Cultural environment
- Economic environment
- Technical environment

The identified environmental elements can be further subdivided into specific components which have the potential to be affected by the implementation of the alternative solutions. Table 3.1 provides an overview of the Specific Environmental Components considered of relevance to this investigation. These components were identified following the initial round of public and agency input, and a preliminary review of each alternative with respect to technical considerations and the existing environmental setting of the project area.

Table 3.1 summarizes the environmental features considered of relevance to this Class EA.

Table 3.1
Evaluation of Alternatives: Identification of Environmental Components

Element	Component	Sub-Component
Natural	Aquatic	<ul style="list-style-type: none"> • Aquatic Resources
	Atmosphere	<ul style="list-style-type: none"> • Air Quality, Noise
	Surface Water	<ul style="list-style-type: none"> • Water Quality/ Quantity • Drainage Characteristics
	Terrestrial	<ul style="list-style-type: none"> • Birds, Mammals • Vegetation
	Geologic	<ul style="list-style-type: none"> • Physiographic Features • Groundwater Quality/ Quantity
Social	Neighbourhood	<ul style="list-style-type: none"> • Disruption
	Community	<ul style="list-style-type: none"> • Health and Safety • Recreational Activities
Cultural	Heritage	<ul style="list-style-type: none"> • Historical/ Cultural Resources
Economic	Project Area	<ul style="list-style-type: none"> • Capital and Operational Costs
	Community	<ul style="list-style-type: none"> • Property Taxes
Technical	Transportation	<ul style="list-style-type: none"> • Traffic Patterns/ Volumes • Pedestrian/ Vehicular Safety
	Infrastructure	<ul style="list-style-type: none"> • Condition/ Age • Utilities

(b) Impact Analysis

The environmental effects of each study alternative on the identified environmental features are generally determined through an assessment of the following impact predictors (i.e., impact criteria):

- Nature (direct, indirect, cumulative).
- Magnitude (level of effect, loss of function).
- Location/ Extent (where effect occurs, number/ volume affected).
- Scale (localized or regional effects).
- Timing (seasonality of effects, immediate or delayed impacts).
- Duration (period of impact).
- Socio-economic context (characteristics of community, implications for recovery).

For the purposes of this Class EA, impact determination criteria developed by Natural Resources Canada has been applied to predict the magnitude of environmental effects resulting from the implementation of a project. Table 3.2 summarizes the impact criteria.

Table 3.2
Criteria for Impact Determination

Level of Effect	General Criteria
High	Implementation of the project could threaten sustainability of feature and should be considered a management concern. Additional remediation, monitoring and research may be required to reduce impact potential.
Moderate	Implementation of the project could result in a resource decline below baseline, but impact levels should stabilize following project completion and into the foreseeable future. Additional management actions may be required for mitigation purposes.
Low	Implementation of the project could have a limited impact upon the resource during the lifespan of the project. Research, monitoring and/or recovery initiatives may be required for mitigation purposes.
Minimal/ Nil	Implementation of the project could impact upon the resource during the construction phase of the project but would have a negligible impact on the resource during the operational phase.

Given the criteria defined in Table 3.2, the significance of adverse effects is predicated on these considerations:

- Impacts from a proposed alternative assessed as having a Moderate or High level of effect on a given feature would be considered significant.
- Impacts from a proposed alternative assessed as having a Minimal/ Nil to Low level of effect on a given feature would not be considered significant.

3.5 Evaluation of Alternative Solutions

(a) General

The second component of Phase 2 of the Class EA process, being the evaluation of the defined alternatives, is conducted by examining the technical, economic, social and environmental considerations associated with implementing any alternative. Mitigation measures that could lessen environmental impacts are also defined. A preferred solution or solutions is then selected. Several activities were incorporated into this assessment process, including a field inspection of the proposed road extension routes, a review of public and agency consultation received to date and additional consultation with municipal staff and regulatory agencies. Table 3.3 summarizes the primary components of the alternatives being considered.

**Table 3.3
 Primary Components of the Identified Alternatives**

Alternative	Required Works
Alternative 1 (Extend Duke St. & Centennial Dr. with municipal Services)	<ul style="list-style-type: none"> - Extend Centennial Drive approximately 650 feet (198m) to the north and extend Duke Street 1130 feet (405m) east to a point of intersection. The new road would incorporate an urban cross-section and include two lanes of traffic with curbs and gutters. - Install watermains, storm sewers and sanitary sewer facilities within all or portions of the proposed road allowances. - Construct a storm water management facility in the southwest corner of the study area lands to control stormwater runoff from the project area. - Extend sewage and water infrastructure within internal servicing corridor located on development lands located west of Centennial Drive and south of Duke Street.
Alternative 2 (Do Nothing)	- No additional works planned.

(b) Comparative Analysis

Table 3.4 provides a summary of the key considerations for each option with respect to the environmental components described in Table 3.1. The table identifies benefits and impacts that were identified as significant during the initial evaluation of alternatives. Potential mitigation measures for the identified impacts are also presented.

(c) Environmental Effects Analysis

The potential interactions between the identified alternatives and environmental components and sub-components (Table 3.1) were examined as part of the evaluation of alternatives phase. The purpose of this analysis was to determine, in relative terms, the environmental effects of each identified alternative on each of the environmental components and sub-components (using the impact criteria described in Table 3.2). In this regard, the level of effect for the environmental interactions were rated as High, Moderate, Low or Minimal/ Nil. Potential mitigation measures were also identified as part of this evaluation.

Table 3.5 summarizes the outcome of the environmental effects analysis carried out for the identified alternatives and the environmental components summarized in Table 3.1. This analysis forms the basis for the identification of impacts which will be discussed in further detail later in this report.

**Table 3.4
 Preliminary Evaluation of Alternatives**

Study Alternative	Benefits	Potential Impacts	Initial Remediation
Alternative 1 (Extend roads with servicing)	<ul style="list-style-type: none"> - Provides additional development lands with access to municipal roads and servicing infrastructure. - Promotes additional residential growth within the community of Seaforth by providing access to serviced lands. - Limits traffic disruption by constructing a new roadway and servicing corridor within relatively undeveloped areas. - Improves access and servicing infrastructure within the northeast quadrant of Seaforth. - More efficient approach to install servicing when roads are being constructed. 	<ul style="list-style-type: none"> - Construction of new roads not within existing right of ways increases potential impacts to the natural and cultural environments. - May result in minor increases to traffic flow/volume in the immediate vicinity of the proposed road extensions. - Increased construction traffic adjacent to elementary school and hospital facilities may present a potential safety hazard. - More expensive alternative to install servicing at the time of construction. 	<ul style="list-style-type: none"> - An archaeological investigation has been completed which indicates that the lands do not contain significant cultural material. - The proposed expansion area is actively farmed at present and is not considered to have ecological significance. - Few existing developments located adjacent to the proposed road extension, thereby minimizing impacts to adjacent properties. - Construction traffic should not impact school as traffic will not pass school entrance and fence separates road extensions from playground area. - Warning signs could be erected adjacent to the hospital facilities warning of potential conflicts with emergency vehicles. - From a life cycle costing perspective, installation of services at the time of road construction is much more cost effective than installing them at a later date.
Alternative 2 (Do Nothing)	<ul style="list-style-type: none"> - Represents the least expensive option. - Does not impact upon natural or cultural features. 	<ul style="list-style-type: none"> - Fails to address the defined problem/opportunity. 	<ul style="list-style-type: none"> - Identified impact cannot be mitigated.

Table 3.5
Alternative Solutions:
Environmental Effects Analysis

Environmental Component	Alternative Solution	Level of Effect	Impact Considerations (Construction and Operational Activities)
Natural <ul style="list-style-type: none"> Aquatic 	(1) Road Extensions with Services	Minimal/ Nil	<ul style="list-style-type: none"> Given that there are no watercourses in the immediate vicinity of the proposed works, few impacts are anticipated. Sediment and erosion control measures will be implemented during construction to prevent the loss of sediment. No impacts anticipated from the operation of the proposed works.
	(2) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> No impacts anticipated.
<ul style="list-style-type: none"> Atmosphere 	(1) Road Extensions with Services	Minimal/ Nil	<ul style="list-style-type: none"> Standard construction mitigation will be implemented to mitigate construction-related impacts on air quality and ambient noise levels. No impacts anticipated from the operation of the proposed works.
	(2) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> No impacts anticipated.
<ul style="list-style-type: none"> Surface Water 	(1) Road Extensions with Services	Low/Moderate	<ul style="list-style-type: none"> Downstream drainage areas may be impacted by increased runoff from future development lands to be serviced by the proposed road extensions. A stormwater management facility will be constructed to control surface water flows leaving the site which will discharge to the existing Municipal Drain, following completion of development. No impacts anticipated from the operation of the proposed works.
	(2) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> No impacts anticipated.
<ul style="list-style-type: none"> Terrestrial 	(1) Road Extensions with Services	Minimal/Nil	<ul style="list-style-type: none"> Given that the proposed road extensions are either actively cultivated or are manicured lawns, no impacts to terrestrial habitat are anticipated. No impacts anticipated from the operation of the proposed works.
	(2) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> No impacts anticipated.

<ul style="list-style-type: none"> Geologic 	(1) Road Extensions with Services	Minimal/ Nil	<ul style="list-style-type: none"> No impacts anticipated.
	(2) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> No impacts anticipated.
<i>Social</i> <ul style="list-style-type: none"> Neighbourhood 	(1) Road Extensions with Services	Moderate	<ul style="list-style-type: none"> Extension of Duke Street will have direct impacts to the Seaforth Agricultural Society property, impacting the existing track feature and south entrance. The Municipality plans to realign the track further to the north and relocate other affected infrastructure north of the proposed Duke Street extension. The land was purchased from the Ag. Society. Any other construction-related impacts such as noise, dust, etc., would be minimized with standard construction mitigation measures. Entrances to the Seaforth Hospital and adjacent health facilities will be maintained at all times. Warning signs may need to be erected during construction to minimize impacts to emergency vehicles. No impacts anticipated from the operation of the proposed works, providing that measures to minimize impacts are incorporated into the design.
	(2) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> No impacts anticipated.
<ul style="list-style-type: none"> Community 	(1) Road Extensions with Services	Low	<ul style="list-style-type: none"> Construction and operational activities associated with the proposed works do not present a significant threat to public health and safety. Should result in an overall benefit to the community from improved transportation and servicing connections in addition to new growth.
	(2) Do Nothing	Low	<ul style="list-style-type: none"> A lack of new residential growth and development in the community may negatively impact the community over the long term.
<i>Cultural</i> <ul style="list-style-type: none"> Heritage 	(1) Road and Servicing Extensions	Minimal/ Nil	<ul style="list-style-type: none"> No impacts anticipated, given the findings of the archaeological assessment previously conducted on the subject lands.
	(2) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> No impacts anticipated.

Economic <ul style="list-style-type: none"> Project & Community 	(1) Road and Servicing Extensions	Low/Moderate	<ul style="list-style-type: none"> A majority of the costs associated with the road and servicing extensions will be recouped from developers as the lands are built out through development agreements or development charges. The Municipality does not intend to recoup capital charges associated with the project from existing individual property owners. No impacts anticipated from operation of the proposed project.
	(2) Do Nothing	Low/Moderate	<ul style="list-style-type: none"> A lack of serviced lands available for development may negatively impact the community over the long term.
Technical <ul style="list-style-type: none"> Transportation 	(1) Road and Servicing Extensions	Low/Moderate	<ul style="list-style-type: none"> Traffic movement in the vicinity of the project site may be temporarily impacted during the construction phase of the project. (Traffic control measures will be implemented to provide site access, as required). Access to the hospital site as well as adjacent health care facilities will be maintained at all times. Given that the proposed road extensions will be servicing residential lands and that there are few existing residential properties front Duke Street and Centennial Drive in the vicinity of the proposed extensions, significant impacts associated with increased traffic volumes are not anticipated.
	(2) Do Nothing	Low	<ul style="list-style-type: none"> Proposed accessibility improvements and linkages associated with the proposed road extensions would not be realized.
<ul style="list-style-type: none"> Infrastructure 	(1) Road and Servicing Extensions	Low	<ul style="list-style-type: none"> Sewage and water infrastructure can be more easily incorporated into the road design and would be more efficient if installed during road construction. No impacts are anticipated from the operation of the proposed works.
	(2) Do Nothing	Low/Moderate	<ul style="list-style-type: none"> Potential watermain distribution improvements from looping through the new road infrastructure would not be realized.

3.6 Identification of a Preliminary Preferred Solution

Based upon a review of the information noted in Tables 3.4 and 3.5 and additional input from municipal public works staff, the municipality indicated a preference for Alternative 1, construction of the Duke Street and Centennial Drive road extensions with the provision of full municipal services.

The following are the key attributes associated with this alternative, which justified its selection as the preliminary preferred alternative.

- Provides the subject lands with municipal servicing designed to accommodate future residential development.
- Promotes the further expansion of residential development/growth within the community by providing access to a broader range of serviced parcels.
- More efficient use of Municipal resources to install sanitary, water and stormwater infrastructure during construction of the roads.
- Provides the Municipality with access to additional lands identified within the Official Plan for residential development.
- Minimizes traffic disruption by limiting construction to existing roadways within relatively remote areas.
- Proposes development on lands not considered to be ecologically or culturally significant.

Based upon these considerations, the overall benefit of implementing Alternative 1 was seen to substantially outweigh the potential adverse impacts associated with the project.

4.0 PUBLIC CONSULTATION PROGRAM

4.1 General

Public consultation is an integral component of the Class EA process. Public consultation allows for an exchange of information which assists the proponent in making informed decisions during the evaluation of alternative solutions. During Phases 1 and 2 of the study process, consultation was undertaken to obtain input from the general public, adjacent property owners and review agencies that might have an interest in the project. In general, the consultation program involved the preparation of information describing the defined problem, the identified alternatives and the preferred alternatives under consideration. Comments obtained through the various consultation methods described in this section of the report were incorporated into the evaluation of alternatives phase of the investigation.

The components of the initial public consultation program are summarized in this section of the Screening Report and documented in Appendix 'D'. Comments received from the program and related correspondence are also discussed below and documented in the appendix.

4.2 Initial Public Notice

Contents: General project description, map of study area
 Issued: September 25, 2013
 Placed In: Huron Expositor (September 25 and October 2, 2013)
 Circulated To: 13 Adjacent property owners
 Input Period: Concluded October 25, 2013

No comments were received as a result of this notice.

4.3 Review Agency Circulation

Contents: General study information, site plan illustrating proposed works
 Circulated: September 17, 2013
 Distributed To: 14 review agencies
 Input Period: Concluded October 18, 2013

Table 4.1 summarizes the agency input received as a result of this circulation.

Table 4.1
Agency Comments

Review Agency	Comments/ Concerns	Action Taken
Maitland Valley Conservation Authority (September 19, 2013) Via-e-mail	- Reviewed the project information and determined that a majority of the study area associated with the proposed road extensions are located within the Ausable Bayfield Conservation Authority's jurisdiction.	- Information noted and correspondence also forwarded to ABCA.
Festival Hydro (September 30, 2013) Via-mail	- No concerns with the proposed road extensions. - Festival Hydro is well situated to service the proposed road extensions as they have 3 phase power at Duke Street and Centennial Drive.	- Festival Hydro will be updated as the study progresses.
Huron Perth Catholic District School Board (September 30, 2013) Via-fax	- No concerns with the proposed road extensions.	- Comments noted and filed.
Ministry of Tourism, Culture and Sport (October 1, 2013) Via email	- Project study area should be screened for potential impacts to buried cultural material and built cultural heritage. - Screening Check-Lists provided to assist with identifying potential concerns.	- A Stage 1 & 2 Archaeological Assessment of the subject lands was commissioned.

Review Agency	Comments/ Concerns	Action Taken
Ausable Bayfield Conservation Authority (December 6, 2013) Via phone	<ul style="list-style-type: none"> - Road extensions are not regulated however downstream drainage lands adjacent to the site are controlled. - Silver Creek at the drain outlet is a problem area due to flooding. - Are interested in SWM measures that will be implemented at the site. 	- Comments noted and forwarded to the project manager for consideration.
MOECC (August 28, 2015) Via email	- Provided feedback on the draft Screening Report	- Report amended to reflect comments.

4.4 Aboriginal Consultation

As directed by the MOE in their correspondence dated December 5, 2006, consultation was undertaken in conjunction with the Class EA process with First Nation and Métis Communities identified as potentially having an interest in the project. Project information was subsequently forwarded to seven aboriginal contacts known from previous projects undertaken within the central portion of Huron County. A summary of the responses received are included within Table 4.2 below. Copies of all correspondence received or sent is included within Appendix ‘D’

**Table 4.2
 First Nations Feedback**

Review Agency	Comments/ Concerns	Action Taken
Chippewas of the Thames First Nation November 14, 2013 Via mail	<ul style="list-style-type: none"> - Reviewed the project information and determined that they had no concerns with the project. - Would like to be advised if there are substantive changes to the scope of the project. 	- Information noted and filed.
Aboriginal Affairs and Northern Development Canada December 19, 2013 Via email	<ul style="list-style-type: none"> - Provided information on the new Aboriginal and Treaty Rights Information System (ATRIS) which was recently launched by the Federal Government. - ATRIS is a map based search tool that can be used to search for Aboriginal Communities or treaty rights. 	- Information noted and filed.
Aamjiwnaang First Nation January 21, 2014 Via mail	<ul style="list-style-type: none"> - Reviewed the project information. - Did not recommend that the project be forwarded to the chief or council at this time. - Would like to continue to be advised of project progress. 	<ul style="list-style-type: none"> - Information noted and filed. - Will continue to circulate project information.

4.5 Summary of Public Consultation

The consultation program developed for this Class EA process was focused upon potentially impacted adjacent property owners, Federal and Provincial review agencies, Aboriginal Communities, and the general public. Feedback received as a result of the consultation was limited to standard comments from review agencies and Aboriginal Communities. There were no comments received from adjacent property owners and no significant concerns identified with the proposed road extensions.

5.0 SITE SPECIFIC EVALUATIONS

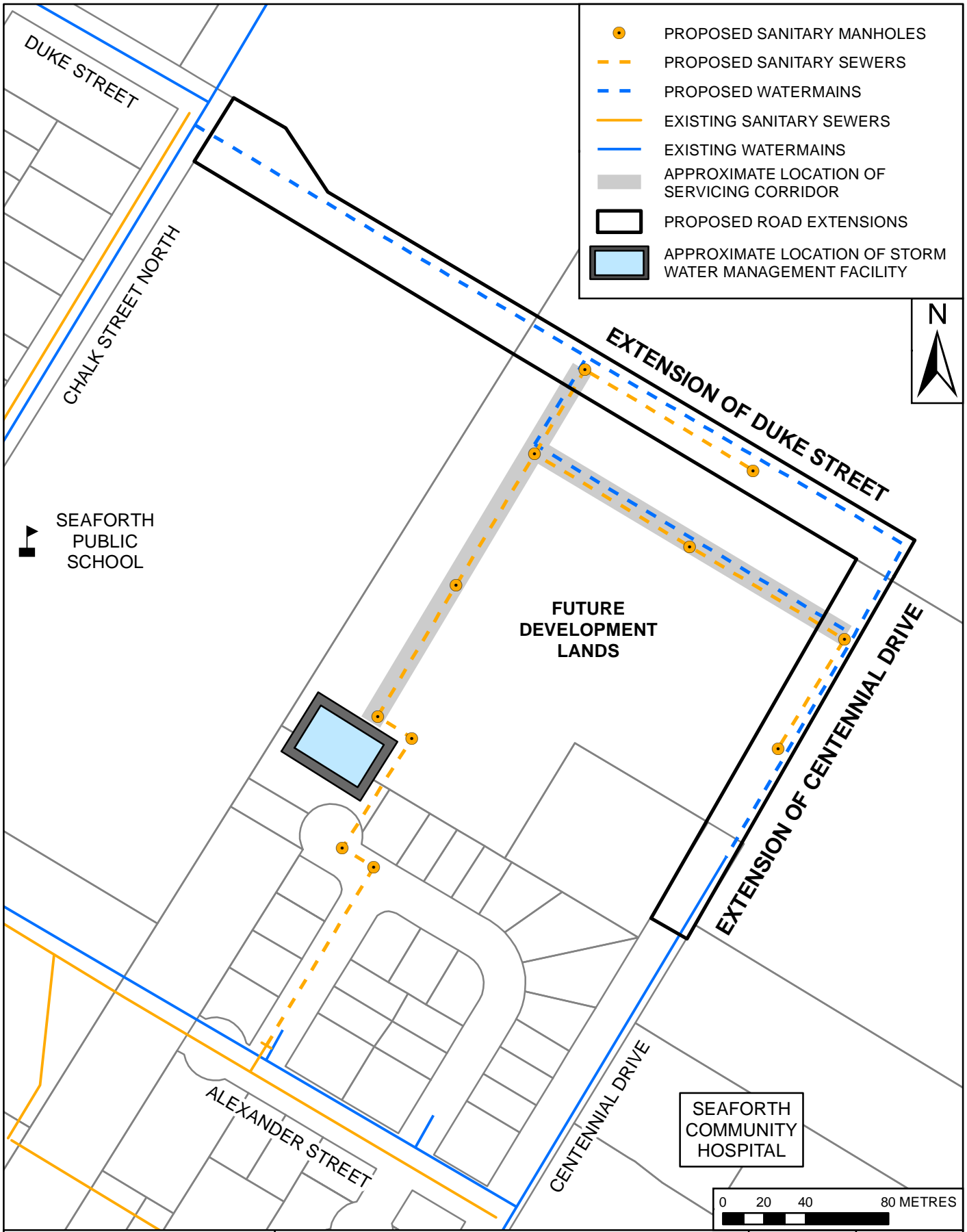
5.1 Sanitary Sewer and Watermain Routing

The proposed development parcel located south of the Duke Street extension and west of the proposed Centennial Drive extension, has been conditionally purchased from the Seaforth Hospital Trust by a developer with plans to establish a retirement-focused development on the subject lands. A preliminary site plan for the proposal has been created which includes an internal road network to be accessed from both Duke Street and Centennial Drive. The most efficient way to service the development parcel would be to extend a gravity sanitary sewer and watermain north from the Silver Creek Subdivision to the site and then through the internal road network to service individual structures located adjacent to the roadway. Sewer and water servicing would then be extended to both Duke Street and Centennial Drive to service additional development lands located north and east of the proposed road extensions. Copies of information related to the proposed development parcel are included within Appendix 'E'. Figure 5.1 illustrates the location of the proposed development parcel in relation to the Duke Street and Centennial Drive road extensions, as well as the alignment of the proposed servicing corridor, stormwater management block and sewer and watermain extensions within the limits of the proposed road extensions.

5.2 Conceptual Storm Water Management

(a) General

A stormwater management facility will be constructed at the southwest corner of the project study area to control surface water drainage flows from future development lands. The proposed facility will be located partly on lands owned by the Municipality of Huron East located at the northwest corner of the Silver Creek subdivision and will discharge to the existing Seaforth Municipal Drain, which currently extends through the area before discharging to Silver Creek south of Goderich Street. Although the ultimate size of the facility will be dependent on the density of the proposed development, basic parameters for the facility are included here. A separate Storm Water Management report will be prepared by the developers in conjunction with the proposed development application for submission to the Conservation Authority and the MOECC for regulatory approval. The following sections of this report discuss the major components of the facility planned for this site including water quality and quantity controls as well as regulatory requirements.



MUNICIPALITY OF HURON EAST
 CLASS EA FOR THE EXTENSION OF DUKE STREET
 AND CENTENNIAL DRIVE (TOWN OF SEAFORTH)
PROPOSED SERVICING

DATE SEPT. 9, 2015	PROJECT No. 11151
SCALE 1:2,500	FIGURE No. 5.1

5.3 Stormwater Quality Controls

(a) Design Parameters

Quality control for the facility will be designed in compliance with the MOECC design standards. The design parameters are as follows:

- Level 2 receiving stream.
- End-of-pipe, extended detention, wet pond configuration.
- Average impervious rates of 0.30.

(b) Facility Requirements

The facility will include the following key components:

- Permanent pool area
- Wet pond quality control area for extended detention
- Maintenance access to the forebay and outlet structure
- Landscaping

(c) Additional Treatment Measures

Development of individual parcels within the future development lands could occur over a number of years. To minimize impacts to existing infrastructure, on-site sediment and erosion control measures will be implemented during the development of individual parcels. A treatment train approach would be implemented in the drainage area to control pollution at the source. In particular, the following controls would be implemented upstream of the proposed pond facility.

Lot Level Controls - Reduced lot grading could be required to promote natural infiltration and sedimentation.

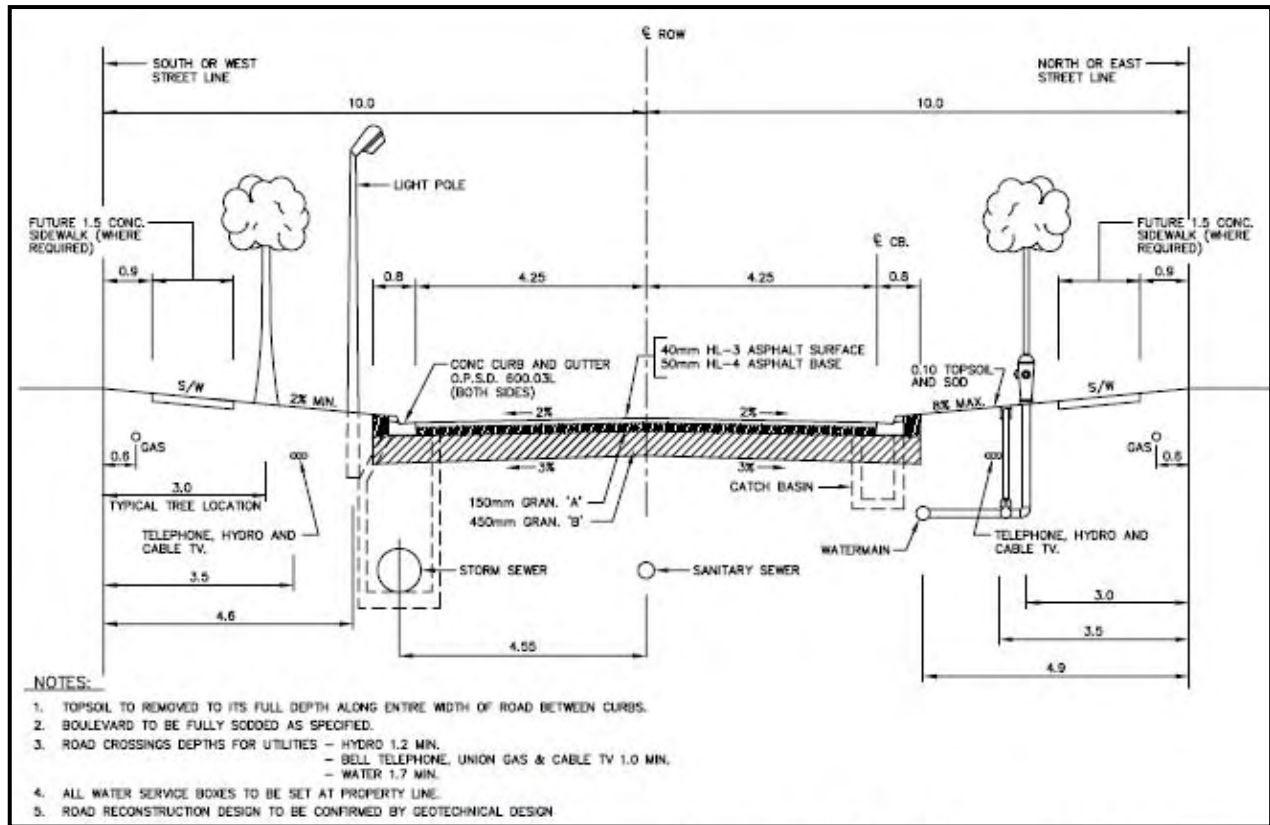
Conveyance Controls - Long, broad grassed swales could be required, where possible, to promote infiltration and sedimentation.

Should individual parcel development exceed the impermeability ratio defined for the pond facility (proposed as 30% impermeable area), additional lot level controls may be required.

5.4 Proposed Road Cross Section

The proposed road extensions will be constructed to an urban municipal standard with an 8.5 metre paved road surface and curbs and gutters to convey surface water flows to the storm drainage collection system. Figure 5.2 illustrates the proposed road cross section planned for the Duke Street and Centennial Road extensions. This is a standard urban cross-section adopted by the Municipality of Huron East for all new urban road construction. The same road standard will be utilized for development lands located adjacent to the newly constructed road extensions.

**Figure 5.2
 Proposed Urban Road Cross-Section**



6.0 SUMMARY OF IMPACT ASSESSMENT AND MITIGATION

6.1 General

Based upon the findings of the general impact assessment (Tables 4.4) and the environmental effects analysis (Table 4.5), the project has the potential to impact upon a limited number of specific environmental components. They are as follows:

- Natural Environment: Surface Water
- Social Environment
- Economic Environment

The potential impacts to each identified feature are described in detail within this section of the report. Measures designed to minimize the impacts are also presented. The determination of appropriate mitigation measures incorporated an assessment of previous studies and investigations, site specific requirements and an evaluation of a broad range of alternatives. This assessment was based on consideration of three broad approaches to impact mitigation; avoidance, minimization of adverse effects and compensation.

6.2 Natural Environment

Storm drainage flows from the project study area will discharge to Silver Creek, south of Highway 8, through the existing storm drainage system. Due to existing hydraulic and capacity limitations within this section of Silver Creek, increased discharges during significant storm events would negatively impact the area, which has already been identified as a flood risk zone. Accordingly, a stormwater detention facility will be constructed at the southwest portion of the project study area to contain stormwater flows from the area, releasing them to the channel at a slower rate, when peak flows associated with surface water drainage from undeveloped lands have already passed through the system. Figure 5.1 illustrates the location of the conceptual stormwater management facility which will be constructed in conjunction with development of the subject lands.

6.3 Social Environment

Residents living in the immediate vicinity of the proposed road construction sites will experience some impacts from construction (noise/traffic disruption/dust). However, impacts should not be significant as there are few residences that directly front on the affected sections of road allowance. The greatest short-term impact will be from construction traffic, however long-term impacts associated with potential increases in traffic volume on adjacent road allowances, as a result of the road construction, could be experienced.

(a) Traffic Disruption (short-term)

The proposed road construction will occur along extensions to the existing Duke Street and Centennial Drive alignments to a point where a new intersection is created. The project will involve some modifications to the adjacent intersections at these roadways which may result in limited disruptions to traffic flow. Disruptions are not anticipated to pose a significant inconvenience to residents as a majority of construction will occur within the new road allowances, away from existing developed areas. Access to the Seaforth Public Hospital and to the Community Health Centre and Community Care Access Centre, located immediately south of the proposed Centennial Drive road extension, will be maintained at all times during the construction. The south access to the Agricultural Park will be disrupted during construction of the Duke Street extension, however additional entrances are located further to the north that can be utilized until the south access is reconfigured.

(b) Traffic Volumes (long-term)

Currently there is limited road infrastructure servicing the northwest portion of the community of Seaforth. Once completed, the proposed road extensions will present a more direct route for many residents to access facilities in the area, including the Seaforth and District Community Centre (Arena), located immediately north of Duke Street, and the Seaforth Community Hospital. Emergency access routes to the Hospital may be improved in conjunction with the proposed road extensions, for those residents living in the north portion of Seaforth. Accordingly, there may be increased traffic volumes along sections of Centennial Drive and Duke Street once the construction is completed.

It is not anticipated that these increases will be significant or result in significant impacts as few residences currently front on the affected section of Centennial Drive and the area already experiences moderate levels of traffic due to the presence of the Seaforth Community Hospital and Health Care Centre. Similarly, the affected section of Duke Street already experiences a moderate level of traffic flow due to the presence of the Community Centre and Agricultural Society site.

(c) Impacts on Adjacent Properties

As noted, a majority of the planned road extensions are located within cultivated agricultural fields with no adjacent properties that will be directly impacted by the proposed road construction activities. However, the westerly extent of the proposed Duke Street extension is located immediately north of the Seaforth public school property (playing fields) and at the south limit of the Seaforth Agricultural Society property. The Agricultural Society property in particular, will be directly impacted by the construction as the proposed road extension crosses the south limit of the property where a horse track is currently located. To mitigate this impact, the Municipality of Huron East has purchased that portion of the lands needed to facilitate construction of the proposed Duke Street extension and to undertake the relocation of the racetrack and other associated features (landscaping, fencing, utilities, etc.) impacted by the proposed work. Impacts to the public school property are not anticipated to be significant given that the proposed road extension is located adjacent to the play ground area and is currently separated by a fence, which will remain in place following construction of the proposed road extension.

Properties located adjacent to the proposed Centennial Drive extension are not expected to be significantly impacted by the proposed road extensions. Although a minor increase in traffic volumes may result once the road extensions are completed, there is little actual construction planned for the existing stretch of Centennial Drive. Municipal watermains are already installed within Centennial Drive and will be extended north into the road extensions from their current point of termination. Sanitary sewer servicing will be extended through the internal servicing corridor and then south within the road extension itself. Sewers are not currently proposed within the existing Centennial Drive boulevard. Minor impacts associated with construction traffic, noise and dust will be experienced, however access to the hospital and associated care facilities will be maintained at all times.

6.4 Economic Environment

(a) General

Capital costs associated with the planned road extension project will initially be funded through the capital reserves fund from the municipality. It is anticipated that a majority of the capital costs associated with the road and servicing extensions located adjacent to the development site, will be recovered over time through means such as development charges or through development agreements which are entered into between the Municipality and a proposed developer to address issues such as servicing prior to a development being approved.

(b) Project Cost Estimates

i) Duke Street and Centennial Drive Road Extensions

Estimated construction costs have been calculated for each aspect of the project based upon previous knowledge of the costs associated with various construction methods as well as actual construction costs known from former projects undertaken within the Municipality. Final costs associated with the project will not be known until all construction is completed. The estimated costs include construction of the road infrastructure, sanitary sewers, watermains and stormwater drainage infrastructure, and include an allowance for engineering and a contingency amount but do not include HST.

ii) Estimated Construction Costs

Component	Probable Cost
Duke Street Extension	\$ 972,000.00
Centennial Drive Extension	\$ 540,000.00
Stormwater Management Facility	\$ 255,000.00
Total	\$ 1,767,000.00

Annual maintenance costs associated with the proposed road and servicing extensions are not anticipated to be significant, given that the facilities will have been newly constructed and typically do not require much maintenance initially.

(c) Impact to Adjacent Properties

As noted above, a majority if the capital costs associated with the planned road and servicing extensions will be recovered over time from developers. This applies to the construction of Centennial Drive and the easterly extent of Duke Street. The westerly extent of Duke Street is bounded by existing developed properties, the Seaforth Public School to the south and the Seaforth Agricultural Society site to the north. Development of the road extension through these lands will be funded directly by the Municipality through their capital reserves fund. Existing development on adjacent properties will not be liable for construction costs associated with this portion of the project.

6.5 General Construction Mitigation

Construction-related activities associated with project implementation have the potential to impact upon existing environmental features, the general public and construction workers. The Contractor would therefore be responsible for carrying out these activities in accordance with industry safety standards and all applicable legislation. Mitigation measures would also be incorporated into the construction specifications to ensure that operations are conducted in a manner that limits detrimental effects to the environment. Table 6.1 outlines a series of mitigation measures that are commonly incorporated into construction specifications.

**Table 6.1
 Typical Mitigation Measures for Construction-Related Activities**

Construction Activity	Typical Mitigation Measure
Refuelling and Maintenance	<ul style="list-style-type: none"> - Identify suitable locations for refuelling and maintenance areas. - Restrict refuelling or maintenance of equipment near watercourses. Non-spill equipment is required within 30 m of any watercourse. Fuelled equipment shall be stored overnight not less than 30 m from the edge of water. - Avoid cleaning equipment in watercourses and in locations where debris can gain access to sewers or watercourses. - Prepare to intercept, clean up, and dispose of any spillage that may occur.
Traffic Control	<ul style="list-style-type: none"> - Require the Contractor to prepare and submit a traffic plan to the Contract Administrator for review and acceptance. - Maintain traffic flow for private accesses at all times during construction (as practical). - Provide adequate signage and barricades.
Disposal	<ul style="list-style-type: none"> - Dispose of all construction debris in approved locations. - Avoid emptying fuel, lubricants or pesticides into sewers or watercourses.
Dust Control	<ul style="list-style-type: none"> - Cover or wet down dry materials and rubbish to prevent blowing dust and debris. - Avoid the use of chemical dust control products adjacent to wetlands and watercourses.
Site Clearing	<ul style="list-style-type: none"> - Implement protective measures to safeguard trees from construction operations. - Restrict equipment or vehicles from being parked, repaired or refuelled near the dripline area of any tree not designated for removal. - Prohibit construction and earth materials from being stockpiled within the defined dripline areas. - Restrict tree removal to areas designated by the Contract Administrator. - Minimize stripping of topsoil and vegetation.
Sedimentation/ Erosion Control	<ul style="list-style-type: none"> - Erect sediment fencing to control excess sediment loss during construction period. - Minimize the removal of vegetation from sloped approaches to any affected watercourses. - Protect watercourses, wetlands, catch basins and pipe ends from sediment intrusion. - Complete restoration works following construction. - Install straw bale check dams in ditch lines following rough grading of ditches.
Noise Control	<ul style="list-style-type: none"> - Avoid nighttime or Sunday work, except in emergency situations.

6.6 Operations Phase

Upon completion of the proposed works the Municipality of Huron East would maintain the road, water and sanitary and storm sewer facilities in accordance with normal municipal practices. In this regard, the new servicing infrastructure would be subject to routine maintenance activities. Standard response procedures would also be employed to resolve problems with the constructed works, as well as emergencies.

7.0 CONCLUSIONS AND PROJECT IMPLEMENTATION

7.1 Selection of a Preferred Alternative

Given the foregoing, **Alternative1 – Extend Duke Street and Centennial Driver, including the provision of full municipal services** was selected as the preferred solution to the identified problem. This option involves the extension of Duke Street east from its current limit and Centennial Drive north, to lands in the northeast quadrant of Seaforth. Full municipal servicing would be incorporated into the proposed road allowance and/or designated servicing easements.

7.2 Impact Mitigation

Based upon a review of the current environmental setting, there were no impacts associated with implementation of the preferred alternative that could not be mitigated. Therefore, development of the proposed municipal road extensions, including the provision of full municipal services, appears to be appropriate for the subject lands and is not expected to result in adverse effects to the natural, social, economic or cultural environments.

7.3 Class EA Project Schedule

The recommended solution involves the extension of Duke Street directly east and Centennial Drive directly north to a new intersection. This is a Schedule "B" project under the Class EA, as it involves the extension of a road facility outside of existing road allowances or utility corridors. The process of implementing this alternative involves the submission of this screening report to the Municipality and the circulation of a Notice of Completion of the Class EA process through the local newspapers.

7.4 Final Public Consultation

To finalize the Class EA process, a Notice of Completion will be circulated to local residents, stakeholders, Aboriginal Communities and government review agencies (refer to Appendix C). The notice will identify the preferred alternative and provide the basis for appeal of the selected servicing plan (i.e., a Part II Order request to the Minister of the Environment and Climate Change prior to the conclusion of the review period).

The following summarizes the proposed distribution of the notice.

Contents:	Identification of preferred solution, key project components
Issued:	September 16, 2015
Placed In:	Huron Expositor (September 16 and 23, 2015), Municipal Website.
Distributed To:	9 review organizations
Review Period:	Concludes October 16, 2015

7.5 Class EA Finalization

The following activities are required in order to complete the formal Class EA process:

- Address outstanding issues resulting from the Notice of Completion.
- Finalize the Screening Report following the conclusion of the 30-day review period.
- Advise the Municipality of Huron East and the MOECC when the study process is complete (assuming no Part II Order requests are filed).

7.6 Project Implementation

The works associated with Alternative 1, as outlined in Table 3.1 of this report, are anticipated to be constructed in 2016 (Centennial Drive construction) and 2017 (Duke Street construction), pending the successful completion of the Class EA process and the receipt of all necessary approvals. Construction of the road extensions will typically begin in May and be completed by November of the same year. Watermains, gravity sewers and stormwater drainage infrastructure will be installed at the same time as road extensions.

Installation of services within the internal servicing corridor associated with development lands to the south and east of the planned road extensions, will be constructed in conjunction with the proposed development plans. The development is currently being reviewed by the County of Huron and the Municipality of Huron East and is tentatively scheduled for construction in 2016.

The proposed stormwater management facility may be constructed in phases with the initial phase being installed in conjunction with the planned development located immediately north of the facility. As development proceeds onto adjacent lands located north and east of the proposed road extensions, the facility will be expanded to address the additional runoff. Consultation with the Ausable Bayfield Conservation Authority will be initiated once a preliminary design for the facility has been completed.

The project will be completed by a qualified Contractor, following a competitive selection process. The constructed works will be warranted by the Contractor for a period prescribed in the contract documentation (typically one year). Following construction and commissioning of the facilities, the Municipality will maintain the physical condition and operation of all built works and will perform remediation work as required and in accordance with the requirements of applicable regulatory agencies.

8.0 APPROVALS

8.1 Conservation Authorities Act

The proposed road extensions are not located within an area that is regulated by the Ausable-Bayfield Conservation Authority through Ontario Regulation 97/04, therefore a permit pursuant to Section 28 of the Conservation Authorities Act will not be required. However, the ABCA has expressed an interest in the stormwater management details associated with the development of the future development lands, therefore a copy of the Conceptual Stormwater Management Report will be forwarded to the ABCA for their review, when it has been completed.

8.2 Ontario Water Resources Act

Wastewater works associated with the preferred alternative are subject to the *Ontario Water Resources Act*. Consequently, the project cannot proceed until the Municipality has received the necessary Environmental Compliance Approval from the Ministry of the Environment and Climate Change (MOECC). A permit to take water may also be required if significant de-watering (>50,000 l/day) is needed for the sanitary sewer installation. This permit would also be obtained from the MOECC.

8.3 Safe Drinking Water Act

The waterworks associated with the preferred alternative are subject to the Safe Drinking Water Act. Accordingly, the project cannot proceed until the Municipality has received the necessary approvals from the MOECC. The approvals documentation will define how these works must be designed, constructed, operated and maintained in order to ensure compliance with accepted engineering standards.

9.0 ENVIRONMENTAL COMMITMENTS

As an outcome of this Class EA planning process, the Municipality is committed to carrying out the following measures to mitigate the potential environmental impacts of project implementation:

- Implementation of standard construction mitigation measures during the road construction phase of the project, to minimize construction related impacts to the natural and social environments.
- Submission of relevant applications to the MOECC in conjunction with the proposed works, as well as implementation of all conditions issued in association with the subsequent approvals.
- Completion of agreed upon mitigation measures associated with the purchase of lands from the Seaforth Agricultural Society in order to extend Duke Street east from its current point of termination.

10.0 SUMMARY

This report documents the Municipal Class Environmental Assessment process conducted to evaluate the potential impacts associated with the extension of municipal road, water and wastewater infrastructure along the easterly extension of Duke Street and the northerly extension of Centennial Drive in northeast Seaforth. A preferred servicing plan was selected through the Class EA process. The potential environmental impacts of the proposed works can be effectively mitigated through the implementation of measures defined in this report.

The proposed project is a Schedule 'B' activity under the terms of the Class EA document. The Municipality of Huron East intends to proceed with the implementation of this project following completion of the Class EA process and upon receipt of all necessary approvals.

All of which is respectfully submitted.

B. M. ROSS AND ASSOCIATES LIMITED

Per _____
Bruce Potter, P. Eng.

Per _____
Kelly Vader, RPP, MCIP
Environmental Planner

:hv

References

1. Municipal Engineers Association, Municipal Class Environmental Assessment, June 2000 as amended in 2007 and 2011.
2. County of Huron Planning and Development Department. Huron East Official Plan. July 2003 (Consolidated Copy August, 2014).
3. County of Huron Planning and Development Department. Municipality of Huron East Zoning By-Law 52-2006. September 19, 2006 (Consolidated August, 2014).
4. Chapman, L.J. and Putnam, D.F. The Physiography of Southern Ontario. Third Edition. 1984.
5. Ministry of Natural Resources. Natural Heritage Information Centre (website).
6. Ausable Bayfield Conservation Authority. Website, 2015.
7. Ausable Bayfield Maitland Valley Source Protection Region. Website, 2015.
8. Bird Studies Canada. Atlas of the Breeding Birds of Ontario. Website, 2015.
9. B.M. Ross & Associates Ltd. Class EA for Sanitary Servicing of the Community of Egmondville. February 9, 2011.
10. J.L. Retirement Living. Preliminary Site Plan. July 2015.

APPENDIX 'A'

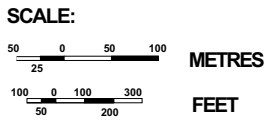
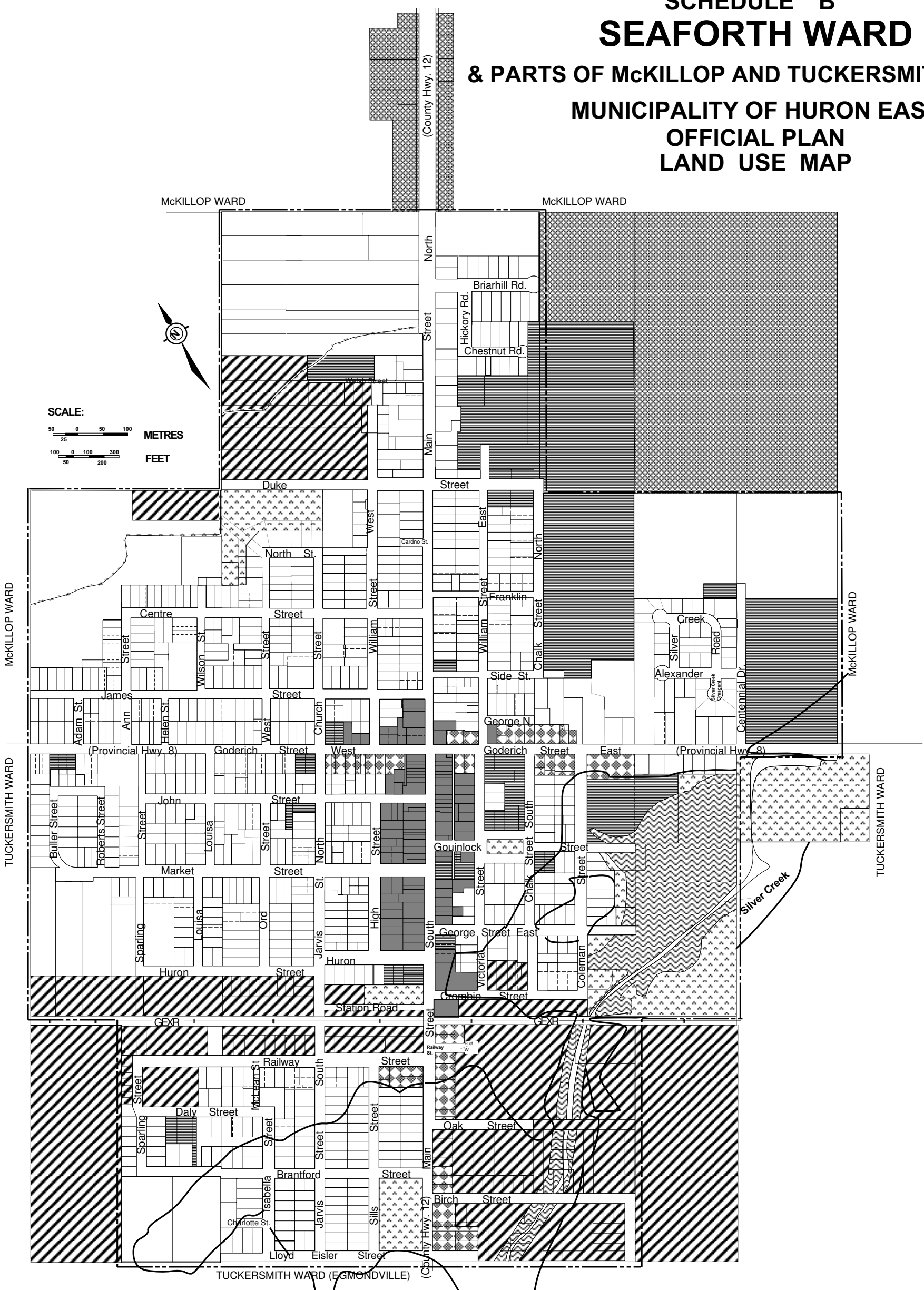
**EXCERPTS FROM HURON EAST PLANNING
DOCUMENTS**

SCHEDULE "B" SEAFORTH WARD

& PARTS OF McKILLOP AND TUCKERSMITH WARDS

MUNICIPALITY OF HURON EAST

OFFICIAL PLAN
LAND USE MAP



- | | |
|--|------------------------|
| Residential | Core Area Commercial |
| Urban Natural Environment and Open Space | Industrial |
| Community Facility | Inner Flood Plain |
| Highway Commercial | Flood Plain Limit |
| Urban | Seaforth Ward Boundary |
| Watercourse (Urban Natural Environment) | |

Produced by the County of Huron Planning and Development Department
July 2003
Updated December 2006 with OPA #2
Updated September 2009 with OPA #3

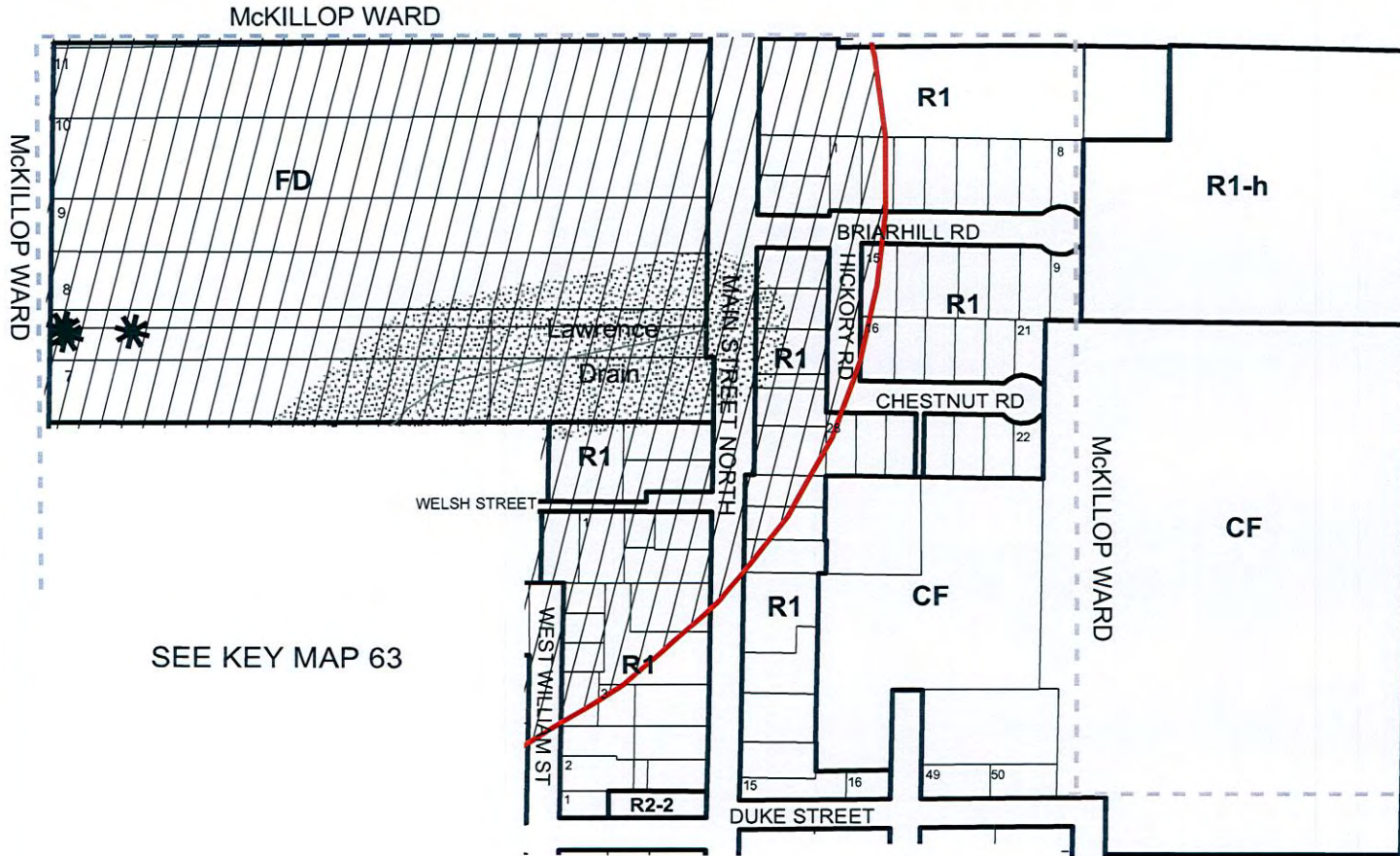
McKILLOP WARD
SEE KEY MAP 33

McKILLOP WARD
SEE KEY MAP 34

Lot 26 Con 2

Lot 25 Con 2

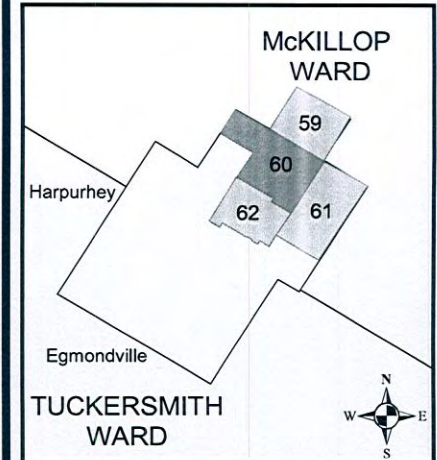
SEE KEY MAP 59



SEE KEY MAP 63

SEE KEY MAP 62

SCHEDULE 'A'
KEY MAP 60
HURON EAST
SEAFORTH WARD

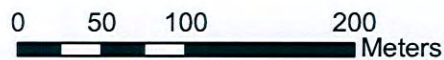


McKILLOP WARD SEE KEY MAP 61

	Rivers		Roads
	Zone		Adjacent Lands and/or Conservation Authority Regulated Lands
	Municipal Well		2 Year Time of Travel (See section 3.50)

Amendments
Amendede by By-law 85-2009 (Adding the Identification of Municipal Wells and 2 year time of travel)

REVISION DATE
May 18, 2010



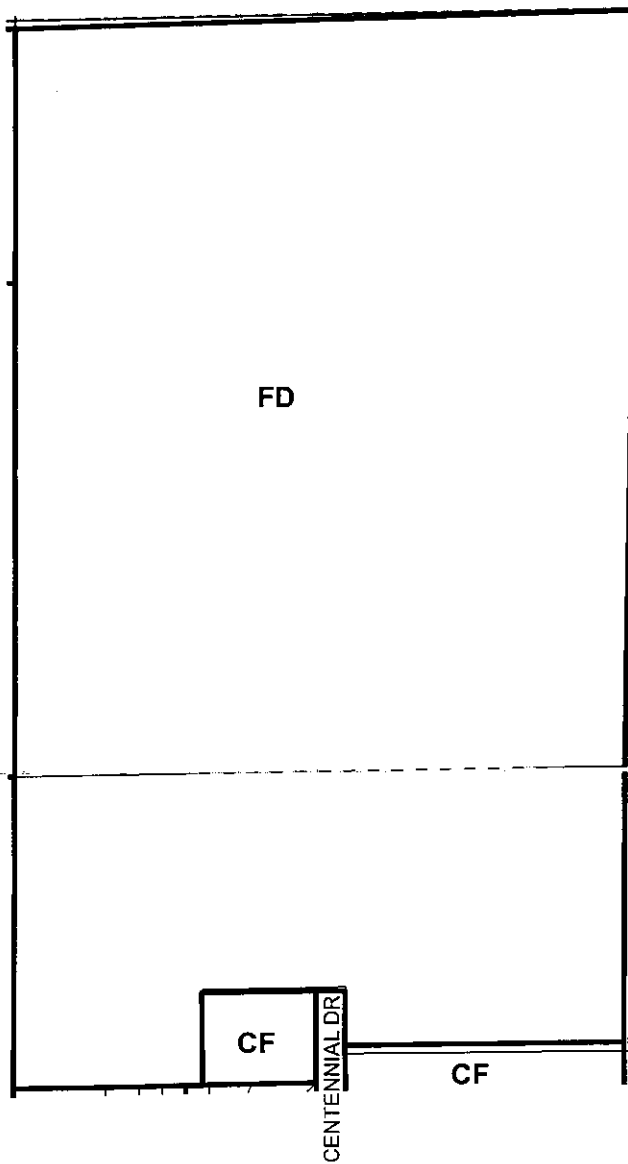
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Lot 24 Con 2

McKILLOP WARD SEE KEY MAP 34

SEE KEY MAP 60

McKILLOP WARD
SEE KEY MAP 34

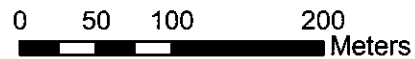


McKILLOP WARD
SEAFORTH WARD

McKILLOP WARD
SEAFORTH WARD

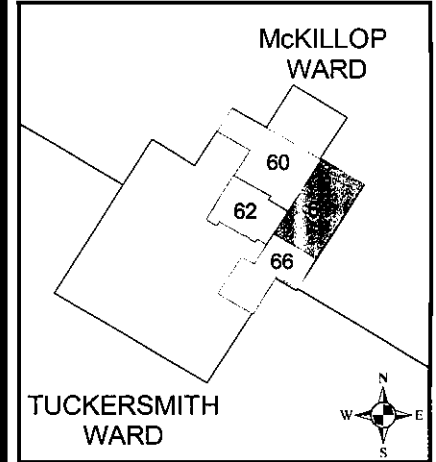
SEE KEY MAP 62

SEE KEY MAP 66






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SCHEDULE 'A'
KEY MAP 61
HURON EAST
 SEAFORTH WARD



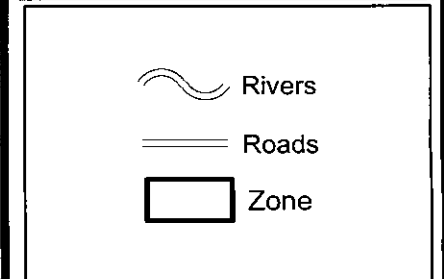
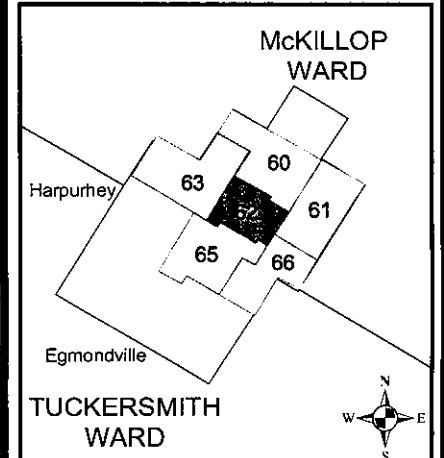
TUCKERSMITH
WARD

-  Rivers
-  Roads
-  Zone

Amendments

REVISION DATE
September 19, 2006

SCHEDULE 'A'
KEY MAP 62
HURON EAST
 SEAFORTH WARD



Amendments
 1 Minor Variance A1-09

REVISION DATE
October 25, 2010

Lot 25 Con 1

SEE KEY MAP 60

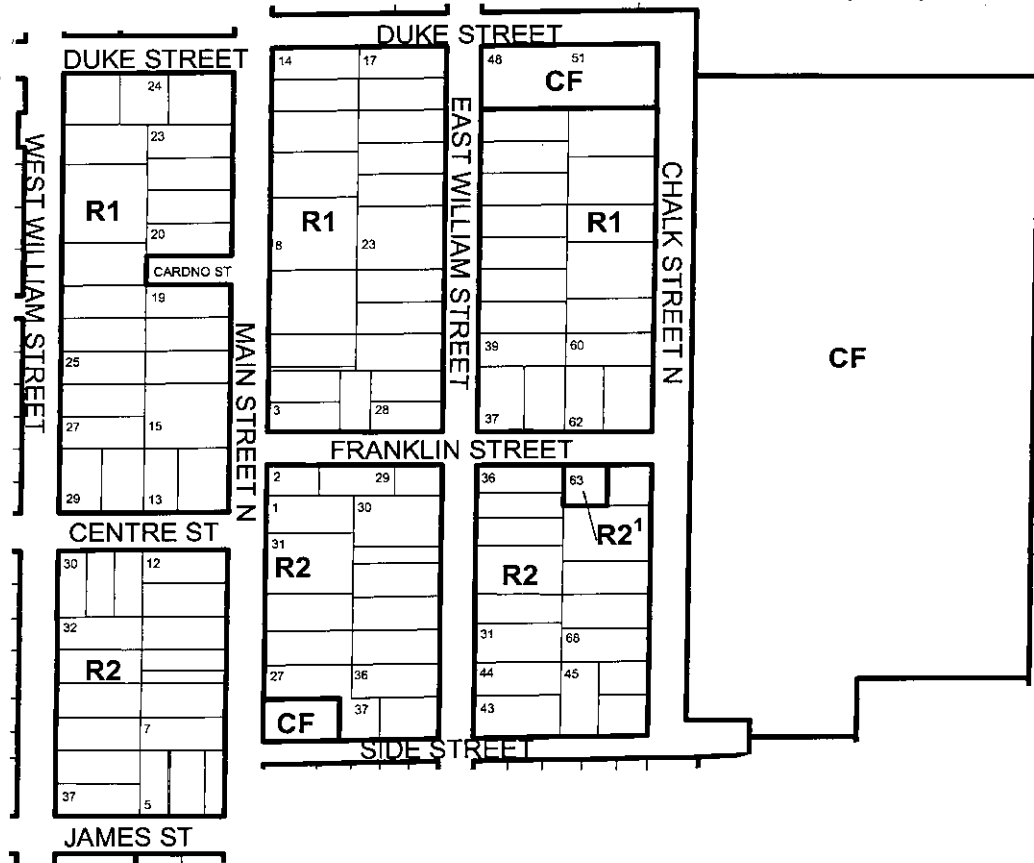
McKILLOP WARD

McKILLOP WARD

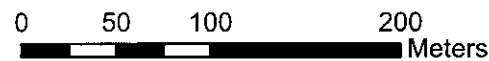
SEE KEY MAP 61

SEE KEY MAP 66

SEE KEY MAP 63



SEE KEY MAP 65



1:4,000

**SECTION 6
URBAN SETTLEMENTS**

6.1 Introduction

Policies for development will be structured around the following servicing levels and settlement types:

**Existing Water and Sewer Services
in Urban Settlements**

Public Water and Public Sewer	Public Water and Private Septic	Private Water and Private Septic
Seaforth Brussels Vanastra	Egmondville Brucefield South of Clinton	Harpurhey Ethel Cranbrook Molesworth Henfryn Graham Survey Winthrop Kippen Walton St. Columban Dublin

Huron East has a system of urban places including the larger full serviced settlements of: Brussels, Seaforth and Vanastra and the partially serviced settlements of Egmondville, Brucefield, and South of Clinton. The other settlement areas are serviced by private water and septic and include: Harpurhey, Ethel, Cranbrook, Molesworth, Henfryn, Graham Survey, Winthrop, and part of the settlements of Kippen, Walton, St. Columban and Dublin.

It is the intention of this Plan to promote the development of these settlements in a manner consistent with their existing roles, character and servicing.

The urban policies will also need to address other types of urban settlements such as: development adjacent to the neighbouring urban settlements of Clinton and Hensall; and existing/future Mobile Home Park development.

New developments may be required to provide the following information:

- Storm water management plan
- Water supply and sewage disposal
- Lot grading and drainage plan
- Landscaping plan
- Utilities (hydro, gas, telephone, etc.)

- Other information as required by the Municipality of Huron East

6.2 Definition and Location

This Plan deals with various types of urban development based on function, size and the availability of services with definitions, goals, policies, locations and implementation criteria established for each.

The classification of land use categories in each of the urban servicing policy sections is as follows:

- Residential
- Commercial (including Core Area Commercial and Highway Commercial)
- Industrial
- Urban Natural Environment and Open Spaces
- Flood Plain
- Mobile Home Parks

Their boundaries are shown on Schedules "B" as attached e.g. Schedule "B" – Seaforth, Schedule "B" - Brussels.

The following sections are established for the settlement areas:

- Larger Settlement Areas: Seaforth, Brussels and Vanastra
- Hamlets
- Mobile Home Parks

The location of the lands designated Urban, to which the urban policies apply, is shown on Schedule "B". Specific locations of different types of uses are shown in the Zoning By-law. In addition:

- Two Industrial designated locations in the south west and south east corners of Seaforth are located in the Tuckersmith Ward. The Industrial policies of Section 6.3.3.4 shall apply.
- One Urban designated location in the north east corner of Seaforth is located in the McKillop Ward. The policies of Section 6.3. shall apply.

**6.3 Larger Settlement Areas:
Seaforth, Brussels and Vanastra**

6.3.1 Introduction

Huron East has three larger settlement areas serviced by public water and public sewage: Seaforth, Brussels and Vanastra.

The settlement of **Seaforth** functions as the largest urban centre for housing and employment in the urban system of Huron East.

It is also one of the 5 main urban settlements in Huron County. In addition to a Provincial highway, a freight rail line also services Seaforth. The Municipal services of Seaforth and the adjacent settlement areas of Egmondville and Harpurhey will continue to be expanded to accommodate further growth and development in the Municipality.

The heritage attributes of Seaforth, its Victorian Main Street and tree lined streets dotted with heritage homes, make it a desirable residential area and visitor destination. Seaforth's pride reflects a long tradition of community involvement and sports achievements; it promotes itself as "Small Town Canada at its Best". Seaforth is located on Provincial Highway #8 halfway between Stratford and Goderich. Adjacent to Seaforth are the settlements of Harpurhey and Egmondville which present an additional residential focus for the area. The Bayfield River and Silver Creek provide natural heritage features in the area.

The settlement of **Brussels** functions as an urban service centre for the surrounding rural agricultural area and provides an important residential, institutional and commercial focus. Rich in natural and built heritage, Brussels' location on the Maitland River provides a scenic location for its historical features and homes. Brussels promotes itself as providing the ambiance of rural life – with urban convenience. Brussels is located approximately 25 km north of Seaforth along County Road #12. The urban designated area of Brussels is large enough to accommodate its anticipated growth, at this time.

The settlement of **Vanastra** provides an important residential, institutional, industrial and commercial function. As a former military base transferred to private ownership, Vanastra displays some unique design and building characteristics. It is located just south of Clinton on Provincial Highway #4. The eastern half of Vanastra is composed almost entirely of residential and institutional uses; whereas the west is largely a combination of industrial, commercial and some institutional uses. The continued development of the commercial / industrial sector and the residential area should be encouraged and compatibility issues addressed.

6.3.2 Goals

The following goals are established:

- i) To provide opportunities for new residential, commercial, and industrial development.

- ii) Expansion of urban settlement boundaries will be based on the availability of public water and sewer and a demonstrated need for the urban growth.
- iii) To prevent fringe or sprawl development patterns by efficient concentration of urban uses.
- iv) To provide a broad mix of housing choices, both to rent and to own, in sufficient supply and variety in type, cost, affordability and location to meet the varying housing needs of the community.
- v) To promote the creative use of landscaping, energy efficiency, building and site design in residential development and the integration of new buildings to harmonize with established areas.
- vi) To maintain stable, safe, attractive, and healthy residential neighbourhoods while protecting from conflicting land uses.
- vii) To promote architecturally compatible housing and compatible lot sizes in existing residential areas.
- viii) To limit industrial uses to those that are in compliance with Provincial emissions standards and servicing capacities.
- ix) To retain the maximum flexibility for commercial and industrial uses in hamlets. These uses can locate in the urban designation with the appropriate amendment to the Zoning By-law.
- x) To designate lands as commercial or industrial in the larger settlements.
- xi) To guide the location and development of Community Facility uses ensuring their compatibility with surrounding land uses.
- xii) To meet the urban natural environment, parks and open space needs of the community and to protect unique or fragile natural landscapes.
- xiii) To undertake a floodplain management program to ensure proper land use and to minimize risk to life and property.

6.3.3 Policies and Actions

Development Policies and Actions will be grouped according to type of land use:

- Residential
 - Low Density

- Medium and High Density
- Other Permitted Uses in Residential Areas
 - Home Occupations and Home Industries
 - Medical Facilities
 - Bed and Breakfast
 - Group Homes
 - Senior Citizens' Housing
 - Residential Conversions
 - Community Facility and Open Space Uses

Commercial

Industrial

Mobile Home Parks

Community Facility

Urban Natural Environment and Open Space

- Floodplain

6.3.3.1 Residential

The residential function of Seaforth, Brussels and Vanastra is the main use of land in these communities. The residents choose to live here for the sense of community, access to services, housing choices and quality of life. The intent of the Plan is to maintain and enhance the residential neighbourhoods through the following goals and policies:

- i) Adequate parks, water supply, sanitary waste disposal, storm and surface drainage, roads, sidewalks and street lighting are available or are made available to serve the proposed development.
 - ii) The location of dwellings shall generally follow a compatible transition from higher to lower density forms of housing. Dwelling types will be encouraged to locate in a manner that groups similar types and provides for appropriate separations between different densities and an arrangement of housing types that will prevent conflicts between types.
 - iii) Natural site features including tree cover and topography will be protected and incorporated into the design concept as far as possible and landscaping will be used to enhance residential character and quality.
 - iv) New residential development will be allowed in all residential neighbourhoods both as infilling and expansion on full Municipal services. Infilling will proceed primarily by severance and the proposed lot sizes shall be compatible with the existing lot sizes in the immediate area. The expansion of residential areas will be by registered plan of subdivision or condominium, will maintain a continuous urban form and will be staged to the availability and capacity of Municipal services.
- v) Energy conservation concepts will be encouraged into road, subdivision and building design to permit new dwellings to take advantage of passive solar heat gain.
 - vi) Alleviation measures will be included in the development and redevelopment of residential land uses located or being proposed in areas subject to the impact of noise and/or vibration.
 - vii) New housing should be carefully designed to blend with the form, scale, character and architectural design of existing development and should be compatible with existing or proposed surrounding uses.
 - viii) The Municipality of Huron East will have regard for accessibility issues promoting a barrier free Municipality in accordance with the *Ontarian's with Disabilities Act, 2001*. (www.gov.on.ca/citizenship/accessibility)
 - ix) Residential uses will be allowed within the central business area above or behind commercial uses, but must be provided with adequate off-street parking facilities.
 - x) Home occupations and home industries will be allowed in residential areas subject to the provisions of the implementing Zoning By-law.
 - xi) All residential areas requiring an upgrading of the physical environment including the needed hard and soft services, are designated as community improvement areas; in these areas, programs for conservation, rehabilitation and renewal will be initiated in conjunction with the neighbourhood residents.
 - xii) The larger settlement of Seaforth has 2 adjoining smaller hamlets: Egmondville and Harpurhey. Future development of these adjacent areas may need to be fully serviced with Municipal water and sewer. Limited infill development may be considered on private servicing conditional upon a Sewage Strategy and approval of authorities.
 - xiii) The larger settlement of Brussels has 2 adjoining smaller hamlets: Graham Survey and East of Brussels. Future development of these adjacent areas may need to be fully serviced with Municipal water and sewer.

Limited infill development may be considered on private servicing conditional upon a Sewage Strategy and approval of authorities.

6.3.3.1.1 Low Density

- i) Includes single and two-unit dwellings.
- ii) Low density housing will comprise most of the residential land area and the predominant housing type will be the single detached residence. Semi-detached and duplex dwellings will be sensitively integrated and sited to create a pleasing visual effect and balance in the residential environment.

6.3.3.1.2 Medium and High Density

- i) Medium density includes triplexes, fourplexes, and townhouses, which do not exceed four units per building.
- ii) High density includes apartments and townhouses, which exceed four units per building.
- iii) Medium and high density uses will be permitted in limited numbers throughout the residential designation of land use, subject to the appropriate zoning.
- iv) New development will come under the site planning controls of Section 41 of the *Planning Act*, (RSO 1990), and applicants shall be required to enter into registered agreements with the Municipality prior to the enactment of an amendment to the Zoning By-law and/or the issuance of building permits.
- v) Medium and high density housing proposals will be considered individually on their merits and prior to rezoning shall meet the following criteria:
 - medium and high density housing shall maintain a low building profile in relation to the residential area and their design should maintain the low density character of the residential area;
 - all parking to be off-street;
 - attractive landscaping and adequate on-site amenities will be provided;
 - the siting, design and coloration of buildings and structures should be used to create a harmonious blending with the surrounding residential area.
- vi) Where a conflicting land use exists near a developing residential area, the residential development will incorporate appropriate

measures to prevent or alleviate any adverse effect on the residential use.

- vii) Medium and high density sites shall be located in a manner, which minimizes traffic movement through low density residential areas.
- viii) The consideration by Council of medium and high density housing proposals will be based on the submission of perspective drawings.

6.3.3.2 Other Permitted Uses in Residential Areas

In residential areas, secondary or complementary uses have occurred and will continue to occur. The following Policies and Actions provide guidance and compatibility criteria for review of these uses:

6.3.3.2.1 Home Occupations and Home Industries

Home occupations and home industries will be allowed in residential areas subject to the provisions of the implementing Zoning By-law.

6.3.3.2.2 Medical Facilities

Medical facilities such as the offices of doctors, dentists and drugless practitioners will be allowed in a residential area subject to the following:

- i) The policy set out for home occupations and the requirements of the Zoning By-law.
- ii) Medical facilities which exceed the criteria of home occupations will be required to locate in a commercial area, or in a special medical care facilities area developed in conjunction with the Seaforth Community Hospital complex or the Brussels Medical Centre
- iii) **Site Plan Control**
Pursuant to Section 41(2) of the *Planning Act*, (RSO 1990), any lands proposed for medical facilities, under subsection (ii) above, are hereby established as a proposed site plan control area within which Council may pass site plan control by-laws.

6.3.3.2.3 Bed and Breakfast

Bed and Breakfast establishments are allowed in the residential designation where permitted by and in accordance with the Comprehensive Zoning By-law.

6.3.3.2.4 Group Homes

Group homes, as defined in the Zoning By-law, will be permitted in the Municipality subject to the following Policies and Actions:

- i) Group homes will be allowed in all residential areas consistent with the scale of the area and the requirements of the Zoning By-law.
- ii) To ensure group home facilities are not concentrated, minimum separation distances between group home facilities will be established in the Zoning By-law.
- iii) That Municipal sanitary, storm and water supply services are available and have the capacity to accommodate the development.
- iv) That appropriate site planning measures are used to ensure compatibility with adjacent residential uses.
- v) That the residential character of building exteriors is maintained.
- vi) That conversions meet the requirements of the Zoning By-law, the property standards and occupancy by-law.
- vii) **Site Plan Control.** Pursuant to Section 41(2) of the *Planning Act*, (RSO 1990), any lands proposed for a residential conversion are hereby established as a proposed site plan control area within which Council may pass site plan control by-laws.

6.3.3.2.5 Senior Citizens' Housing

Senior Citizens' Housing includes nursing homes, rest homes, and long-term residential care for seniors / physically challenged adults' and seniors' dwelling units. These residential services for seniors will be permitted subject to the following Policies and Actions:

- i) That sufficient road access, on-site parking, amenities, and services are provided to meet the needs of the development.
- ii) That the development is designed in harmony with the scale, building height and character of the surrounding area.
- iii) That appropriate site planning measures are used to ensure compatibility with adjacent residential uses.
- iv) That a nursing home complies with Provincial legislation.
- v) **Site Plan Control.** Pursuant to Section 41(2) of the *Planning Act*, (RSO 1990), any lands proposed for senior citizens' housing are hereby established as a proposed site plan control area within which Council may pass site plan control by-laws.

6.3.3.2.6 Residential Conversions

Residential conversions to multi-household units will be permitted subject to the following Policies and Actions:

- i) That sufficient road access, on-site parking, amenities and services are provided to meet the needs of the development.
- ii) That Municipal sanitary, storm and water supply services are available and have the capacity to accommodate the development.
- iii) That the residential character of the area is maintained.

6.3.3.2.7 Community Facility and Open Space Uses

In addition to the primary residential uses, community facility and open space uses will be allowed in residential areas. These uses which form an integral part of the residential area and play a supportive role may be permitted if the following Policies and Actions are satisfied:

- i) They are located and designed so that the primary residential character, function, and atmosphere is maintained.
- ii) Necessary site planning measures are taken to avoid disrupting surrounding residential uses by nuisances arising from traffic flow, signage, and assemblages of people and lighting.
- iii) Sufficient on-site or nearby parking is provided.
- iv) An amendment to the Zoning By-law to the appropriate Community Facility or Urban Natural Environment and Open Space zone is made.
- v) **Site Plan Control**
Pursuant to Section 41(2) of the *Planning Act*, (RSO 1990), any lands proposed for community facility and open space uses are hereby established as a proposed site plan control area within which Council may pass site plan control by-laws.

6.3.3.2.8 Funeral Homes

In Huron East, three funeral homes are located in residential neighbourhoods (2-Seaforth; 1-Brussels). These uses will be recognized by a special residential zone in the corresponding Zoning By-law. Any expansion of these uses onto adjacent

properties will require a Zoning By-law amendment and not an Official Plan Amendment. New funeral homes will be directed to Commercial areas.

Site Plan Control

Pursuant to Section 41(2) of the Planning Act, (RSO 1990), any lands proposed or used for a funeral home are hereby established as a proposed site plan control area within which Council may pass site plan control by-laws. (OPA#5)

6.3.3.2.9 Barns in Settlement Areas

In Huron East, in settlement areas, the establishment of a barn requires a rezoning to a special zone specifying the maximum number and type of livestock. (OPA#2)

6.3.3.3 Commercial

Commercial development is a key component of towns and villages. The downtowns of Seaforth and Brussels provide a focus for pedestrian commercial activity and an historic sense of community. Highway commercial areas provide vehicular-oriented commercial activity in both settlements. Vanastra's commercial activity is unique in its geographic disbursement amongst industrial uses. The intent of the Plan is to maintain and enhance commercial areas through the following goals and Policies and Actions.

6.3.3.3.1 Definitions and Location

The commercial classification of land use is comprised of three major groups:

Core Area

The core area is the most intensive, diversified, and dominant centre of community activity in the Municipality providing a broad spectrum of retail, business, financial, personal and professional services, offices and studios, hotels and restaurants, places of entertainment, culture, habitation and recreation, institutional, community facility, judicial, civic and administrative uses. As a multi-functional environment, which serves as the social, economic, and cultural focal point of the community, the core area provides a basic people-place function.

The core area is the traditional and established business district of the Municipality with its tightly built up urban form and compact nature. It is connected by a system of sidewalks, roads, and parking areas provided for the general commercial requirements of the Municipality and particularly the multi-purpose pedestrian comparison shopping trade.

Highway Commercial

Highway commercial uses play a more specialized and distinct role in the commercial hierarchy of the Municipality. Typically, highway commercial uses exhibit a single-purpose character and are oriented to highway-related functions. They take a variety of forms and share all or many of the following characteristics:

- Those which are essential to the operation of the highway system such as work yards, police facilities.
- Those which are oriented to or economically reliant on serving vehicular traffic and the traveling public such as service stations, motels and eating establishments, and therefore require exposure on a major road.
- Those which require large tracts of land for large buildings, extensive parking, and loading operations, such as public garages, building supply yards, contractors' yards, fuel dealers, boat, marine and trailer sales, farm implement dealers.
- Those which require access to a major road for efficient operation such as trucking businesses, bus depots, contractors' yards.
- Those which provide neighbourhood convenience goods or services such as a convenience store, or laundromat but not including offices, financial services, or the general commercial uses of the core area.

Because of their extensive space needs, operating characteristics, locational and functional requirements, highway commercial uses either cannot be accommodated or would be incompatible with the compact nature of the core area. In addition, a range of secondary uses which are supportive, complementary or compatible with the primary commercial function will be permitted including recreational facilities, utilities, assembly halls, clinics, funeral homes, accessory buildings and parking lots.

Vanastra Commercial Industrial

Vanastra Commercial Industrial refers to a wide range of either commercial or industrial activities. Commercial refers to the business of buying, selling, leasing and exchanging of commodities and services. Industrial refers to the use of land, structures or buildings for processing, manufacturing, dismantling, and the repairing and servicing of vehicles, machinery, and buildings for associated administrative work. Industrial uses are intended to include those, which are compliant with Provincial emissions standards and servicing capacity.

SECTION 9 INFRASTRUCTURE AND SERVICING

9.1 Introduction

In the settlement areas, certain areas of land are devoted to provide facilities for public use or public service. These uses are necessities and include the provision of potable water, roads, sewage treatment and storm water management. Infrastructure and Servicing vary in scale, function, and locational requirements and require planning guidelines and controls to ensure compatible integration within the community.

Infrastructure and servicing are fundamental building blocks for development and have the potential to greatly impact the environment. "Infrastructure" refers to the physical structures that form the foundation for development, including utility lines and corridors, landfill sites, windmills, railway corridors and communication facilities, roads, water and sewage treatment plants and distribution systems. "Servicing" describes the act or result of employing infrastructure facilities to meet the physical needs of development and the community.

9.2 Definitions

Infrastructure and Servicing cover a broad range of land uses that provide facilities for public service and public use. These are owned or operated by public, semi-public or private enterprises to meet the infrastructure requirements of the community.

Infrastructure and Servicing form part of a larger grid, network or system and have limited location discretion. These include such uses as:

- Utility lines and corridors
- Municipal Wells
- Waste management
- Electric power
- Wind energy
- Solar energy
- Railway and communications facilities
- Roads
- Water and sewage treatment plants and distribution systems
- Flood and erosion control works

Full Municipal Services means piped sewage and water services that are connected to Municipal centralized waste water and water treatment facility.

Communal / Shared Services means sewage systems and water works that provide for the

distribution, collection or treatment of sewage or water but which:

- are not connected to full Municipal sewage and water services;
- are for the common use of more than five residential units/lots;
- are owned, operated and managed by:
 - the Municipality
 - another public body
 - a condominium corporation or single owner which has entered into a responsibility agreement with the Municipality or public body

Individual Private Systems means individual autonomous water supply system which is owned, operated and managed by the owner of the property upon which the system is located and which does not serve more than five residential units/ lots.

Individual Private Systems also means an autonomous sewage disposal systems which is owned, operated and managed by the owner of the property upon which the system is located.

Partial services mean connection to Municipal water and private on site sewage.

Responsibility Agreement means an agreement entered into between the Municipality or a public body and a single owner pursuant to Section 51 of the *Planning Act* (RSO 1990) providing for Municipal or public assumption of the communal services in event of default by the owner.

9.3 Goals

The following goals are adopted for Municipal Infrastructure and Servicing:

- i) To reduce deficiencies and improve Municipal services in order to maintain the quality, safety and stability of the community. This includes the creation of new services where necessary, having regard to the needs of the residents of the Municipality.
- ii) To provide efficient and compatible locations for infrastructure and utilities.
- iii) To establish a road system capable of providing for the safe and efficient movement of people, goods and services.
- iv) To provide a system of Municipal services consistent with the needs and resources of the community, including: high standards of design and sound planning, engineering, and environmental practices.

9.4 Policies and Actions

Infrastructure and Servicing such as: roads, transmission lines, communication, sewers, railway, and water lines may be permitted within Huron East without amendments to the Official Plan and Zoning By-law provided they are established in consultation and co-operation with the Municipality. Development of Infrastructure and Servicing may be made conditional upon public meetings and agreements at the discretion of the Municipality, unless they are subject to the *Environmental Assessment Act* review process.

9.4.1 Water and Sewage Services

The Municipality of Huron East recognizes the hierarchy of water and sewer servicing preferences established by the *Provincial Policy Statement*, and implements corresponding requirements in Huron East.

Full Municipal sewage and water services are the preferred form of servicing for urban areas. In areas serviced by full Municipal sewage and water services, new and infill development will only be permitted if the water and sewage systems have sufficient capacity to accommodate previously approved development commitments and any proposed new development. New subdivisions will only be permitted on full Municipal sewage and water services, or by a standard of servicing to be determined by a sewage strategy.

A Sewage Strategy for the Municipality is recommended by the Ministry of the Environment. Requirements for this strategy are available in *Guideline D-5: Planning for Sewage and Water Services*. Prior to the availability of the Municipal Sewage Strategy, individual applications for new development will require sewage servicing plans. Both the Municipal Sewage Strategy and the individual sewage servicing plans should address:

- consideration of a reasonable range of alternatives;
- identification and consideration of the effects of each alternative on all aspects of the environment;
- systematic evaluation of alternatives, their advantages and disadvantages, to determine their net environmental effects;
- documentation of the planning process followed, to clearly outline the decision-making process with respect to the project.

Any development proposed on private systems must be supported by studies that include, as a minimum, evaluations of percolation rates and impacts on ground water resources and

adjacent watercourses. Approval of development will require that these studies demonstrate no adverse effects on the quality of surface water, groundwater and the water in active wells operating in the general vicinity.

All water supplies to areas of new development in a settlement area will be provided in accordance with the current *Ontario Drinking Water Act* regulations, as amended.

In areas where full Municipal services are not available or not feasible, where development can be justified consistent with the Policies and Actions of this Plan, the use of individual private on-site sewage and water services may be considered subject to meeting environmental and public health requirements. This will mainly allow for infill development in areas with individual services.

Lot creation or new development will be required to enter a development agreement with the Municipality, registered on title, which may address the following:

- Water supply
- Sewage disposal
- Lot grading and drainage
- Storm water management including erosion and sediment control
- Landscaping
- Protection of natural features
- Utilities (hydro, gas, telephone, etc.)
- Other information as required by the Municipality of Huron East

Minimum standards for servicing are outlined in the table below.

SERVICING TABLE

Development Area	WATER SERVICING REQUIRED		SEWER SERVICING REQUIRED	
	Existing Lots or Infill (Consent)	New (Plan of Subdivision)	Existing Lots or Infill (Consent)	New (Plan of Subdivision)
LARGER SETTLEMENT AREAS				
- Seaforth - Brussels - Vanastra	- Municipal	- Municipal	- Municipal	- Municipal
- Egmondville	- Municipal	- Municipal	- Individual private systems, or - Municipal if available	- Municipal, or -Standard of servicing to be determined by Sewage Strategy
- Brucefield - Area South of Clinton	- Municipal	- Municipal	- Municipal if available, or -Individual private system	- Municipal, or -Standard of servicing to be determined by Sewage Strategy
HAMLETS				
- Harpurhey - Ethel - Cranbrook - Molesworth - Henfryn - Graham Survey - Winthrop - Kippen - Walton - St. Columban - Dublin	- Individual private systems	- Individual private systems, or - Municipal if available	- Individual private systems, or - Municipal if available	- Standard of servicing to be determined by Sewage Strategy
Development Area	Existing Lots or Infill (Consent)	Expansion	Existing Lots or Infill (Consent)	Expansion
MOBILE HOME AND TRAILER PARKS				
- Brussels Mobile Home Park	- Municipal	- Municipal	- Municipal	- Municipal
- Heritage Estates Mobile Home Park (Tuckersmith Ward)	- Private Shared	- Municipal	- Individual private systems	- Municipal, or -Standard of servicing to be determined by Sewage Strategy
- Morgan's Mobile Home Park (Tuckersmith Ward)	- Municipal	- Municipal	- Individual private systems	- Municipal
- Family Paradise Trailer Park and Campground (Seasonal)	- Private shared	- Private shared	- Private shared	-Standard of servicing to be determined by Sewage Strategy
- New Mobile Home Parks (Urban)	- Not applicable	- Municipal	- Not applicable	- Municipal

9.4.2 Roads

The Policies and Actions of this section shall apply to all Provincial Highways, County Roads and Municipal Roads as identified on the Roads Schedules to this Plan.

The public highways and streets are functionally classified as follows:

- Arterial roads: are designed to facilitate through traffic. These roads will be developed, where possible, on a 100 foot road allowance and direct access will be limited so as not to impede the efficient flow of through traffic. In Huron East, all King's Highways are arterial roads.
- Collector roads: have the dual function of carrying moderate volumes of traffic and providing land access. Collector roads distribute traffic between local and arterial roads and carry lighter volumes for shorter trips than an arterial road. These roads will be developed, where possible, on a 100 foot road allowance. In Huron East, all County Roads are collector roads.
- Local roads: provide localized access and minimize through traffic. These roads will be developed, where possible, on a 66 foot road allowance. In Huron East, all Municipal roads are local roads.

All development must front on a public road constructed to the appropriate Provincial, County or Municipal standards. Preference of road access for development shall be considered in the following order: Municipal, County, Provincial.

New private roads in mobile home parks, trailer parks, or serving other private areas, will not be permitted unless they are registered as private roads under the *Condominium Act*.

Mobile home parks should have direct access into a major road and shall not cause heavy volumes of vehicular traffic to use nearby quiet residential streets.

Road alignments, widths, layout and construction standards will be appropriate to the functional classification of the road, projected traffic volumes, prevailing design and safety standards. New roads, created by plan of subdivision or consent, shall be constructed to minimum standards as required by the Municipality prior to their assumption as a public road.

Provincial Highways are regulated by the Ministry of Transportation under the *Public Transportation and Highway Improvement Act*. Ministry of Transportation approval permits are required for all new or altered entrances to the highway system and for all buildings and/or structures located adjacent to the highway. In addition where development is proposed adjacent to a Provincial Highway, it will be incumbent upon owners to obtain permits from the Ministry of Transportation for any access to the highway as well as for any buildings and structures prior to any construction being undertaken.

County Roads are regulated by by-laws of the County of Huron. Any proposed development must conform to these by-laws and appropriate entrance permits must be obtained.

Municipal Roads are regulated by by-laws of the Municipality of Huron East. Any proposed development must conform to these by-laws and appropriate entrance permits must be obtained.

i) New Development

The development of undeveloped land in an existing or proposed Plan of Subdivision will require roads to be built to Municipal or Ministry of Transportation standards by the developer and subsequently assumed by the Municipality. Under the terms of the Subdivision Agreement, subdivision roads will be built by the developer under the supervision of the Municipal Engineer and all costs will be borne by the developer.

Access roads to the subdivision must be public and assumed by the Municipality. If the access road has not already been assumed by the Municipality, then the access road shall be built to Municipal or Ministry of Transportation standards at the expense of the developer prior to the assumption of the subdivision roads by the Municipality.

The developer shall guarantee the construction of the roads for one (1) year from the date of assumption by the Municipality. The developer shall file with the Municipality a Letter of Credit in an amount equal to ten percent (10%) of the cost of the roads (as estimated by the Municipal Engineer) to support the guarantee.

In addition to all the applicable Municipal requirements, all development adjacent to Provincial highways is also subject to the requirements and permits of the Ministry of Transportation.

ii) Infill Development

Where a public, but unassumed road accesses lots which are already developed, infill development will

be permitted on other existing lots along such road provided the owner registers on title a notice regarding the unassumed nature of the road. The Municipality may assume such roads when they are developed to Municipal or Ministry of Transportation standards at the complete expense of the benefiting owners. The request for assumption of the roadway must be submitted in the form of a petition signed by 75% of the property owners in that subdivision.

solar energy systems refer to the Agricultural Policies and Actions of this Plan.

In addition to all the applicable Municipal requirements, all development adjacent to Provincial highways is also subject to the requirements and permits of the Ministry of Transportation.

9.4.3 Waste Management

There is one active landfill site in Huron East (Grey Ward, east of Walton). The mid-Huron landfill site, located in the adjacent Municipality of Central Huron, and the Municipality of Morris-Turnberry landfill site provide service to Huron East.

To optimize the capacity of its existing landfill sites, the Municipality of Huron East encourages residents to adopt and practice waste diversion initiatives based on a hierarchy of 3R activities: reduction, reuse and recycling and composting. As a means of encouragement, the Municipality of Huron East will:

- educate and promote 3R activities
- implement charge systems (i.e. bag-tag, tipping fees)
- provide a Municipal compost site, curb side and/or depot recycling service, as well as annual leaf and brush pick-up in certain settlement areas
- impose material bans at the landfill site

Development adjacent to open or closed landfill sites must conform to the applicable government regulations.

9.4.4 Storm Water Management

Storm Water Management Reports may be considered as a condition of development. Both water quantity and quality may be considered.

9.4.5 Wind Energy and Solar Energy

The Municipality of Huron East recognizes the energy conservation benefits of mechanical systems that convert wind energy and solar energy to electricity. These systems can occur at small or large scales in the Municipality. For specific policies relating to wind energy and

APPENDIX 'B'

**BAYFIELD HEADWATERS
WATERSHED REPORT CARD**



Bayfield Headwaters WATERSHED REPORT CARD

Forest Conditions



Grade:

D

Wetland Cover



Grade:

F

Surface Water Quality



Grade:

C

Grading

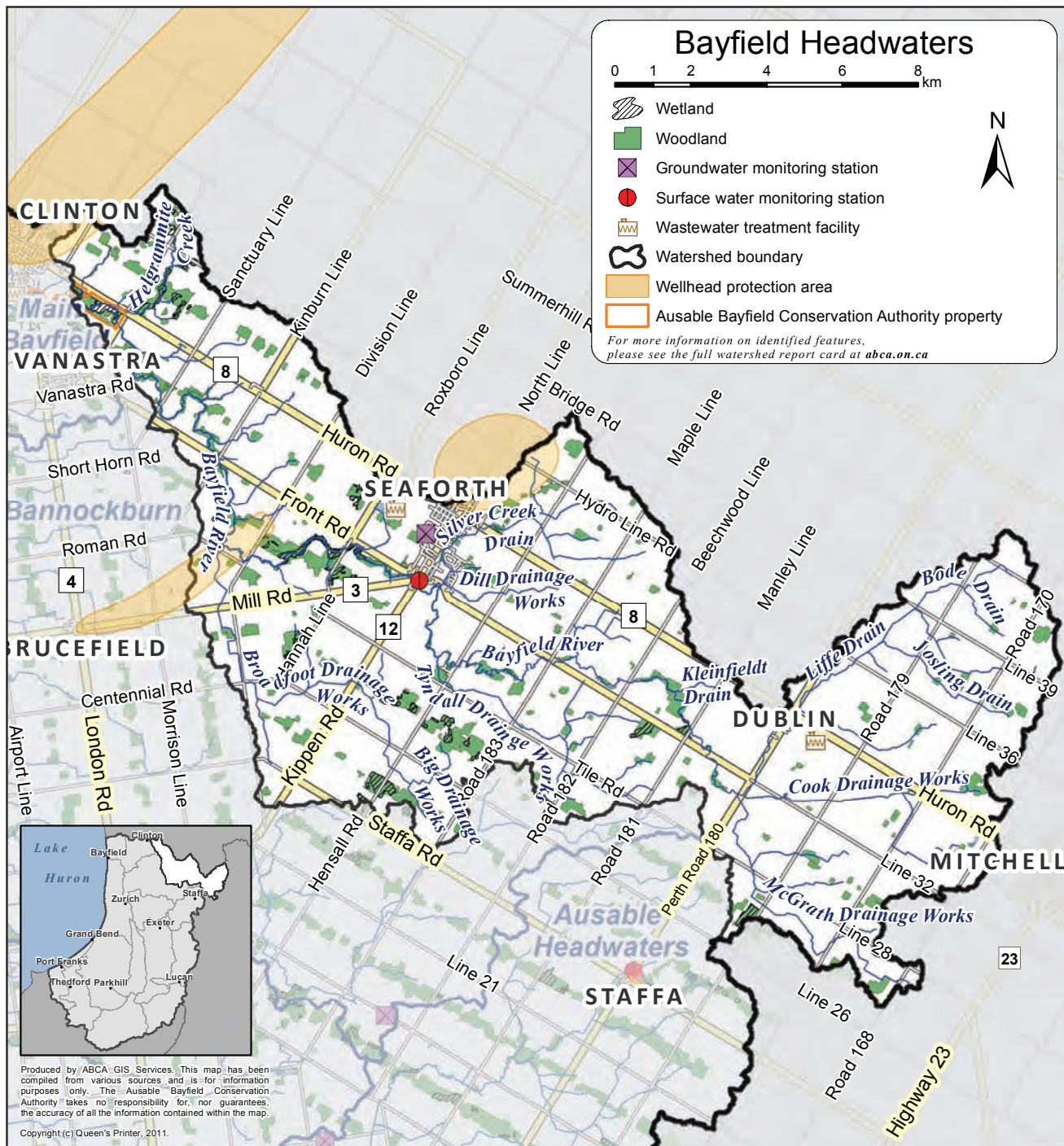
A Excellent

B Good

C Fair

D Poor

F Very Poor



Top action needed to enhance this watershed:

Enhance small creeks through streamside planting and protect and expand existing woodlots.

For other recommended actions, see back page.

The standards used in this report card were developed by conservation authorities to ensure consistent reporting across the province of Ontario and are intended to provide watershed residents with information to protect, enhance, and improve the precious resources that surround us.



Watershed Features

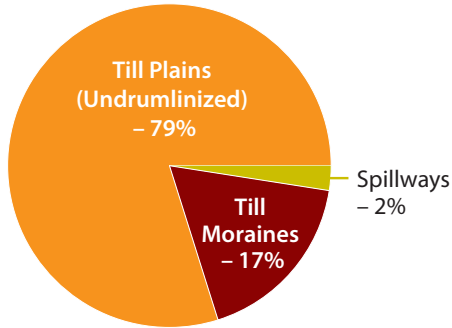
Area: 203 km²

Municipalities: Central Huron, Huron East, West Perth

Watershed features, such as geology, soil type, and land use, help explain forest conditions and the quality of groundwater and surface water.*

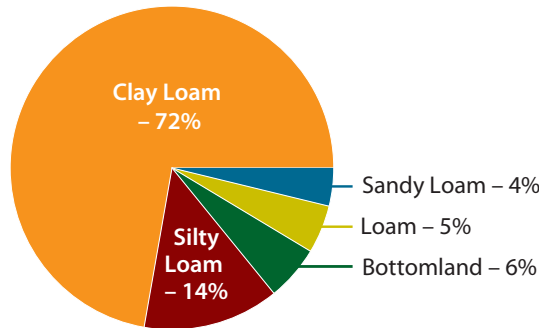
Geology

Chapman and Putnam
1984



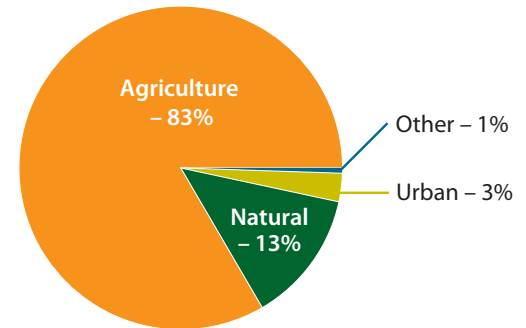
Soils

County Soils Maps
1951-1991



Land Use

Ontario Ministry of Agriculture,
Food and Rural Affairs 2010



Fish:

- There is a warm-water fishery in the main channel.
- The tributaries have baitfish.

Species at Risk:

- One bird, one reptile, one mussel, and one plant species at risk in this watershed.*

Other Watershed Residents

Snapping turtles feel threatened on land because they cannot retract into their shells for protection like smaller turtles. We need to protect these turtles, as they are natural cleaners of our waterways and serve an important role in aquatic food webs.



Photo by Mies van de Leygraaf

Watershed Monitoring

Ausable Bayfield Conservation monitors watershed conditions. Look for a dial graphic like this one at abca.on.ca for low-water advisories and flood messages.



For some data collection needs, especially rainfall amounts, local residents are encouraged to help monitor the watershed.

Other monitoring opportunities may exist. Call us if you're interested at **519-235-2610** or toll-free at **1-888-286-2610**.

Groundwater Quality



- Concentrations of nitrate are better than the drinking water standard; however, chloride concentrations are not as good, and approach the guideline at the deep provincial monitoring well in this watershed.
- No grade was assigned at the watershed level because groundwater boundaries differ from surface water boundaries.
- Different types of aquifers exist throughout the region and the quality of your well water may vary from that of the provincial monitoring wells.*

* See the complete *Watershed Report Card* at abca.on.ca for more information.

Forest Conditions and Water Quality



Forest Conditions



Indicator	Description	Result		2012 Grade	
		2007	2012	Bayfield Headwaters	Entire ABCA Area
Forest cover	<ul style="list-style-type: none"> Forest cover is the percentage of a watershed that is forested. An A grade is forest covering more than 35% of a watershed. 	7.0%	7.2%	D	D (14.1%)
Forest interior	<ul style="list-style-type: none"> Forest interior is the percentage of a watershed with forest cover that is at least 100 metres from the forest's edge. Some birds need this area to nest and breed. An A grade is forest interior covering more than 11.5% of a watershed. 	0.8%	0.7%	F	D (3.2%)
Streamside cover	<ul style="list-style-type: none"> Streamside cover is the percentage of the 30-metre area on both sides of open streams that is forested. An A grade is forest covering more than 57.5% of this streamside area. 	N/A	17.6%	D	C (32.7%)



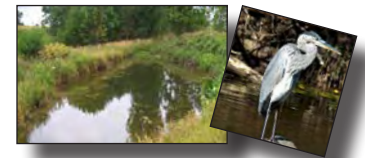
Wetland Cover



Indicator	Description	Result		2012 Grade	
		2007	2012	Bayfield Headwaters	Entire ABCA Area
<ul style="list-style-type: none"> Wetland cover is the percentage of a watershed that is covered by wetlands.* An A grade is wetlands covering over 11.5% of a watershed. 	N/A	1.3%	F	F (2.4%)	



Surface Water Quality



Indicator	Description	Result		2012 Grade	
		2007	2012	Bayfield Headwaters	Entire ABCA Area
Total phosphorus	<ul style="list-style-type: none"> Total phosphorus is a nutrient that enhances plant growth and contributes to excess algae and low oxygen in streams. An A grade is a 75th-percentile* total phosphorus concentration of less than 0.020 mg/L. 	0.040 mg/L	0.030 mg/L	B	D (0.073)
E. coli (Escherichia coli)	<ul style="list-style-type: none"> E. coli are bacteria found in human and animal waste. Their presence indicates water may contain other disease-causing organisms. An A grade is a geometric-mean* E. coli concentration of no more than 30 colony forming units (cfu) per 100 mL. 	323 cfu/100 mL	227 cfu/100 mL	C	C (113)
Benthic invertebrates	<ul style="list-style-type: none"> Benthic invertebrates are small animals, without backbones, that live in stream sediments. A Family Biotic Index (FBI) summarizes the numbers and types of these animals in a sediment sample. Values reflect stream health, ranging from 1 (healthy) to 10 (degraded). An A grade is an average FBI value of no more than 4.25. 	5.95	5.58	C	C (5.51)

* See the complete *Watershed Report Card* at abca.on.ca for definitions of wetlands, 75th percentile, and geometric mean.



Next Steps



Thumbs up!

Low-impact drain maintenance (for example, spot clean-outs and bank repair) has helped to sustain fish habitat.

This is just one example in the watershed. Let us know about projects you and your community are doing.

Grants

Funding may be available to help you plant trees, control erosion, and improve water quality.



How can you help between now and the next Watershed Report Card?

You can ...

- Protect and expand existing woodlots.
- Plant streamside vegetation.
- Use conservation tillage, crop rotation, and grassed waterways to protect your soil.

Your community can ...

- Continue the timely operation of the barrier on Silver Creek to accommodate fish passage for migratory salmonids. Seaforth Lions Club has been a leader in this initiative.
- Organize a community creek clean-up.

Local agencies can ...

- Consider wetland enhancement opportunities at the Seaforth wastewater treatment facility.
- Encourage financial incentive programs, such as county clean water projects.

Take Action! Develop an individual action plan for your property – call us to find out how.

Links to the Great Lakes

No matter where you live in the watershed, you are linked to the Great Lakes.

The local actions you take make a difference for Lake Huron.

Visit lakehuroncommunityaction.ca



Visit abca.on.ca for the complete **Watershed Report Card** for all Ausable Bayfield watersheds.

Ausable Bayfield Conservation Authority (ABCA)
 71108 Morrison Line, RR 3 Exeter, ON • NOM 1S5
 Phone: 519-235-2610
 Toll-free: 1-888-286-2610
 Facsimile: 519-235-1963
 E-mail: info@abca.on.ca
 Website: abca.on.ca



Member of



Conservation ONTARIO
Natural Champions

APPENDIX 'C'

**STAGE 1 & 2 ARCHAEOLOGICAL
ASSESSMENT**

Ministry of Tourism, Culture and Sport

Culture Programs Unit
Programs and Services Branch
Culture Division
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
ArchaeologyReports@ontario.ca

Ministère du Tourisme, de la Culture et du Sport

Unité des programmes culturels
Direction des programmes et des services
Division de culture
401, rue Bay, bureau 1700
Toronto ON M7A 0A7
ArchaeologyReports@ontario.ca



Feb 21, 2014

Matthew Beaudoin (P324)
Timmins Martelle Heritage Consultants Inc. - London
1600 Attawandaron London ON N6G 3M6

**RE: RE: Entry into the Ontario Public Register of Archaeological Reports:
Archaeological Assessment Report Entitled, "Stage 1 and 2 Archaeological
Assessment Class Environmental Assessment Town of Seaforth – Municipality of
Huron East Centennial Drive and Duke Street Road Extensions Part of Lots 24 and
25, Concession 1 Geographic Township of McKillop Huron County", Dated Feb 7,
2014, Filed with MTCS Toronto Office on N/A, MTCS Project Information Form
Number P324-0015-2013, MTCS File Number 0000799**

Dear Doctor. Beaudoin:

The above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18 has been entered into the Ontario Public Register of Archaeological Reports without technical review.¹

Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require further information, please do not hesitate to send your inquiry to ArchaeologyReports@Ontario.ca.

cc. Archaeology Licensing Officer
Kelly Vader, BM Ross and Associates
Brad Knight, Municipality of Huron East

¹In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

**Stage 1 and 2 Archaeological Assessment
Class Environmental Assessment
Town of Seaforth – Municipality of Huron East
Centennial Drive and Duke Street Road Extensions
Part of Lots 24 and 25, Concession 1
Geographic Township of McKillop
Huron County**

Submitted to

B. M. Ross and Associates Ltd.
62 North Street, Goderich, ON N7A 2T4

and

The Ontario Ministry of Tourism, Culture and Sport

Prepared by



**Timmins Martelle
Heritage Consultants Inc.**

@ the Museum of Ontario Archaeology
1600 Attawandaron Road, London, ON N6G 3M6
Phone: (519) 641-7222 Fax: (519) 641-7220

Archaeological License Number: P324, Matt Beaudoin, Ph.D.
Our File: 2011-120
PIF Number: P324-0015-2013

January 2014

(Original report submitted to Ministry of Tourism, Culture and Sport 07 February, 2014)

Executive Summary

A Stage 1 and 2 archaeological assessment was conducted for a proposed road extension project in the Town of Seaforth (Municipality of Huron East), Huron County, Ontario. It is understood the project will see a roughly 235 metre extension of Centennial Drive and a roughly 400 metre extension of Duke Street in the vicinity of the Seaforth Hospital and hospital-owned lands. The road extensions will cross active agricultural land and through grassed areas associated with a horse race track and manicured lawn. Our work was carried out as part of a Municipal Class Environmental Assessment, coordinated by B.M. Ross and Associates on behalf of the Municipality of Huron East. It was undertaken in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MTC 2011). Within the Class EA process, the purpose of the archaeological assessment was to establish if the project would impact known or potential archaeological resources.

The Stage 1 background study included a review of current land use, historic and modern maps, registered archaeological sites and previous archaeological studies, past settlement history for the area and a consideration of topographic and physiographic features, soils and drainage. According to the map-based review, the survey area is intersected by or in proximity to at least three features signalling archaeological potential. The potential for the discovery of Euro-Canadian and historic era sites is demonstrated by proximity (within 300 m) to: 1) mapped 19th century transportation routes, namely Goderich Street and Main Street and; 2) a mapped 19th century structure. The potential for the discovery of pre-contact native sites is also indicated by the proximity of a watercourse (Silver Creek) within 300 metres. A review of proponent aerial mapping indicated that a portion of the project area had witnessed prior disturbance from landscaping, road and racetrack construction and the installation of utilities. However, the level of disturbance within some areas could not be established from aerial mapping alone. A significant portion of the project area consists of active agricultural land. Therefore, lands within the project area were considered to retain archaeological potential and required Stage 2 field survey pending their visual examination.

The Centennial Drive Extension and the eastern portion of the Duke Street Extension were in ploughed fields that were well-weathered with surface visibility that was greater than 80%. These areas (67% of total project lands) were subject to a standard pedestrian survey at a five metre transect interval. The western portion of the Duke Street Extension crossed the Seaforth Agricultural Park where there is a horse track and manicured lawn. The undisturbed grassed areas were subject to a standard test pit survey at a five metre transect interval. Test pits measuring approximately 30 cm (shovel-width) were excavated through the first 5 cm of subsoil with all fill screened through 6 mm hardware cloth. When screening was completed, the soil strata in the test pits was examined before they were backfilled with soil and re-capped with sod as best as possible. While the Seaforth Agricultural Park lands contained some intact natural soils that were tested at a 5 metre transect interval (6%), some areas also showed signs of surface disturbance; these areas were found to contain disturbed soils and were test pitted



at a 10 metre transect interval (14%). Extensively disturbed areas were noted within the project lands as well. These included paved roadways with above- and below-ground utilities, extensively landscaped areas, ditches and dumping areas. These lands were photo-documented and not surveyed (13%) due to low archaeological potential.

The surveyed areas were not found to contain archaeological resources and, as such, are considered free of archaeological concern. No further work is recommended for these areas. If construction plans change to incorporate new areas that were not subject to study in this report, these must be subject to review and survey prior to construction proceeding.



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**Stage 1 and 2 Archaeological Assessment
Class Environmental Assessment
Town of Seaforth – Municipality of Huron East
Centennial Drive and Duke Street Extensions
Geographic Township of McKillop
Huron County**

1.0 PROJECT CONTEXT

1.1 Development Context

1.1.1 Introduction

A Stage 1 and 2 archaeological assessment was conducted for a proposed road extension project in the Town of Seaforth (Municipality of Huron East), Huron County, Ontario. It is understood the project will see a roughly 235 metre extension of Centennial Drive and a roughly 400 metre extension of Duke Street in the vicinity of the Seaforth Hospital and hospital-owned lands. The road extensions will cross active agricultural land and through grassed areas associated with a horse race track and manicured lawn. Our work was carried out as part of a Municipal Class Environmental Assessment, coordinated by B.M. Ross and Associates on behalf of the Municipality of Huron East. It was undertaken in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MTC 2011). Within the Class EA process, the purpose of the archaeological assessment was to establish if the project would impact known or potential archaeological resources.

All archaeological consulting activities were performed under the Professional Archaeological License of Matthew Beaudoin, Ph.D. (P324). Permission to enter the properties and carry out all required archaeological work, including collecting artifacts when present, was provided by Kelly Vader of B.M. Ross and Associates Limited, agent for the landowner.

1.1.2 Purpose and Legislative Context

The *Ontario Heritage Act* makes provisions for the protection and conservation of heritage resources in the Province of Ontario. Heritage concerns are recognized as a matter of provincial interest in Section 2.6.2 of the *Provincial Policy Statement* which stipulates that municipalities shall have regard for the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest. The purpose of a Stage 1 background study is to determine if there is potential for cultural resources to be found on a property for which a change in land use is pending. It is used to determine the need for a Stage 2 field assessment involving the search for archaeological sites. In accordance with *Provincial Policy Statement* 2.6, if significant

sites are found, a strategy (usually avoidance, preservation or excavation) must be put forth for their mitigation.

The *Environmental Assessment Act* also provides for the protection and conservation of the “environment,” widely defined to cover “cultural heritage” resources. Section 5(3)(c) of the *Act* stipulates that heritage resources to be affected by a proposed undertaking be identified during the environmental screening process. Within the context of an Environmental Assessment, the purpose of a Stage 1 background study is to determine if the project has potential to negatively impact known or unknown archaeological resources. A Stage 2 assessment establishes if archaeological sites are present within the proposed impact areas, while a Stage 3 assessment evaluates their cultural heritage value. In the case of archaeological resources, potentially detrimental effects to archaeological resources are mitigated through Stage 4 protection and avoidance and/or excavation.

2.0 STAGE 1 BACKGROUND REVIEW

2.1 Field/Research Methods and Sources

A Stage 1 overview and background study was conducted to gather information about known and potential cultural heritage resources within the project lands. According to the 2011 *Standards and Guidelines for Consultant Archaeologists*, a Stage 1 background study must include a review of:

- an up-to-date listing from the Ontario Archaeological Sites Database (OASD) of registered archaeological sites within 1 km of the project lands;
- a review of previous archaeological fieldwork within a radius of 50 metres;
- topographic maps at 1:10,000 (recent and historical) or the most detailed scale available;
- historic settlement maps (e.g., historical atlas);
- archaeological management plans or other archaeological potential mapping (when available); and
- commemorative plaques or monuments on or near the property.

For this project, the following activities were carried out to satisfy or exceed the aforementioned requirements:

- a database search was filed with Robert von Bitter of the Ministry of Tourism, Culture and Sport requesting a listing of registered archaeological sites within 1 km;
- a review of known prior archaeological reports for the property and adjacent lands;
- a consideration of Ontario Base Mapping (1:10,000) through ArcGIS and mapping layers provided by geographynetwork.ca;



- a review of detailed mapping providing by the proponent; and
- a series of historic maps was reviewed relating to post-1800 land settlement.

Additional sources of information were also consulted, including soils and physiography data provided by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), and both 1:50,000 (Natural Resources Canada) and finer scale topographic mapping.

When compiled, this information was used to create a summary of the characteristics of the project lands, in an effort to evaluate their archaeological potential. The Province of Ontario (MTC 2011 – Section 1.3.1) has recently defined the criteria that identify archaeological potential as:

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



- property listed on a municipal register or designated under the *Ontario Heritage Act* or that is a federal, provincial, or municipal historic landmark or site
- property that local histories or informants have identified with possible archaeological sites, historical events, activities or occupations.

In Southern Ontario (south of the Canadian Shield), any lands within 300 metres of any of the features listed above is considered to have potential for the discovery of archaeological resources.

Typically, a Stage 1 assessment will determine potential for pre-contact First Peoples' and historic era sites independently. This is due to the fact that lifeways varied considerably during these eras so that criteria used to evaluate potential for each type of site also differs.

Some factors can also negate the potential for discovery of intact archaeological deposits. Subsection 1.3.2 of the 2011 *Standards and Guidelines for Consultant Archaeologists* indicates that archaeological potential can be removed in instances where land has been subject to extensive and deep alterations that have severely damaged the integrity of any archaeological resources. Major disturbances indicating removal of archaeological potential include, but are not limited to:

- quarrying
- major landscaping involving grading below topsoil
- building footprints; and
- sewage and infrastructure development.

Some activities (agricultural cultivation, surface landscaping, installation of gravel trails, etc.) may result in minor alterations to the surface topsoil but do not necessarily affect or remove archaeological potential. It is not uncommon for archaeological sites, including structural foundations, subsurface features and burials, to be found intact beneath major surface features like roadways and parking lots. Archaeological potential is, therefore, not removed in cases where there is a chance of deeply buried deposits, as in a developed or urban context or floodplain where modern features or alluvial soils can effectively cap and preserve archaeological resources.

2.2 Project Context: Archaeological Context

2.2.1 Project Lands: Overview and Physical Setting

The Municipality of Huron East is proposing a road extension project that will involve a roughly 235 metre extension of Centennial Drive to the northeast which will meet a roughly 400 metre eastward extension of Duke Street. The ultimate road allowance for both extensions will be 20 metres wide, making the total project area roughly 1.21 hectares. The proposed road extension project is within the eastern portion



of the Town of Seaforth and is located to the northwest of the Seaforth Hospital and hospital-owned lands (Maps 1 and 2). The proposed extension of Centennial Drive will involve the northeast extension of an existing road through active agricultural fields (Image 1). The extension of Duke Street will jog to the southeast and cross manicured lawn and a horse racetrack (Image 2) that forms part of the Seaforth Agricultural Society Park (Image 3). Beyond the park lands the extension will cross an active agricultural field and then meet up with the northerly expansion of Centennial Drive (Image 4). To the south-southwest of the Duke Street extension is a school yard surrounded by chain link fence (Image 2; Map 2). The new Centennial Drive road allowance is bounded to the east by the Seaforth Hospital complex and to the west by a residential area (Map 2). A wood pole hydro line formerly followed the south side of the Duke Street Extension and the east side of the Centennial Drive extension.

The project lands fall within the Stratford Till Plain physiographic region, as defined by Chapman and Putnam (1984:161) (Map 3). The Stratford Till Plain is “an area of ground moraine interrupted by several terminal moraines” (Chapman and Putnam 1984:133). The entire region was once covered by the Huron ice lobe of the Wisconsin ice sheet and is characterized by uniform, brown calcareous silty clay (Chapman and Putnam 1984:134). The southern portion of the till plain has gently rolling topography, the relatively flat surface of the plain cut by creeks and valleys and dotted with knolls and ridges. The road extensions fall within the undrumlinized till plain, with two eskers roughly 500 metres to the east. The soils within the Centennial Drive extension are Harriston silt loam (Map 4), a well-drained, medium textured limestone till derived soil that are susceptible to sheet erosion (Hoffman et al. 1952:40). Soils within the Duke Street extension are Perth clay loam, an imperfectly drained soil derived from heavy textured limestone till deposits.

Silver Creek drains the general vicinity of the project lands and a main branch of the creek crosses Goderich Street to the southeast at a distance of 250 to 300 metres from the southern end of the Centennial Drive extension (Map 5). Although modern development has altered natural drainage patterns in the immediate vicinity, drainage channels and low-lying wet areas were observed northwest of the Seaforth Hospital. These may represent former drainage swales associated with small or intermittent tributaries of Silver Creek. A branch of the South Maitland River drains the lands to the northwest of Seaforth.

2.2.2 Summary of Registered or Known Archaeological Sites

According to the Ontario Archaeological Sites Database (OASD), there are no registered archaeological sites within one kilometre of the project area.

2.2.3 Summary of Past Archaeological investigations Within 50 Metres

During the course of this study, no previous archaeological assessments were identified for lands within 50 metres of the current survey area. Since the Ministry of



Tourism, Culture and Sport currently does not keep a publicly accessible record of archaeological assessments carried out in the Province of Ontario, it is not known if this is an accurate inventory.

2.2.4 Dates of Archaeological Fieldwork

The Stage 2 fieldwork was conducted on December 5, 2013.

2.3 Project Context: Historical Context

2.3.1 Pre- and Early Post-Contact First Peoples Settlement in Huron County

Our archaeological knowledge of past native occupation in the Seaforth area is very limited, largely due to a lack of cultural resource management and research-based archaeological assessments. Using province-wide (MCCR 1997) and region-specific data, a generalized cultural chronology for First Peoples settlement in the area can be proposed. The following paragraphs provide a basic textual summary of the known general cultural trends and a tabular summary appears in Table 1.

Table 1: Cultural Chronology for First Peoples Settlement in the Seaforth Area

Period		Time Range (circa)	Diagnostic Features	Complexes	
Paleoindian	Early	9000 - 8400 B.C.	fluted projectile points	Gainey, Barnes, Crowfield	
	Late	8400 - 8000 B.C.	non-fluted and lanceolate points	Holcombe, Hi-Lo, Lanceolate	
Archaic	Early	8000 - 6000 B.C.	serrated, notched, bifurcate base points	Nettling	
	Middle	6000 - 2500 B.C.	stemmed, side & corner notched points	Brewerton, Otter Creek, Stanly/Neville	
	Late	2000 - 1800 B.C.	narrow points	Lamoka	
		1800 - 1500 B.C.	broad points	Genesee, Adder Orchard, Perkiomen	
		1500 - 1100 B.C.	small points	Crawford Knoll	
	Terminal	1100 - 950 B.C.	first true cemeteries	Hind	
Woodland	Early	950 - 400 B.C.	expanding stemmed points, Vinette pottery	Meadowood	
	Middle	400 B.C. - A.D. 500	dentate, pseudo-scallop pottery	Saugeen	
	Transitional	A.D. 500 - 900	first corn, cord-wrapped stick pottery	Princess Point	
	Late	Early Iroquoian	A.D. 900 - 1300	first villages, corn horticulture, longhouses	Glen Meyer
		Middle Iroquoian	A.D. 1300 - 1400	large villages and houses	Uren, Middleport
		Late Iroquoian	A.D. 1400 - 1650	tribal emergence, territoriality	Algonquin and Iroquoian groups
Contact	Aboriginal	A.D. 1700 - 1875	treaties, mixture of Native & European items		
	Euro-Canadian	A.D. 1796 - present	English goods, homesteads	European settlement, pioneer life	

Paleoindian

The geographic area opened during the glacial retreat in Huron County roughly ca. 13,000 BC. Over the next 2,000 years more land was exposed but it was not until 10,400 BC that access routes into the region became apparent. The first human populations to inhabit Southern Ontario arrived between 12,000 and 10,000 years ago, coincident with the end of the last period of glaciation. Climate and environmental conditions were significantly different then they are today; local environs would not have been welcoming to anything but short-term settlement. Termed Paleoindians by archaeologists, Ontario's first peoples would have crossed the landscape in small groups



(i.e., bands or family units) searching for food, particularly migratory game species. In this area, caribou may have provided the staple of Paleoindian diet, supplemented by wild plants, small game, birds and fish.

Given the low density of populations on the landscape at this time and their mobile nature, Paleoindian sites are small and ephemeral. They are sometimes identified by the presence of fluted projectile points manufactured on high quality raw materials. Sites or find spots are frequently located adjacent to the strandlines of large glacial lakes. This settlement pattern has been attributed to the strategic placement of camps in high, dry areas and at logistical points for the interception of migrating caribou herds.

A number of small Paleoindian occupations have been recorded in western Huron County as a result of ongoing cultural resource management projects being carried out under the *Green Energy Act*. These have been generally associated with former glacial shorelines.

Archaic Period

The archaeological record of early native life in Southern Ontario indicates a change in lifeways beginning circa 8000 B.C. at the start of what archaeologists call the Archaic Period. The Ontario populations are better known than their Paleoindian predecessors, with numerous sites found throughout the area. The characteristic projectile points of early Archaic populations appear similar in some respects to early varieties and are likely a continuation of early trends. Archaic populations continued to rely heavily on game, particularly caribou, but diversified their diet and exploitation patterns with changing environmental conditions. A seasonal pattern of warm season river or lakeshore settlements and interior cold weather occupations has been documented in the archaeological record. Since the large cold weather mammal species that formed the basis of the Paleoindian subsistence pattern became extinct or moved northward with the onset of warmer climate, Archaic populations had a more varied diet, exploiting a range of plant, bird, mammal and fish species. Reliance on specific food resources like fish, deer and nuts becomes more pronounced through time and the presence of more hospitable environs and resource abundance led to the expansion of band and family sizes. In the archaeological record, this is evident in the presence of larger sites and aggregation camps, where several families or bands would come together in times of resource abundance. The coniferous forests of earlier times were replaced by stands of mixed coniferous and deciduous trees by about 4000 B.C. The transition to more productive environmental circumstances led to a rise in population density. As a result, Archaic sites become more abundant over time. Artifacts typical of these occupations include a variety of stemmed and notched projectile points, chipped stone scrapers, ground stone tools (e.g., celts, adzes) and ornaments (e.g., bannerstones, gorgets), bifaces or tool blanks, animal bone and waste flakes, a byproduct of the tool making process.



Early, Middle and Transitional Woodland Periods

Significant changes in cultural and environmental patterns are witnessed in the Early, Middle and Transitional Woodland periods (ca. 950 B.C. to 1000 A.D.). Occupations became increasingly more permanent in this period, culminating in major semi-permanent villages by roughly 1,000 years ago. Archaeologically, the most significant changes by Woodland peoples are the appearance of artifacts manufactured from modeled clay and the emergence of more sedentary villages. The earliest pottery was crudely made by the coiling method and early house structures were simple oval enclosures. The Early and Middle Woodland periods are also characterized by extensive trade in raw materials, objects and finished tools, with sites in Ontario containing trade items with origins in the Mississippi and Ohio River valleys. A rise in mortuary ceremonialism is also evident, culminating in the construction of large burial mounds.

Late Woodland Period

Beginning circa 1000 A.D. the archaeological record in Southern Ontario documents the emergence of more substantial, semi-permanent settlements and the adoption of corn horticulture. These developments are most often associated with Iroquoian-speaking populations, the ancestors of the Wendat (Huron), Petun (Tobacco Nation) and Attawandaron (Neutral) nations who were known to have resided in the province upon the arrival of the first European explorers and missionaries. Iroquoian villages incorporated a number of longhouses, multi-family dwellings that contained several families related through the female line. Pre-contact Iroquoian sites may be identified by a predominance of well-made pottery decorated with various simple and geometric motifs, triangular projectile points, clay pipes and ground stone artifacts. Sites post-dating European contact are recognized through the appearance of various items of European manufacture. The latter include materials acquired by trade (e.g. glass beads, copper/brass kettles, iron axes, knives and other metal implements) in addition to the personal items of European visitors and Jesuit missionaries (e.g. finger rings, stoneware, rosaries, and glassware).

Algonquian Populations

At the time of European contact in the early 17th century the Bruce peninsula was occupied by Algonkian speaking groups (Odawa, Potawatomi, Ojibwa) who maintained a close relationship with the Iroquoian speaking Petun peoples living along the southern end of Georgian Bay (Fox 1990:461). Like other First Peoples in the area, these groups were dispersed in the mid-17th century as a result of the conflict between the Five Nations Iroquois and the Huron-Petun. Many moved along the Lake Huron shoreline into Huron County, with others settling in the peninsula proper. Several probable Algonquin sites on the Bruce peninsula and Georgian Bay have been documented, including a component on the Inverhuron-Lucas site on the Lake Huron shoreline.



2.3.2 Historic Era Municipal Settlement

The project lands are situated in the Geographic Township of McKillop in Huron County and within the Town of Seaforth. This section provides a brief historical summary of municipal settlement in these areas and therefore offers a general context for understanding historic land use and evaluating potential for historic era archaeological potential.

Early Euro-Canadian settlement in Huron County was initiated with the creation of the Huron Tract, established through the efforts of John Galt and the Canada Company. Incorporated in 1824, the company was organized by Galt and a number of wealthy investors who wished to wrest some control from Clergy and Crown who held reserves amounting to two sevenths of lands in Upper Canada in the early-19th century. These lands were largely vacant and uninhabited, which served to impede any sustained settlement efforts in the area and across much of what is now the Province of Ontario. Galt's plans, however, were vehemently opposed by Church of England officials, and its considerable influence prevented the sale of lands held by the church (Beecroft 1984:20). In May of 1826, the Canada Company purchased lands from the British Government that included all of the fifteen townships comprising Huron County. Nine of these townships (including the Township of McKillop) would form part of the Huron Tract.

Much of Huron County at this time was covered by dense forest that had to be cleared, and access to these areas was an obvious necessity. In 1827, Dr. William Dunlop and Mahlon Burwell were contracted to undertake a preliminary survey for a colonization road into the tract. The official survey for what would become the Huron Road (now Highway 8; Goderich Street in Seaforth) was carried out by John McDonald in 1828-29 (Beecroft 1984:37). McDonald was responsible for surveying all of the townships in Huron County, with the exception of Goderich Township, which was undertaken by Deputy Provincial Surveyor David Gibson (Lee 2004:226). Completion of the Huron Road did not, however, initially attract settlers to the region. Five years after the road was finished there were only 385 inhabitants in all of Huron County (Scott 1966:52). Galt made plans for three "inns" to be erected along the course of the Huron Road, where settlers could stay on their journey into the deeper reaches of the tract. In the following years, hundreds of families utilized the inns as they made their way through Huron County (Scott 1966:44). The Canada Company often constructed temporary residences for the accommodation of the settlers until they were able to build their own homes (H. Belden & Co. 1879:8).

Settlement in Tuckersmith and McKillop Townships was centralized around Egmondville which was settled by Anthony Van Egmond of the Canada Company. Van Egmond attempted to establish a settlement on the Huron Road with the understanding that the Canada Company would be supporting further immigration to the area. Van Egmond established the first mill and constructed and supported the first school, but was unhappy with the neglected duties and broken promises of the Canada Company and organized and lead the Huron Union Society in 1835 (Lee 2004:129; Scott 1966:77-78).



Egmondville developed at a rapid rate, with its most promising years being between 1840 and 1860. The Van Egmond family controlled the majority of the local industry, but other local family enterprises soon arose around the community (Scott 1966:147). Egmondville's decline began with the arrival of the railway, which avoided Egmondville and shifted the economic focus to what was to become Seaforth, which was emerging as a major center (Scott 1966:148).

Seaforth did not develop as a town in Huron County until much later and did not see the rapid growth that the towns of Goderich and Clinton had seen throughout the 19th century. The land in the immediate area of Seaforth was quite swampy and not desirable to settlers. A large portion of what became the town was part of a parcel that had been acquired by Colonel Van Egmond. There were also independent settlers who bought land in the area and would figure prominently in the establishment of the town. Andrew Steene purchased Lot 26, Concession 1 of McKillop, and cleared the land and built a cabin. This became the southeast corner of the intersection of the Huron Road and the Brussels Road. On the northwest corner, McGregor bought one hundred acres from the Canada Company but never cleared the land and eventually sold it to Christopher Sparling. Christopher Sparling and his brother George, land speculators, would go on to buy large tracts of land in area, primarily on the south side of the Huron Road, with the idea that they could induce the Buffalo and Lake Huron Railway to run through their holdings.

The Sparling brothers land speculation captured the attention of two law firms who had connections in the county. The firms joined together as Bernard, Patton and Lefroy and began purchasing plots on both the north and south sides of the Huron Road. By the time transactions were complete the firm owned most of what is now the central portion of Seaforth with the exception of the northwest corner, where the Sparling brothers retained a 100 acre plot. Once the land deals were complete the town site was laid out in 1855 and the law firm worked with the Sparling brothers to ensure that the railroad ran through their holdings (Scott 1966).

The arrival of the railway in Seaforth ensured the success of the town. Businesses developed quickly in the area including grain dealers, hotel-keepers, mills, and other merchants. By 1870 Seaforth was shipping more wheat than any other town in Ontario (Scott 1966:265). In 1877 the town suffered a serious loss when the business district was ravaged by a fire on Main Street. Due to most of the buildings being of frame construction 12 acres of the core of the town were lost. However, the town was so successful and businesses were flourishing at the time the Main Street was rebuilt almost immediately with brick business blocks (Scott 1966). Much of the architecture survives to this day and in 1984 was designated as a Heritage Conservation district (Huron East Doors Open Guide 2005)



Historic and Current Land Use

The project lands are located within parts of Lot 24 and 25, Concession 1 in the Geographic Township of McKillop. The lots are located on the eastern edge of the original town limits (Maps 6 and 7). The 1879 map of the township (Map 6) shows that Lot 24 was owned by J. Wilson, whereas the close up inset map of the Town of Seaforth (Map 7) show A. Wilson as the owner. The Township map (Map 6) shows a Wilson-family structure in the central portion of Lot 24, but adjacent to Highway 8 or Goderich Street (outside the project lands but within 300 metres) as well as smaller (likely residential) lots within the southwest corner of Lot 24. Both the southeast and northwest portions of Lot 25 are shown on the inset map (Map 7) as owned by Dr. Coleman, although the township map shows him as owning only the northeast quadrant. No structures are shown on any of these parcels, although the southwest corner of Lot 25 is shown as consisting of residential lots and a cheese factory is indicated on the inset map, within Coleman's landholding. Regardless, it should be noted that historic maps are not always accurate renderings of land conditions at the time.

Dr. Timothy (Thimothy) F. Coleman was the first professional man to establish himself in Seaforth and arrived to the early crossroads community around 1857 at which point he opened a medical office (accessgenealogy.com). He was active in public and business enterprises and was noted as one of the foremost figures in the development of the town in the early years (Scott 1966:266). He was Huron County coroner from 1857 to 1866 (www.accessgenealogy.com). The 1861 and 1871 census listings shows Timothy, a doctor born in Ireland in 1826, living in Tuckersmith Township (not on Lot 25 of McKillop Township) and so it can be concluded that he resided on lands shown on the 1879 map of Seaforth as under his ownership and south of the Huron Road. Coleman's stature and influence helped him purchase several land parcels in Seaforth and vicinity (see Map 7), so his listing as owner on Lot 25 does not indicate that he resided on the property. Coleman had significant landholdings on both the north and south sides of the Huron Road east of Main Street. The affected portions of both Lots 24 and 25 were situated just outside of the urban limits of Seaforth in 1879.

It would appear from historic mapping that the Centennial Drive extension area has remained in agricultural use since its time of initial clearing in the 19th century. Much of the Duke Street extension is the same, save for that portion that was developed in more recent times as the agricultural park and horse track. In the late 19th century, the park lands included residential lots and a cheese factory fronting Main Street, as shown on Map 7.

2.4 Analysis and Conclusions

As noted in Section 2.1, the Province of Ontario has identified numerous factors that signal the potential of a property to contain archaeological resources. Based on the archaeological and historical context reviewed above, the archaeological potential of the survey area can be evaluated.



According to the map-based review, the survey area is intersected by or in proximity to at least three features signalling archaeological potential. The potential for the discovery of Euro-Canadian and historic era sites is demonstrated by proximity (within 300 m) to: 1) mapped 19th century transportation routes, namely Goderich Street (Highway 8 and the historic Huron Road) and Main Street; and 2) a mapped 19th century structure (that of J. Wilson shown on the 1879 map of McKillop Township; Map 6). The project lands are also in general proximity to the historic core of the Town of Seaforth, although appear to have been rural and agricultural in nature late in the 19th century. Potential for the discovery of pre-contact native sites is also indicated by the presence of a watercourse (Silver Creek) within 300 metres of the project lands.

A review of orthoimagery-based project mapping provided by the proponent and other aerial imagery indicates that the affected lands consist of: a) active agricultural fields; b) obviously disturbed areas (roadways, utilities, landscaped zones); and some grassed areas for which extent of disturbance cannot be established without field review. Therefore portions of the project were considered to retain archaeological potential pending visual inspection in the field.

2.5 Recommendations

Given that some of the project lands demonstrated and retained potential for the discovery of archaeological resources, a Stage 2 archaeological assessment was recommended. In keeping with provincial standards, the project lands consisting of manicured lawn were recommended for a test pit survey using a five metre interval. The active agricultural lands were recommended for a pedestrian survey using a 5 metre interval. Areas identified as possible zones of disturbance (i.e., landscaped areas in the Agricultural Park, horse track, roadbeds) were recommended for more detailed review in the field at which time a thorough inspection could be undertaken and photo-documentation could take place. In sum, all of the property was considered to have archaeological potential pending Stage 2 field inspection and therefore a separate map detailing zones of archaeological potential is not provided herein (as per Section 7.7.4 Standard 1 and 7.7.6 Standards 1 and 2).

3.0 STAGE 2 ARCHAEOLOGICAL ASSESSMENT

3.1 Field Methods

The Stage 2 fieldwork was conducted on December 5, 2013 in sunny and cold weather. There were no lighting or weather conditions that inhibited the recognition and recovery of archaeological resources. The limits of the proposed impact areas were marked in the field by ploughing, followed obvious landscape markers and boundaries, and were established using detailed mapping based on existing road allowances. The ultimate right-of-way was established to be 20 metres in width and this area plus a buffer (to 30 metres wide maximum) was surveyed (1.9 ha).



The majority of the proposed road extensions will cross through active agricultural lands. The Centennial Drive Extension (Image 1) and the eastern portion of the Duke Street Extension (Image 4) were in ploughed fields that were well-weathered with surface visibility that was greater than 80% (Image 5). These areas (67% of total project lands) were subject to a standard pedestrian survey at a five metre transect interval (Image 6). It should be noted that the wood pole hydro lines that appear on some aerial photographs of the project area as adjacent to the new road allowances (Map 2) were no longer standing by the time the assessment was undertaken (Images 1 and 4).

The manicured lawn within the Seaforth Agricultural Park was subject to a standard test pit survey at a five metre transect interval (Image 7). Test pits measuring approximately 30 cm (shovel-width) were excavated through the first 5 cm of subsoil with all fill screened through 6 mm hardware cloth. When screening was completed, the soil strata in the test pits was examined before they were backfilled with soil and re-capped with sod as best as possible. Typical test pits in the park lawn contained brown sandy clay loam topsoil over orange/brown clay loam subsoil (Image 8); the areas containing seemingly natural soils (6%) had topsoil depths of 25 cm or so. The soils surrounding the horse track (to the east and south) were found to be disturbed and consisted of fill soils up to 50 cm deep (Image 9) below topsoil. Some of the fill soils consisted of degraded asphalt which was impenetrable in places (Image 10). In some instances it was not possible to break through the asphalt layer, which may have formed part of a previous roadbed or parking area. Where these disturbed soils were encountered, the survey interval was widened to 10 metres (14%), with the focus being to confirm the presence and establish the spatial extent of the altered soils.

Additional areas of obvious and extensive surface and below-ground disturbance were observed upon field inspection. These represented 13% of the total project area, were deemed to be of low archaeological potential and were eliminated from survey following photo-documentation. These unsurveyed, disturbed lands included: a) the southwest end of the new Centennial Drive road allowance (Map 8) where paved roadway and both above- and below-ground utilities were noted (watermain, buried hydro, above-ground hydro, cable and telephone, ditches) within the right-of-way (Image 11); b) the eastern end of the Duke Street extension within the Agricultural Park (Map 8) where modern dumping had occurred (Image 12), no intact topsoil was noted, and gravel was identified on the surface and within a sample test pit excavated to confirm a lack of natural soils (Image 13); and c) the horse racetrack, comprised of chipped gravel, and built upon raised fill soils (Image 2).

Map 8 illustrates the Stage 2 field conditions observed and assessment methods used during this project. The same map set also shows the location and orientation of photos appearing in this report. There is no formal proponent mapping for this project so no attempt was made to overlay the assessment results on proponent mapping (as required by the *Standards and Guidelines for Consultant Archaeologists*). Appendix A includes the mapping provided by B.M. Ross and an explanation of how the project lands were described.



3.2 Record of Finds

No archaeological resources were identified during the Stage 2 assessment. Table 2 provides a list of documentary records generated during this project.

Table 2: Documentary Records

- Field notes and field maps – December 5, 2013
- Photo catalogue- images December 5, 2013 (P1030545-P1050595)
- Records housed at Timmins Martelle Heritage Consultants Inc., @ the Museum of Ontario Archaeology, 1600 Attawandaron Road, London, ON N6G 3M6

3.3 Analysis and Conclusions

A Stage 2 field assessment was carried out in keeping with the Province of Ontario's *Standards and Guidelines for Consultant Archaeologists*. The assessment demonstrated that while the majority of the project lands were undeveloped, some areas within the proposed road extension lands were disturbed by prior road and racetrack construction, modern dumping, landscaping and servicing.

As no archaeological material was discovered during the Stage 2 survey the property is considered free of archaeological concern.

3.4 Recommendations

As all work met provincial standards and no archaeological material was discovered, the project lands are considered free of archaeological concern. No further work is recommended.

If construction plans change to incorporate new lands not subject to review in this report, further Stage 2 field review or survey will be required prior to construction commencing.

The recommendations listed above are subject to the conditions laid out in Section 5.0 of this report and the Ministry of Tourism, Culture and Sport's review and acceptance of this report into the provincial registry.



4.0 SUMMARY

A Stage 1 and 2 archaeological assessment was conducted for proposed road extensions to Centennial Drive and Duke Street in the Town of Seaforth (Municipality of Huron East), Geographic Township of McKillop, Huron County, Ontario. The Stage 1 assessment revealed that at least a portion of the project lands exhibited potential for the discovery of archaeological resources. As such, a Stage 2 field survey (5 m interval) was undertaken, including a pedestrian survey of agricultural lands and test pit survey of lawn areas. Areas of former disturbance were photo-documented and eliminated from survey. No archaeological resources were noted within the areas survey and therefore the project lands are considered free of archaeological concern, with no further assessment work recommended. If construction plans change to incorporate new lands not subject to review in this report, further assessment will be required prior to construction commencing.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Ministry of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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

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



Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Small Business and Consumer Services. The Registrar of Cemeteries, Cemeteries Regulation Unit can be reached at (416) 326-8404 or (416) 326-8393.

6.0 BIBLIOGRAPHY

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7.0 IMAGES



Image 1: Overview of Centennial Street Extension (looking north)



Image 2: Overview of Proposed Duke Street Extension (looking east)



Image 3: Entrance to Seaforth Agricultural Society Park (looking east)



Image 4: Overview of Eastern Segment of Duke Street Extension (looking northwest)



Image 5: Surface Visibility in Ploughed Areas of Project Lands



Image 6: Pedestrian Survey of Project Lands (looking northeast)



**Image 7: Test Pit Survey of Manicured Lawn in Duke Street Extension
(looking west)**



Image 8: Test Pit From West End of Agricultural Park With Intact Soils



Image 9: Test Pit in East End of Park With Mottled, Disturbed Soils



Image 10: Asphalt Chunks in Test Pit with Soil Disturbance, Near Horse Track



**Image 11: Centennial Drive Extension – South End With Services
(looking northeast)**



Image 12: Woodlot Dump in East End of Agricultural Park (looking south)

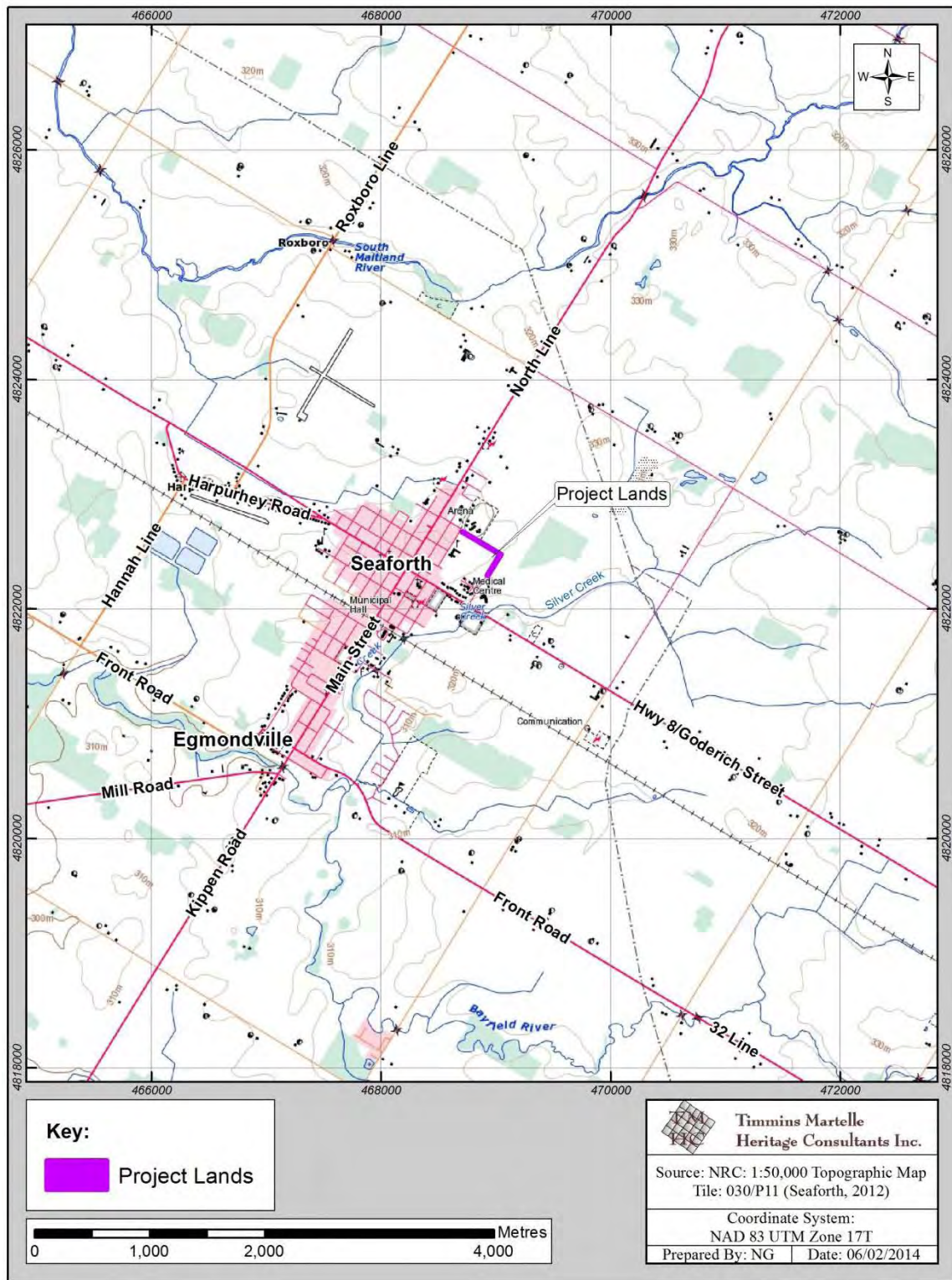


Image 113: Gravel Filled Test Pit Excavated in Dump Area



8.0 MAPS





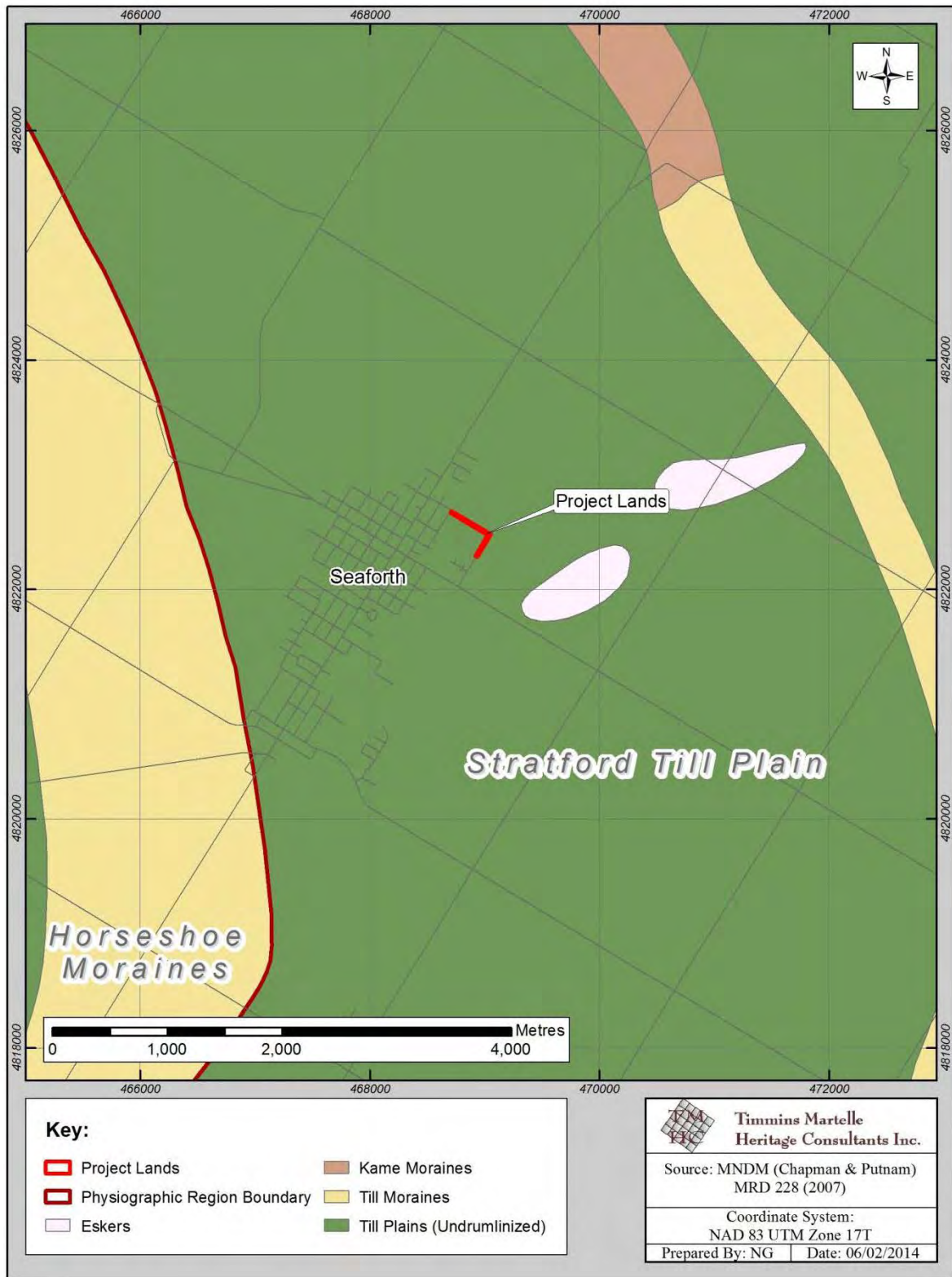
Map 1: Location of the Project Lands Near Seaforth, ON





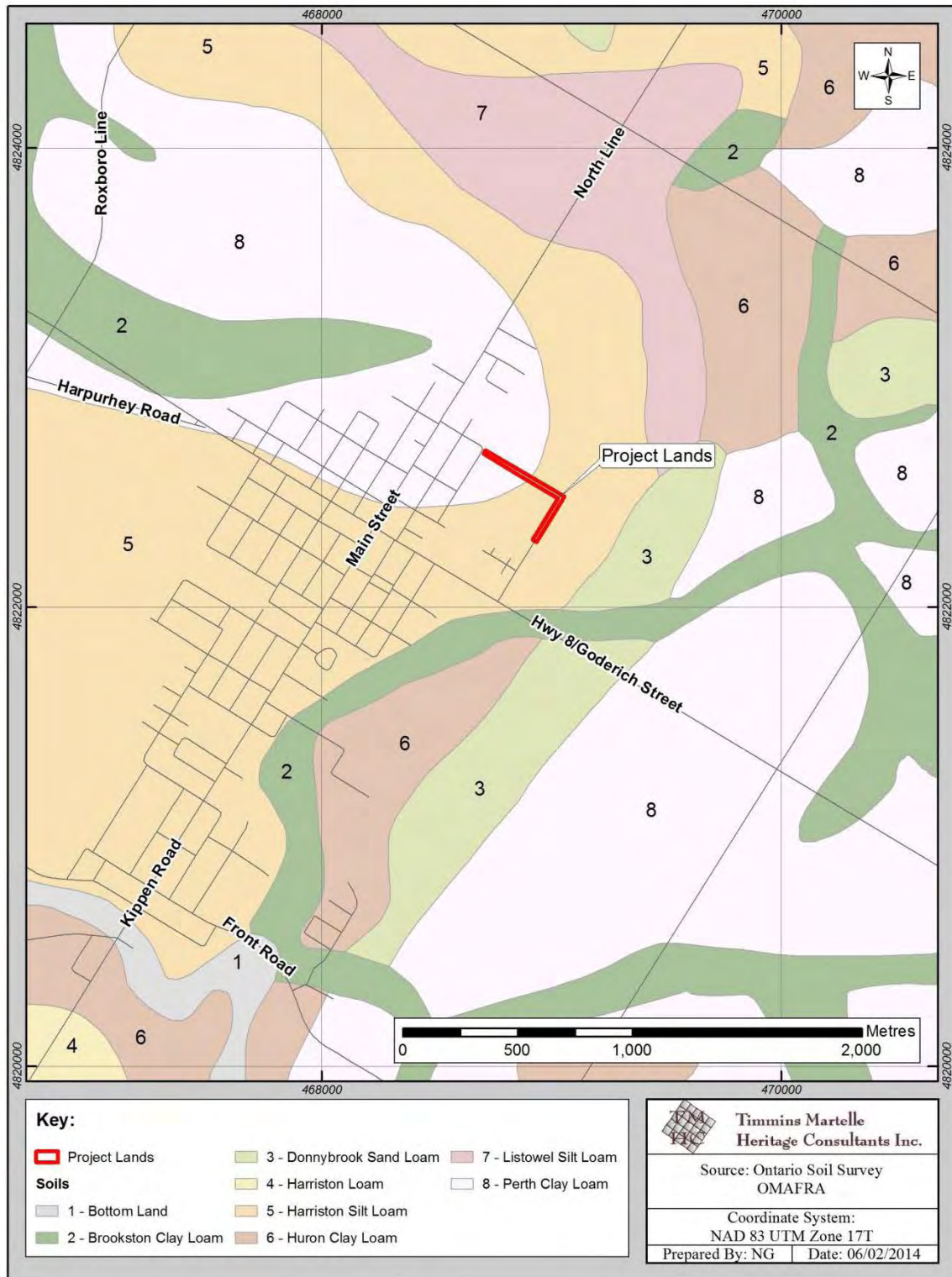
**Map 2: Aerial Photograph Showing the Location of the Project Lands Near
Seaforth, ON**





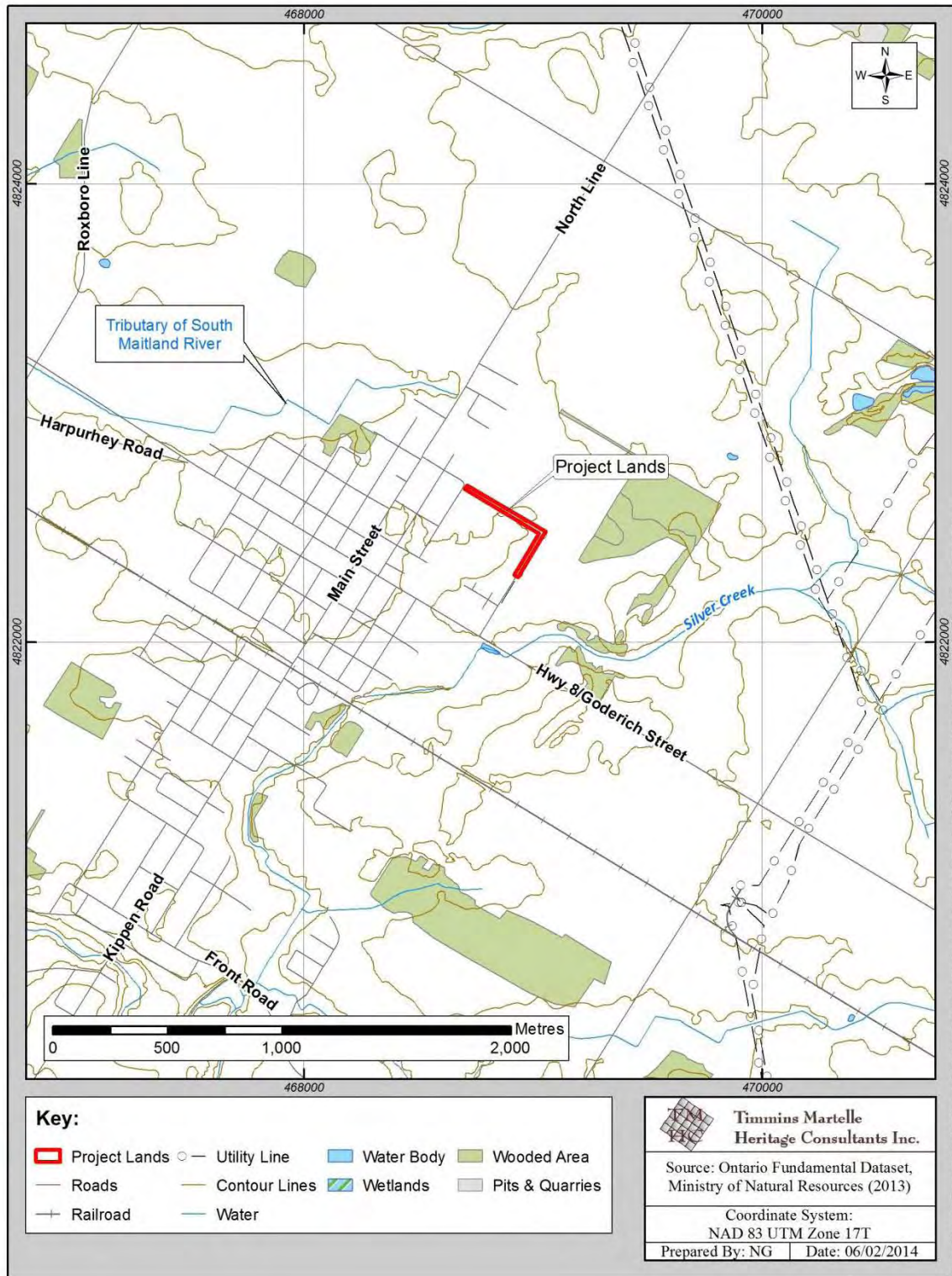
Map 3: Physiography within the Vicinity of the Project Lands





Map 4: Soils within the Vicinity of the Project Lands

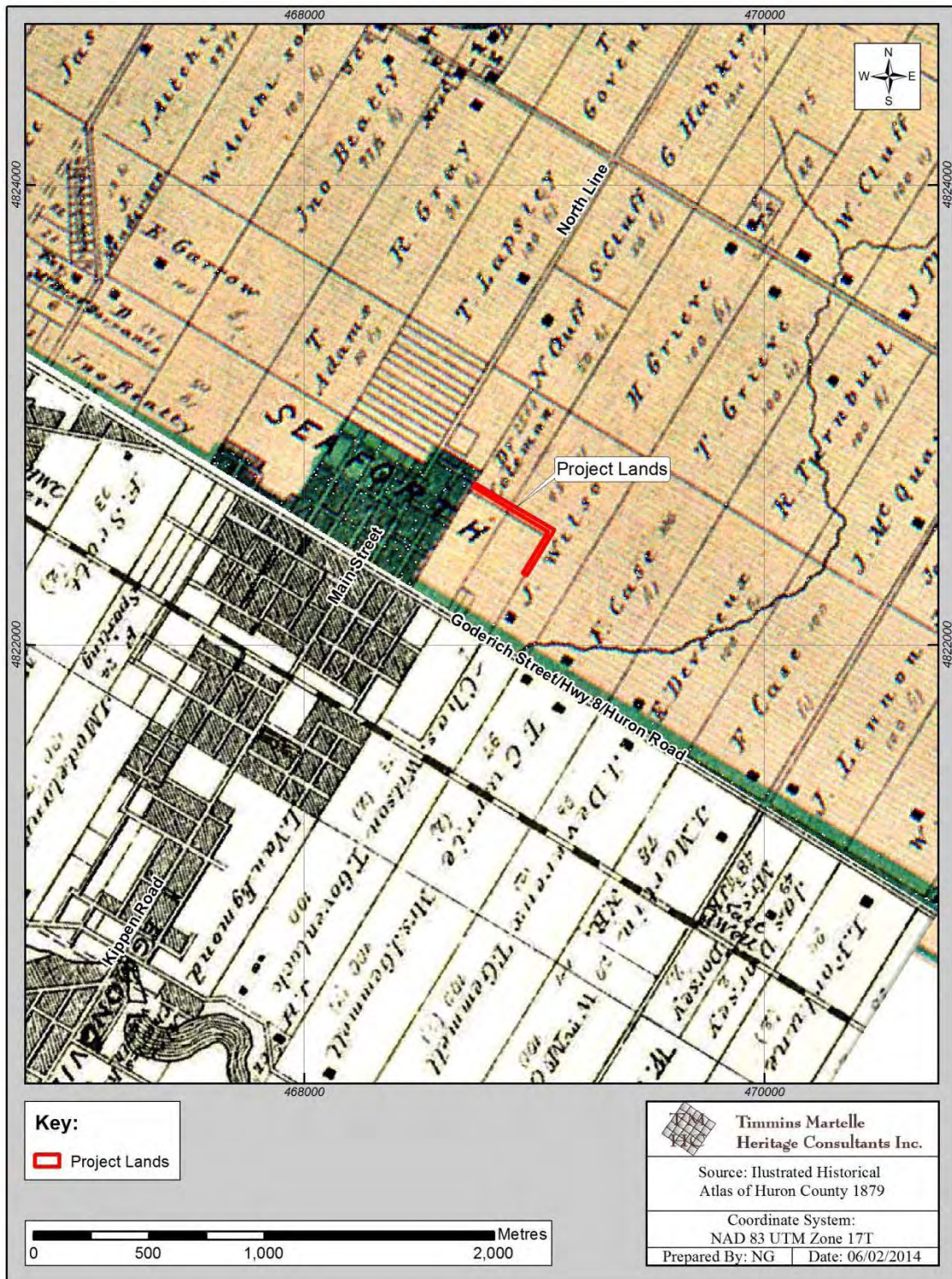




Produced by Timmins Martelle Heritage Consultants under licence from Ontario Ministry of Natural Resources. Copyright © Queens Printer 2013. 0002289

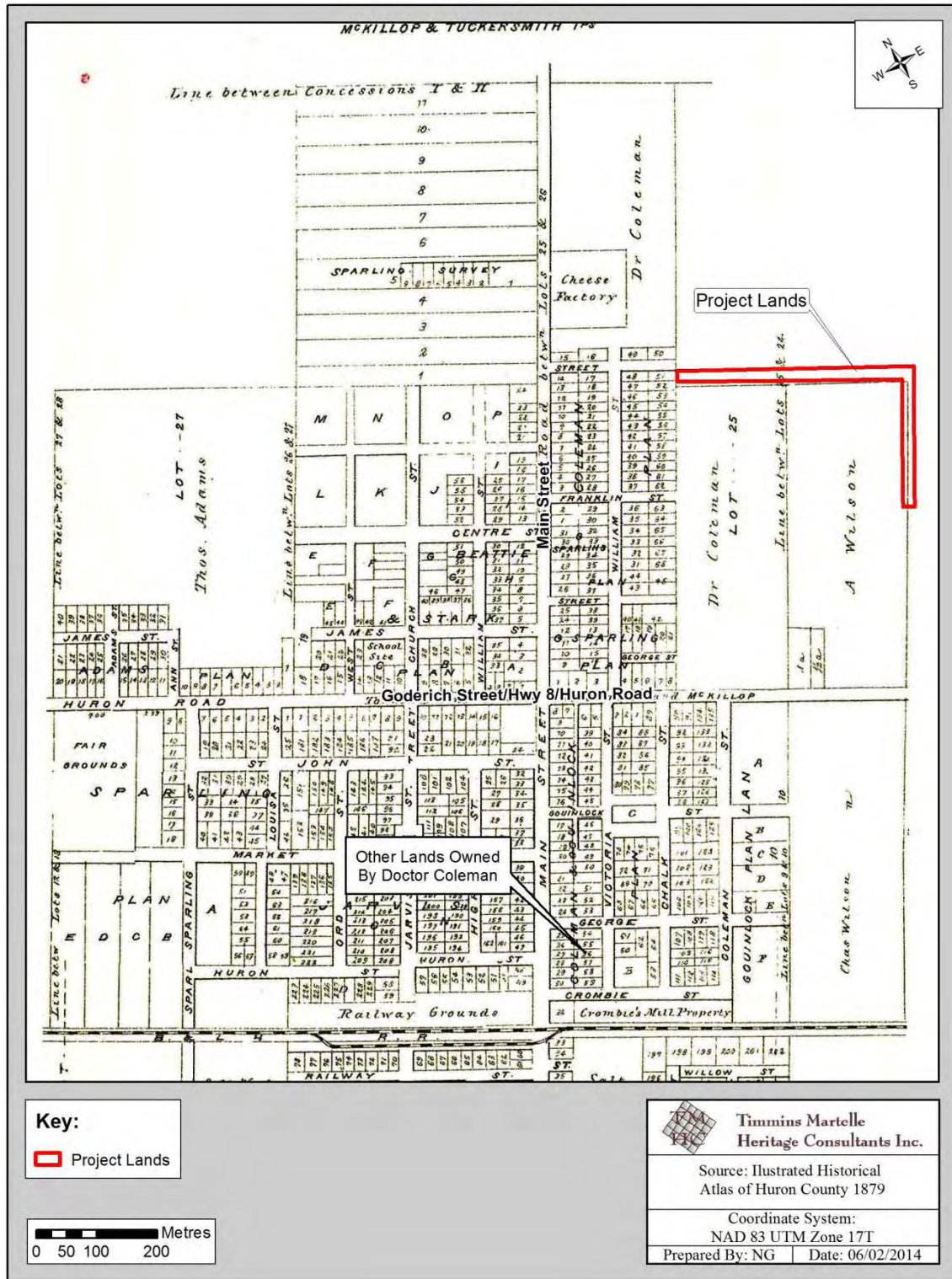
Map 5: Drainage within the Vicinity of the Project Lands



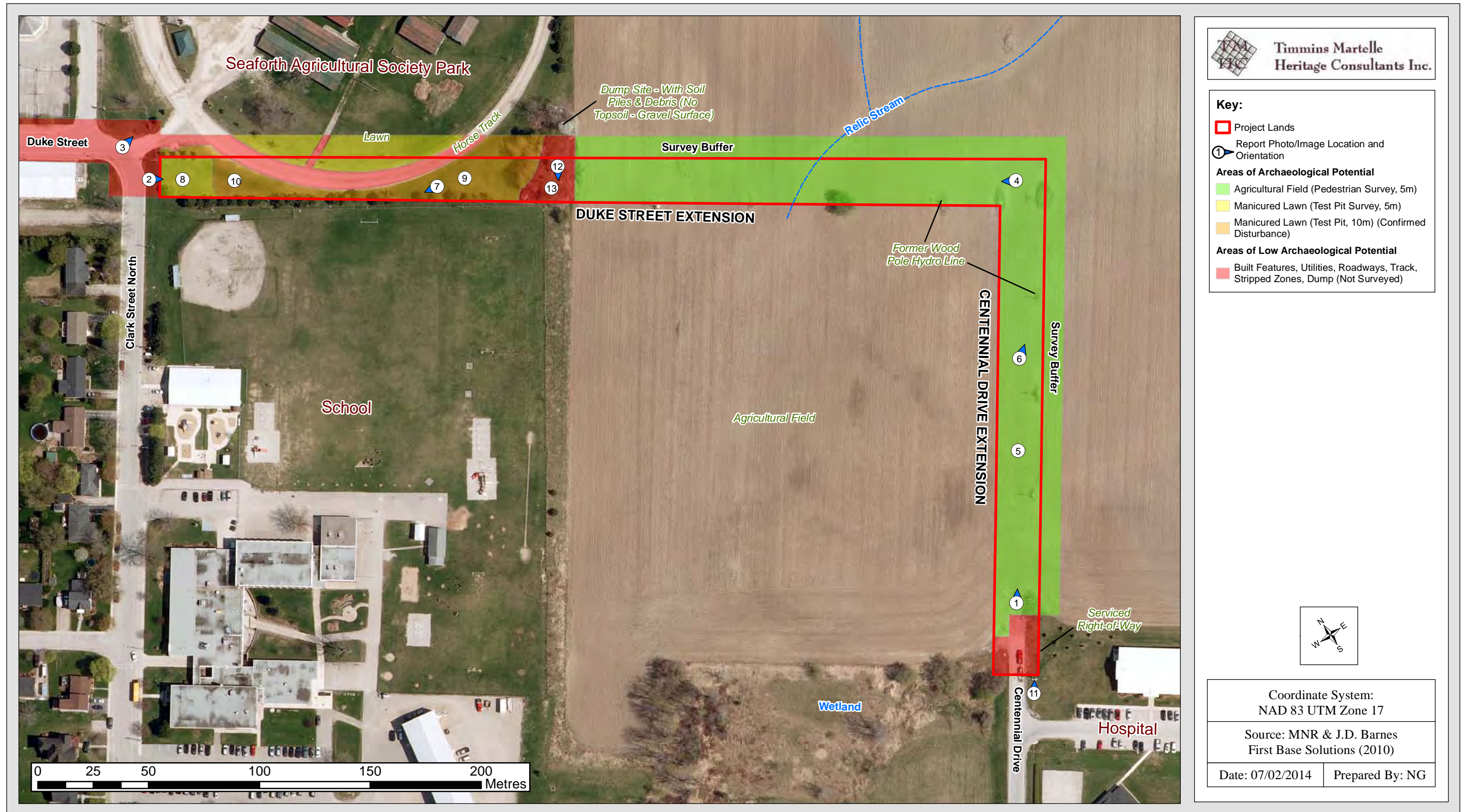


Map 6: Location of the Project Lands Shown on the 1879 Maps of Tuckersmith and McKillop Townships





Map 7: Project Lands Shown on 1879 Map of the Town of Seaforth



Map 8: Stage 2 Field Conditions and Assessment Methods



Appendix A: Proponent Definition of the Project Lands

The following generalized map was provided by the proponent, indicating the location of the planned 20 m wide road allowances.

Area for Archaeological Assessment



APPENDIX 'D'
CONSULTATION RECORD



MUNICIPALITY OF HURON EAST (COMMUNITY OF SEAFORTH)

MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT EXTENSION OF DUKE STREET & CENTENNIAL DRIVE

NOTICE OF STUDY COMMENCEMENT

THE PROJECT:

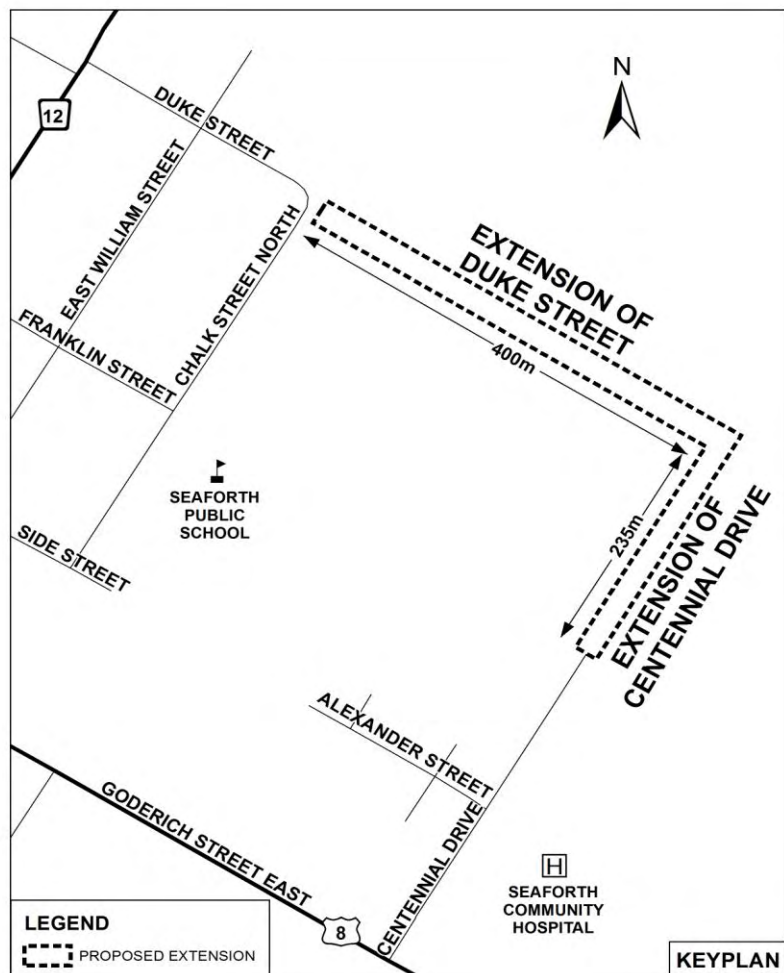
The Municipality of Huron East is planning to extend Centennial Drive and Duke Street in the northeast portion of Seaforth in order to service adjacent lands designated for urban development. The proposed road extensions will link Duke Street and Centennial Drive north of the Seaforth Community Hospital. Servicing extensions, which will include sanitary sewers, watermains and stormwater drainage on the proposed road extensions or adjacent lands, will also be examined in conjunction with the project.

THE ENVIRONMENTAL ASSESSMENT PROCESS:

The planning for this project is following the environmental screening process established for Schedule B activities under the Municipal Class Environmental Assessment (Class EA) document (approved October 2000, as amended in 2007 and 2011). The purpose of the Environmental Assessment process is to identify any potential environmental impacts associated with the project and to plan for appropriate mitigation of any impacts. The process includes consultation with the public, stakeholders and government review agencies.

PUBLIC INVOLVEMENT:

Public input and comments are invited for incorporation into the planning and design of this project and will be received until **October 25, 2013** at the address listed below. Any comments collected in conjunction with the study, will be maintained on file for use during the project and may be included in project documentation. With the exception of personal information, all comments will become part of the public record.



For further information on this project, or to review the Municipal Class EA process, please contact the Project Engineers: B. M. Ross and Associates: 62 North Street, Goderich, Ontario, N7A 2T4. Telephone (519) 524-2641. Fax (519) 524-4403. Kelly Vader, Environmental Planner (e-mail: kvader@bmross.net).

Brad Knight, CAO/Clerk-Administrator
Municipality of Huron East

This Notice Issued September 25, 2013

September 17, 2013

EA Coordinator
Ministry of the Environment
733 Exeter Road
London, ON N6E 1L3

**Re: Municipality of Huron East, Community of Seaforth
Class EA for the Extension of Duke Street and Centennial Drive**

The Municipality of Huron East is planning to extend Centennial Drive and Duke Street in the northeast portion of Seaforth in order to service adjacent lands designated for urban development. The proposed road extensions will link Duke Street and Centennial Drive north of the Seaforth Community Hospital. Servicing extensions, which will include sanitary sewers, watermains and stormwater drainage on the proposed road extensions or adjacent lands, will also be examined in conjunction with the project.

It is anticipated that the road extension work would be completed during the 2014 construction season. The affected sections of Duke Street and Centennial Drive would remain open during the construction period however, there may be limited access.

The planning for this project is following the environmental screening process set out for Schedule 'B' activities under the Municipal Class Environmental Assessment (Class EA) document (approved October 2000, as amended in 2007 and 2011, under the terms of the *Environmental Assessment Act*). The purpose of the Class EA screening process is to identify any potential environmental impacts associated with the proposed works and to plan for appropriate mitigation of any identified impacts. This process includes consultation with the public, stakeholder and government review agencies.

Your organization has been identified as possibly having an interest in the project and we are soliciting your input. Please forward your response to our office by **October 18, 2013**. If you have any questions or require further information on this project, please contact the undersigned.

Yours very truly

B. M. ROSS AND ASSOCIATES LIMITED

Per _____

Kelly Vader, RPP, MCIP
Environmental Planner

KV:es

Encl.

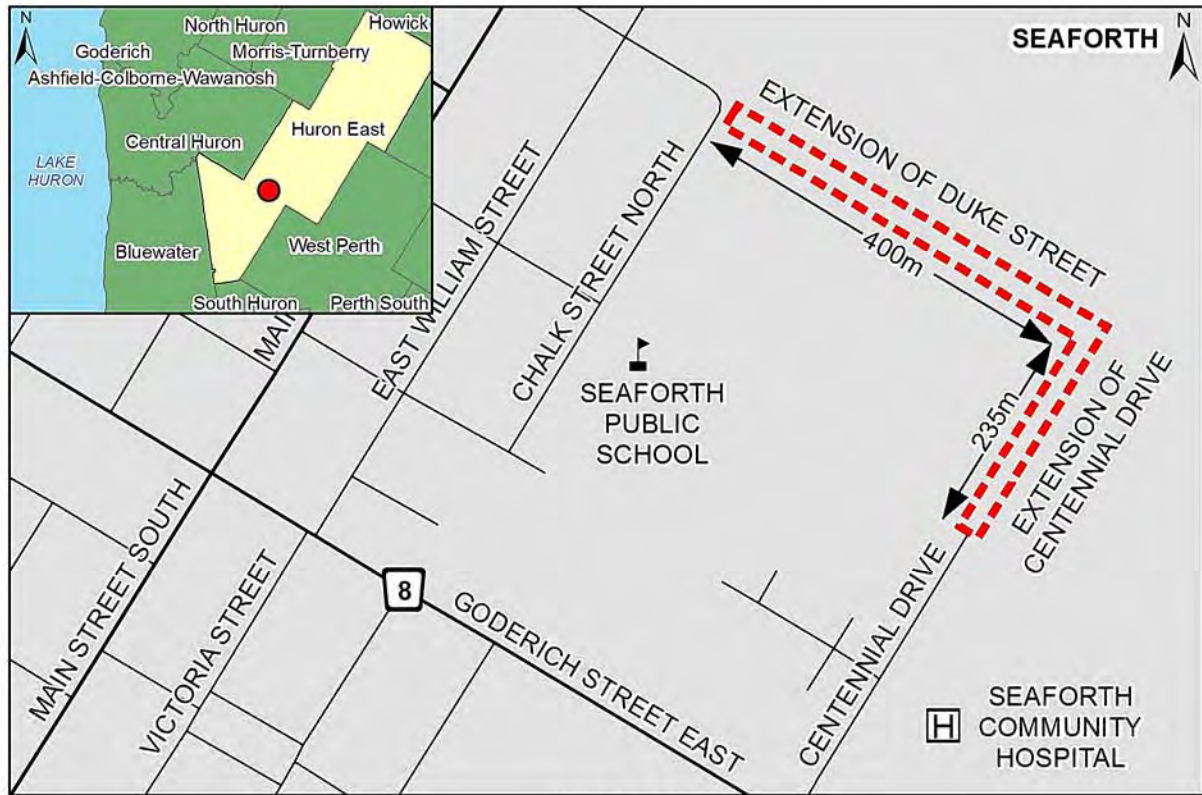
c.c. Brad Knight, CEO/Clerk-Administrator, Municipality of Huron East

**MUNICIPALITY OF HURON EAST
COMMUNITY OF SEAFORTH**

**MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT
FOR EXTENSION OF DUKE STREET AND CENTENNIAL DRIVE
FILE NO. 11151**

REVIEW AGENCY CIRCULATION LIST

REVIEW AGENCY	INVOLVEMENT
Ministry of the Environment (EA Coordinator) - Southwest District Office - London	Mandatory Contact
Ministry of Natural Resources (District Planner) - Guelph Office	Potential Impact upon Natural Environment
Ministry of Culture, Tourism and Sport - Culture Services Unit (Toronto)	Potential Impact upon Heritage Features
Maitland Valley Conservation Authority	Potential Impact on Environmental Features
Ontario Provincial Police Huron Detachment	General Information - Traffic
Municipality of Huron East	Copy of Correspondence - Proponent
County of Huron - Administration - Emergency Services (EMS, Fire Dispatch, CEMC) - Planning and Development Department	General Information
Huron East Fire Department 321 Birch, Seaforth, ON N0K 1W0	General Information
Huron-Perth Catholic District School Board Mill Street, Dublin, Ontario, N0K 1E0	General Information - Busing
Avon Maitland District School Board 62 Chalk Street, Seaforth, Ontario, N0K 1W0	General Information - Busing
Mitchell Seaforth Cable TV 123 Ontario, Dublin, ON NOK 1E0	General Information
Hydro-Festival Hydro	General Information
Union Gas (London)	General Information
Bell (Kitchener)	General Information



KEY PLAN
NOT TO SCALE



AERIAL PHOTOGRAPHY OF PROJECT AREA
SCALE 1 : 4 000

Aerial Photography Provided by County of Huron, 2010



LOOKING NORTH ON
CENTENNIAL DRIVE EXTENSION



LOOKING NORTHEAST ON
CENTENNIAL DRIVE EXTENSION



LOOKING SOUTHEAST
ON DUKE STREET EXTENSION



LOOKING SOUTHEAST
ON DUKE STREET EXTENSION

SITE PHOTOGRAPHS: AUG 22, 2013



MUNICIPALITY OF HURON EAST
COMMUNITY OF SEAFORTH
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT
FOR DUKE STREET AND CENTENNIAL DRIVE
ROAD EXTENSIONS
GENERAL LOCATION PLAN

DATE SEPT. 16, 2013	PROJECT No. 11151
SCALE AS SHOWN	FIGURE No. 1.0



Huron-Perth Catholic District School Board

Mail PO Box 70 Dublin ON N0K 1E0 Website www.huronperthcatholic.ca
Phone 519 345 2440 Fax 519 345 2449

September 30, 2013

B.M. Ross & Associates Limited
Engineers & Planners
Attn: Kelly Vader
62 North Street
Goderich ON N7A 2T4

One page.
FAKED
Sep 30 2013
619-524-4403

Dear Ms. Vader,

**RE: MUNICIPALITY OF HURON EAST, COMMUNITY OF SEAFORTH
CLASS EA FOR THE EXTENSION OF DUKE ST. & CENTENNIAL DR.**

In response to your correspondence of September 17, 2013, please be advised that we have no concerns in regards to the above-mentioned project.

Sincerely,

Anne Marie Nicholson
Manager of Assessment & Plant

/dd

Festival Hydro INC.

187 Erie Street, Box 397
Stratford ON N5A 6T5
(519) 271-4700 Fax (519) 271-7204

B.M. Ross And Associates Limited
62 North Street, Goderich Ontario
N7A 2T4

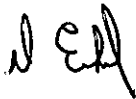
Attention: Kelly Vader

Date: September 30, 2013

Re: Municipality of Huron East, Community of Seaforth Class EA for the
Extension of Duke Street and Centennial Drive

I have reviewed the proposed extensions of Duke Street and Centennial Drive in the Community of Seaforth and I have no concerns at this time. I would ask that Festival Hydro be kept up to date on the progress of the proposed development so as to provide input on the electrical servicing. Festival Hydro is positioned well for extending services into the development as we have 3 phase power available at Duke Street and Centennial Drive.

If you have any questions or concerns please call me.



Doug Eckel
Engineering Manager
Festival Hydro
Phone (519) 271-4703 Ext. 246
Cell (519) 272- 3377

RECEIVED

OCT 02 2013

B.M. ROSS & ASSOC. LTD.

**Ministry of Tourism,
Culture and Sport**

Culture Services Unit
Programs and Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tel: 416 314 7145
Fax: 416 314 7175

**Ministère du Tourisme,
de la Culture et du Sport**

Unité des services culturels
Direction des programmes et des services
401, rue Bay, Bureau 1700
Toronto ON M7A 0A7
Tél: 416 314 7145
Télé: 416 314 7175



October 1, 2013 (EMAIL ONLY)

Kelly Vader, RPP/MCIP
B.M. Ross and Associates
69 North Street
Goderich, ON N7A 2T4
E: kvader@bmross.net

**RE: Class EA for the Extension of Duke Street and Centennial Drive
Municipality of Huron East, Community of Seaforth, Ontario
MTCS file no. 0000263**

Dear Kelly Vader:

Thank you for providing the Ministry of Tourism, Culture and Sport (MTCS) with the Notice of Commencement for your project. For this undertaking, it is the mandate of MTCS, under the *Ontario Heritage Act (OHA)*, to conserve, protect and preserve Ontario's cultural heritage, including:

- Archaeological resources;
- Built heritage resources, including bridges and monuments; and,
- Cultural heritage landscapes.

Under the EA process, a determination of the project's potential impact on these cultural heritage resources is required. Please advise MTCS whether archaeological and/or heritage impact assessments will be completed for your EA project, and forward them to MTCS, before issuing a Notice of Completion.

Archaeological Resources

Screening your EA project with the attached MTCS *Criteria for Evaluating Archaeological Potential* determines whether it may impact archaeological resources. MTCS archaeological sites data are available at archaeologysites@ontario.ca. If your EA project area exhibits archaeological potential, then an archaeological assessment (AA) is recommended by an *OHA* licensed archaeologist and the AA report forwarded to MTCS for review.

Built Heritage and Cultural Heritage Landscapes

The MTCS *Screening for Impacts to Built Heritage and Cultural Heritage Landscapes* checklist attached determines whether your EA project may impact these cultural heritage resources: the Clerk for Huron East can provide information on property registered or designated under the *Ontario Heritage Act*. I understand that an adjacent property ("The Roundhouse" at 140 Duke Street in Seaforth), is designated under Part IV of the *OHA* and included in the Canadian Register of Historic Places. If your EA project may impact known or potential cultural heritage resources, MTCS recommends that a Heritage Impact Assessment (HIA) be prepared by a qualified consultant. The MTCS [Info Sheet #5: Heritage Impact Assessments and Conservation Plans](#) outlines the scope of HIAs. Please send completed HIAs to MTCS and the local municipality for review, and make it available to local heritage organizations with an interest.

Environmental Assessment Reporting

HIA and AA reports and their recommendations are part of the EA project. The Environmental Study Report should document and summarize any determinations that no cultural heritage resources are impacted and no technical studies are warranted as part of the EA process. MTCS is in no way liable if the information in the completed checklists is found to be inaccurate or incomplete.

Thank-you for circulating MTCS on this project: please continue to do so through the EA process, and contact me for any questions or clarification.

Sincerely,

Joseph Muller
Heritage Planner
Joseph.Muller@ontario.ca

Copied to: Brad Knight, CEO/Clerk-Administrator, Municipality of Huron East

Disclaimer: The Ministry of Tourism, Culture and Sport reserves the right to review projects for their potential to impact archaeological, built heritage and cultural heritage landscape resources, and recommend that archaeological and/or heritage impact assessments be undertaken.

Please notify MTCS if archaeological resources are impacted by EA project work. All activities impacting archaeological resources must cease immediately, and a licensed archaeologist is required to carry out a determination of their nature and significance.

If human remains are encountered, all activities must cease immediately and the local police be contacted as well as the Cemeteries Regulation Unit of the Ministry of Consumer Services must be contacted. In situations where human remains are associated with archaeological resources, MTCS should also be notified to ensure that the site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

October 28, 2013

First Nation Letter (See Attached List)

**Re: Municipality of Huron East
Class EA for the Extension of Duke Street and Centennial Drive
Community of Seaforth**

The Municipality of Huron East is planning to extend Centennial Drive and Duke Street in the northeast portion of Seaforth in order to service adjacent lands designated for urban development. The proposed road extensions will link Duke Street and Centennial Drive north of the Seaforth Community Hospital. Servicing extensions, which will include sanitary sewers, watermains and stormwater drainage on the proposed road extensions or adjacent lands, will also be examined in conjunction with the project.

It is anticipated that the road extension work would be completed during the 2014 construction season. The affected sections of Duke Street and Centennial Drive would remain open during the construction period however, there may be limited access.

The planning for this project is following the environmental screening process set out for Schedule 'B' activities under the Municipal Class Environmental Assessment (Class EA) document (approved October 2000, as amended in 2007 and 2011, under the terms of the *Environmental Assessment Act*). The purpose of the Class EA screening process is to identify any potential environmental impacts associated with the proposed works and to plan for appropriate mitigation of any identified impacts. This process includes consultation with the public, stakeholder and government review agencies.

Your community has been identified as possibly having an interest in this project. For your convenience, a response form is enclosed along with a self-addressed stamped envelope. Please return by **December 15, 2013**. If you have any questions on this matter or require further information, please contact the undersigned at 1-888-524-2641 or by e-mail at kvader@bmross.net.

Yours very truly

B. M. ROSS AND ASSOCIATES LIMITED

Per _____

Kelly Vader, RPP, MCIP
Environmental Planner

KV:hv
Encl.

c.c. Brad Knight, Municipality of Huron East

**MUNICIPALITY OF HURON EAST
COMMUNITY OF SEAFORTH**

**CLASS ENVIRONMENTAL ASSESSMENT
EXTENSION OF DUKE STREET & CENTENNIAL DRIVE
PROJECT 11151**

**AGENCY CIRCULATION LIST:
ABORIGINAL INTERESTS**

Chippewas of Kettle and Stony Point First Nation
6247 Indian Lane
RR #2 Forest, Ontario
N0N 1J0
Ph: 519-786-2125

Aamjiwnaang First Nation
Aamjiwnaang Administration Office
978 Tashmoo Ave.
Sarnia, ON
N7T 7H5
Ph: 519-336-8410

Chippewas of the Thames First Nation
Chief Vaughn Albert Sr.
320 Chippewa Road, Muncey, ON
N0L 1Y0
519-289-5555
Consultation and Accommodation Unit
4 Anishnabeg Drive, Muncey Ontario N0L 1Y0
519-289-2662

Oneida Nation of the Thames
2212 Elm Ave
Southwold, Ontario
N0L 2G0
Ph: 519-652-3244

Munsee-Delaware Nation
RR#1
Muncey, Ontario
N0L 1Y0
519.289.5396

Response Form

Project Name: Class EA for the Extension of Duke Street and Centennial Drive, Seaforth, ON

Project Description: Extension of Centennial Drive and Duke Street in the northeast portion of Seaforth in order to service adjacent lands designated for urban development. The proposed road extensions will link Duke Street and Centennial Drive north of the Seaforth Community Hospital. Servicing extensions which will include sanitary sewers, watermains and stormwater drainage on the proposed road extensions or adjacent lands, will also be examined in conjunction with the project.

Project Location: Seaforth, Municipality of Huron East, County of Huron, Ontario

(Key Plan of Project Location attached)

Please Detach and Return in Envelope Provided

Name of Aboriginal Community: _____

Please check appropriate box

Please send additional information on this project.

We would like to meet with representatives of this project.

We have no concerns with this project and do not wish to be consulted further.

Project Name: 11151

Location: Seaforth

Proponent: Municipality of Huron-East



CHIPPEWAS OF THE THAMES FIRST NATION

RECEIVED

NOV 20 2013

B.M. ROSS & ASSOC. LTD.

November 14, 2013

B. M. Ross and Associates Limited
Kelly Vader
Environmental Planner
62 North Street
Goderich, ON N7A 2T4

**Subject: Municipality of Huron East
Class EA for the Extension of Duke Street and Centennial Drive
Community of Seaforth**

Dear Kelly,

We are in receipt of correspondence of the aforementioned project.

In our screening of your correspondence we have identified no concerns with your project or the information that you have presented to us as this time.

We ask that if there are any changes to your project that are of a substantive nature that you keep us informed.

Sincerely,

Fallon Burch
Chippewa of the Thames
Consultation Coordinator

Response Form

Project Name: Class EA for the Extension of Duke Street and Centennial Drive, Seaforth, ON

Project Description: Extension of Centennial Drive and Duke Street in the northeast portion of Seaforth in order to service adjacent lands designated for urban development. The proposed road extensions will link Duke Street and Centennial Drive north of the Seaforth Community Hospital. Servicing extensions which will include sanitary sewers, watermains and stormwater drainage on the proposed road extensions or adjacent lands, will also be examined in conjunction with the project.

Project Location: Seaforth, Municipality of Huron East, County of Huron, Ontario

(Key Plan of Project Location attached)

Please Detach and Return in Envelope Provided

Name of Aboriginal Community: Chippewin of the Thames First Nation

Please check appropriate box

Please send additional information on this project.

We would like to meet with representatives of this project.

We have no concerns with this project and do not wish to be consulted further.

↳ unless your project has any changes that are of a substantive nature.

Project Name: 11151

Location: Seaforth

Proponent: Municipality of Huron-East

January 15 , 2014

Pamela Scharfe
B.M. Ross and Associates
62 Northe Street
Goderich, ON N7A 2T4

pscharfe@bmross.net (519) 524-2641

Dear Ms. Scharfe;

Re: Municipal Servicing Extension (project 11151) – Seaforth, Ontario

Thank you for your e-mail of September 19, 2013, requesting information held by Aboriginal Affairs and Northern Development Canada (AANDC) on established or potential Aboriginal and treaty rights in the vicinity of the project noted above.

Consulting with Canadians on matters of interest or concern to them is an important part of good governance, sound policy development and decision-making. In addition to good governance objectives, there may be statutory or contractual reasons for consulting, as well as the common law duty to consult with First Nations, Métis and Inuit when conduct that might adversely impact the section 35 Aboriginal or treaty rights (established or potential) is contemplated.

Section 35 of the *Constitution Act, 1982*, reads, in part:

- The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.
- In this Act, “aboriginal peoples of Canada” includes the Indian, Inuit and Métis peoples of Canada.
- For greater certainty, “treaty rights” includes rights that now exist by way of land claims agreements or may be so acquired.

The attached report consists of the following categories of information *when applicable*:

Key Features of the Project Area provides a synopsis of the key section 35 considerations that characterize the location in question and, where appropriate, CIS’s methodology in identifying the information provided.

Aboriginal Community Information includes key contact information and any other information such as Tribal Council affiliation.

Treaties includes information on historic and modern treaties, which define established rights of the signatory Aboriginal groups.

Claims includes comprehensive, specific and special claims:

- Comprehensive claims are those which, when accepted for negotiation, address broad assertions of Aboriginal rights and title and are intended to result in a modern treaty or agreement that defines and clarifies s. 35 rights within the treaty area.

- Specific claims are claims made by a First Nation against the federal government related to outstanding lawful obligations, such as the administration of land and other First Nation assets, and to the fulfillment of Indian treaties, although the treaties themselves are not open to re-negotiation. Claims that are closed, settled or not land-related to lands or treaty obligations have been excluded from this response. As the claims progress regularly, it is recommended that the status of each claim be reviewed through the Reporting Centre on Specific Claims at: http://pse5-esd5.ainc-inac.gc.ca/SCBRI_E/Main/ReportingCentre/External/externalreporting.aspx
- Special claims, or claims of a third kind, are those that do not meet the definition of comprehensive or specific claims but deal with some form of historic obligations.

Legal Proceedings usually refer to litigation between the Aboriginal Group and the Crown, often pertaining to section 35 rights assertions or consultation matters. The groups in question may have various other matters being litigated, however, only those that are related to land or s.35 rights are included herein.

Self-Government Agreements may be part of comprehensive claims or stand-alone negotiations and may or may not be protected under section 35. Unless they form part of a treaty, they are not geographically defined and address such areas of responsibility as internal governance, education, culture and justice.

Other Considerations may also be included to make you aware of groups, rights assertions or consultation-related matters that may also be relevant.

Should you require further assistance regarding the information provided, or if you have any questions and/or comments about the enclosed response, please do not hesitate to contact me.

Changing Role of the Consultation Information Service

AANDC has now launched the Aboriginal and Treaty Rights Information System (ATRIS). This Web-based system uses a mapping interface to provide information to federal officials and other interested parties on the location and nature of established and potential Aboriginal and Treaty rights. With ATRIS bringing together information regarding Aboriginal groups such as their exact location, their established rights (through treaties and other agreements) and their asserted rights through claim processes and also enabling users to relate many types of AANDC corporate data within a geographical and consultation context, ATRIS has become the main platform for Canada to disseminate its real or constructive knowledge of section 35 rights.

Due to the recent public availability of ATRIS, the role of the Consultation Information Service (CIS) of AANDC's Consultation and Accommodation Unit is currently in transition. That is, the focus of the CIS is shifting away from its former practice of providing written responses to written requests for information on established or potential Aboriginal and treaty rights to managing and supplementing the content in ATRIS. Previously, we prepared these responses to specific requests by drawing on ATRIS. Now that ATRIS is widely available, we are directing requesters to ATRIS so they can locate the information they are seeking. By focusing our attention on building up and improving the content of ATRIS, the CIS will be able to provide consistent and comprehensive information more efficiently.

If you are using ATRIS from outside of the federal government, you can go directly to http://sidait-atris.aadnc-aandc.gc.ca/atris_online/ and begin your research in ATRIS. At the ATRIS “Help” button, there are answers to frequently asked questions, a glossary, and instructions on how to navigate the system. Please familiarize yourself with the information available there so you can carry out your research using ATRIS.

Please keep in mind that some of the information provided by ATRIS will be contextual. Depending on your project, the information that comes up in a search may or may not pertain to Aboriginal or treaty rights in your particular project area. In most cases, therefore, the Aboriginal communities identified by ATRIS are best placed to explain their traditional use of land, their practices, or their claims that may fall under section 35 of the *Constitution Act, 1982*.

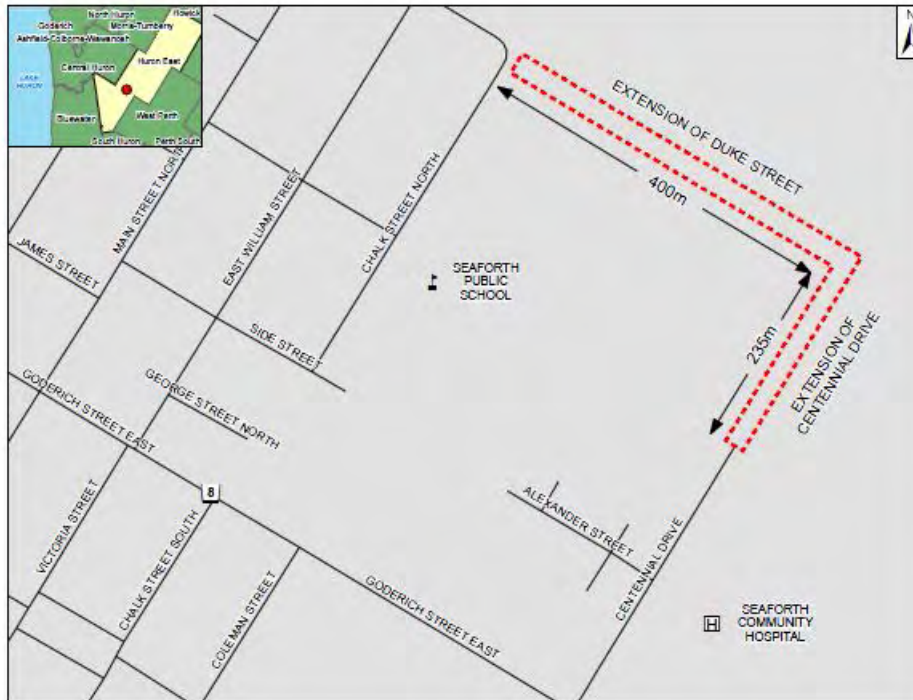
If you have specific questions on how to conduct research using ATRIS, we will endeavour to assist you if you contact the CIS through the e-mail address: UCA-CAU@aadnc-aandc.gc.ca. Should you have comments regarding the contents in ATRIS, please complete the “Provide Feedback” form available in the “Help” or provide them through e-mail. Your input is valuable as ATRIS is continually evolving through the addition of new information and the observations and contributions of users.

Regards,

Allison Berman
Consultation Information Service
Consultation and Accommodation Unit
Aboriginal Affairs and Northern Development Canada
10 Wellington Street, 8th floor
Gatineau, QC K1A 0H4
819-934-1873

CONSULTATION INFORMATION RESPONSE – January 2014

Municipal Servicing Extension (project 11151) – Seaforth, Ontario



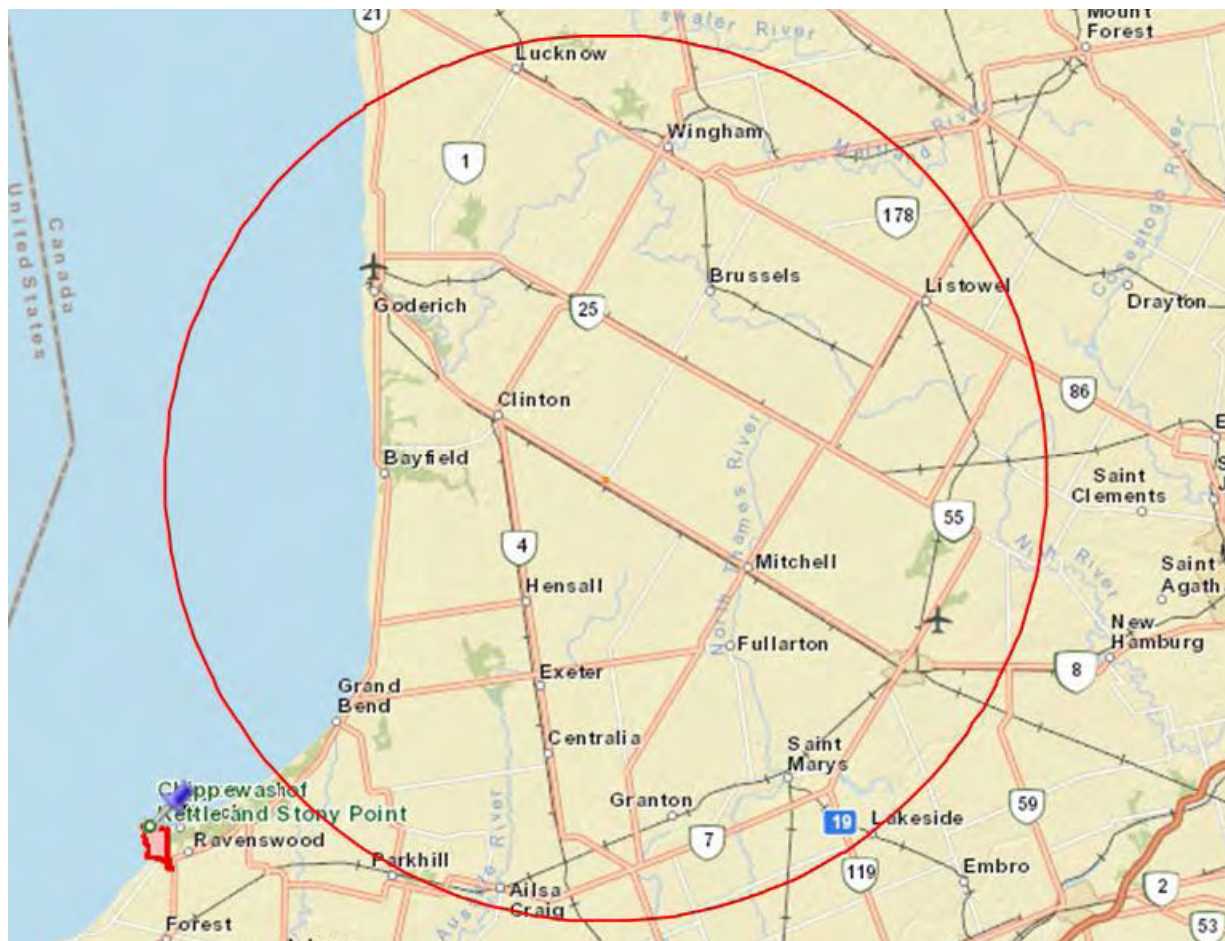
Disclaimer

This information is provided as a public service by the Government of Canada. All of the information is provided "as is" without warranty of any kind, whether express or implied, including, without limitation, implied warranties as to the accuracy or reliability of any of the information provided, its fitness for a particular purpose or use, or non-infringement, which implied warranties are hereby expressly disclaimed. References to any website are provided for information only shall not be taken as endorsement of any kind. The Government of Canada is not responsible for the content or reliability of any referenced website and does not endorse the content, products, services or views expressed within them.

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Under no circumstances will the Government of Canada be liable to any person or business entity for any reliance on the completeness or accuracy of this information or for any direct, indirect, special, incidental, consequential, or other damages based on any use of this information including, without limitation, any lost profits, business interruption, or loss of programs or information, even if the Government of Canada has been specifically advised of the possibility of such damages.

On the map below, a 50 km radius (red circle) around the project is provided. There are no First Nation communities within a close proximity to the project. For a wider buffer, please access ATRIS as recommended in the above letter.



Key considerations:

The project falls within the Upper Canada Treaties region

IMPORTANT CONTEXTUAL INFORMATION RELATED TO SECTION 35 RIGHTS

The project area in question falls within the Upper Canada Treaties area. In general, where historic treaties have been signed, the rights of signatory First Nation's are defined by the terms of the Treaty. In many cases, however, there are divergent views between First Nations and the Crown as to what the treaty provisions imply or signify.

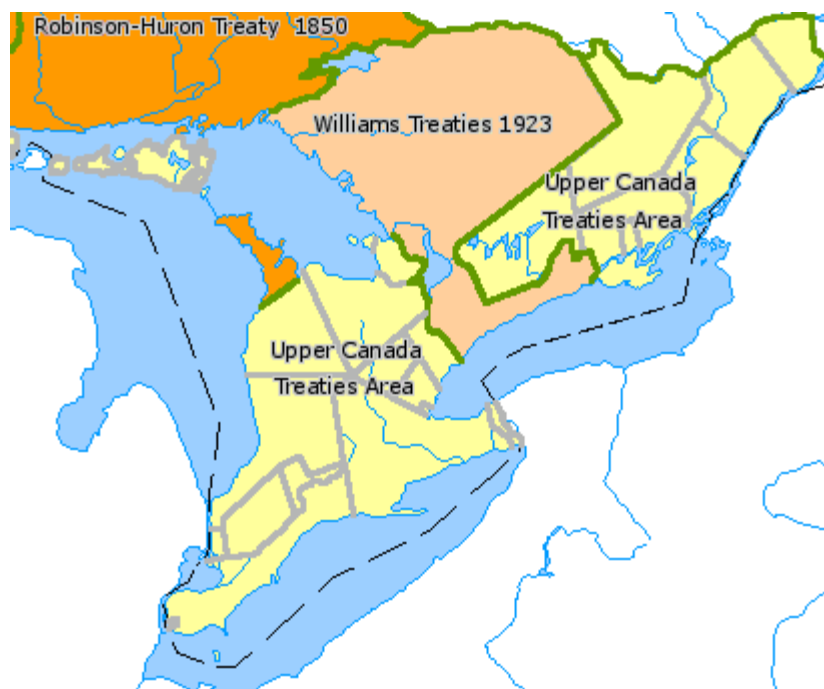
Treaties of Southern Ontario- The Upper Canada Treaties

There are several treaty making eras which impact the province of Ontario. These eras are known as the Upper Canada Land Surrenders from 1764 to 1862. These surrenders are seen as treaties which transfer all Aboriginal rights and title to the Crown in exchange for one-time

payments or annuities. They tended to be made with individual First Nation groups for tracts of land.

1764-1782 – Early Land Surrenders

The Royal Proclamation of 1763 established the protection from encroachment of an Aboriginal territory outside of the colonial boundaries. Rules and protocols for the acquisition of Aboriginal lands by Crown officials were set out and became the basis for all future land treaties. In response to military and defensive needs around the Great Lakes, the Indian Department negotiated several land surrender treaties in the Niagara region.



*Atlas of Canada

1783-1815- Treaties for Settlement

As part of the plan to resettle some 30,000 United Empire Loyalists who refused to accept American rule, and fled to Montreal, the Indian Department undertook a series of land surrenders west of the Ottawa River with the Mississauga and the Chippewa of the southern Great Lakes. These tended to be uncomplicated arrangements whereby for a particular Aboriginal group was paid a specific sum paid in trade goods, to surrender a stated amount of land.

1815-1862- Treaties to Open the Interior

After the war of 1812, the colonial administration of Upper Canada focused on greater settlement of the colony. The Indian Department completed the last of the over 30 Upper Canada Land Surrenders around the Kawartha, Georgian Bay, and the Rideau and Ottawa Rivers. All of this land which today is known as Southern Ontario, was ceded to the Crown.



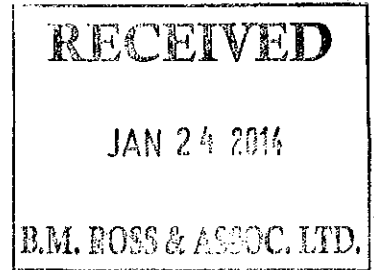
**AAMJIWNAANG FIRST NATION
CHIPPEWAS OF SARNIA
Band Council**

978 TASHMOO AVENUE
SARNIA, ONTARIO
N7T 7H5
Phone: (519) 336-8410
Fax: (519) 336-0382

January 21, 2014

File #2013-0053

B. M. Ross and Associates Limited
62 North Street,
Goderich, ON
N7A 2T4



Attention: Kelly Vader

**Re: Municipality of Huron East-Class EA for Extension of Duke Street and Centennial Drive
Community of Seaforth**

Dear Ms. Vader:

Thank you for the information dated October 28, 2013 regarding the above noted project. The information has been entered in Aamjiwnaang First Nation's Consultation log.

The information was presented to Aamjiwnaang First Nation's Environment Committee at a recent committee meeting. After review and consideration of the information available, the members have not recommended forwarding the file to Chief and Council for full consultation at this time. The members have requested that future information be obtained so that they may review for further action. Therefore, we request the information on this project continue to be forwarded to our offices. Your offices will be notified accordingly of any required consultation activities, if any.

Aamjiwnaang First Nation continues to assert and exercise our Aboriginal Rights and Title to all parts of our Reserve and Traditional Territory.

Sincerely,

FOR / Sharilyn Johnston
Environmental Coordinator
Aamjiwnaang First Nation

"Saving our Home and Native Land"

August 25, 2015

B.M. Ross and Associates Ltd.
62 North Street
Goderich Ontario N7A 2T4

Attention: Ms. Kelly Vader, MCIP, RPP (BY EMAIL ONLY)

Re: **Draft report for the Class Environmental Assessment for the Extension of
Duke Street and Centennial Drive (Town of Seaforth)**

Dear Ms. Vader:

This letter provides the Ministry of the Environment and Climate Change's (MOECC) initial comments on B.M. Ross and Associates Ltd.'s (B.M. Ross) draft report entitled "**Municipality of Huron East Class Environmental Assessment for the Extension of Duke Street and Centennial Drive (Town of Seaforth) Screening Report.**" B.M. Ross has provided the MOECC an opportunity to review the draft report prior to the issuance of the Notice of Completion.

The MOECC's comments for both B.M. Ross's (consultant) and the Municipality of Huron East's (proponent) due consideration and response are below.

Sanitary and Water Servicing

Several different sections of the report discuss the installation of water and wastewater servicing infrastructure in the "limits of the road allowance" and/or the "internal servicing corridor" (Sections 2.4, 2.7, 5.1 and Table 3.3). Each section describes the location of the proposed servicing infrastructure slightly differently and it is not explicitly clear where exactly the proposed sanitary sewers and watermains will be located. This should be more clearly and consistently described. Additionally it would be helpful to update Figure 2.6 (page 16) to include "proposed sanitary sewers" and "proposed watermains" as a visual reference.

Consultation with the Seaforth Community Hospital

The Seaforth Community Hospital is located near the project area on Centennial Drive, however there is no indication in the report that the Seaforth Community Hospital has been consulted directly regarding the project and any potential impacts to the hospital's operations. This is important considering that Table 3.4 indicates that construction traffic can be routed along Centennial Drive as much as possible to minimize volume adjacent to the Seaforth Public School. Please include information regarding consultation with the hospital in the report.

Additionally, the report includes an evaluation of potential impacts and initial remediation in Table 3.4 as well as an effects analysis in Table 3.5 for the nearby Seaforth Public School but not for the nearby Seaforth Community Hospital. Please include an evaluation/analysis for the hospital in Table 3.4 and 3.5 as appropriate.

Lastly, Figure 2.6 (page 16) of the report labels the location of the Seaforth Community Hospital. Above this label, at the north end of the existing Centennial Drive there appear to be two buildings and a parking lot with only one entrance from Centennial Drive. Is this a part of the hospital or separate properties? Will this parking lot be accessible during construction of the project? If not, are there any "remediation" measures that can be put in place to accommodate the property owner(s)/parking lot users?

Aboriginal Consultation

Proponents have an important and direct role in the consultation process, including a responsibility to conduct adequate consultation with First Nation and Métis communities as part of the environmental assessment process. This involves engaging with the communities in two-way communication and providing opportunity for participation in the project in a meaningful way. To ensure that Aboriginal communities have the ability to assess a project's potential to adversely affect their Aboriginal or treaty rights, Ontario requires proponents to undertake certain procedural aspects of consultation. Providing notice to the elected leadership of the First Nation and/or Métis communities, as well as following up with communities is a part of the proponent's responsibilities for procedural aspects of consultation.

The MOECC notes that five Aboriginal communities were engaged by the proponent for the project. The Chippewas of the Thames First Nation responded that they had no concerns and asked to be kept informed if there were substantive changes to the project. The Aamjiwnaang First Nation responded that the project would not be forwarded to the chief and council at that time and they would like to continue to be advised about the project. Your correspondence with the Chippewas of the Thames First Nation is included in Appendix D, but your correspondence with the Aamjiwnaang First Nation is not. Please be consistent and include all correspondence.

Per the Aboriginal Consultation Log in Appendix D, it appears the proponent, with the help of its consultant, has only followed up with one community since project initiation in October of 2013. As such, I would advise that the proponent should follow up with all communities directly (with the exception of Chippewas of the Thames First Nation, unless substantive changes to the project have occurred since your previous communication with the community) prior to the Notice of Completion being issued to initiate discussions on the project.

With respect to the Notice of Completion, Section 7.4 of the report states that the Notice of Completion will be issued on September 9, 2015 with the review period concluding on October 9, 2015. However, your Aboriginal Consultation Log indicates that the Notice of Completion will be sent to Aboriginal communities on September 16, 2015. Please distribute the Notice of Completion to the Aboriginal communities when the Notice is first issued, allowing for the full 30 day review period. Please address the Notice directly to the elected leadership of the community as well as any additional contacts that you have been provided in the past. Please update your Agency Circulation List in Appendix D to reflect the name of the contact (i.e. elected leadership) to whom the Notice is being provided. Please include in the final report copies of the cover letters sent out with the Notice of Completion to demonstrate that the Notice is addressed directly to the elected leadership of the community. Following distribution of the Notice of Completion, please follow up with each community to make reasonable attempts to ensure they

have received the Notice, have reviewed the information and confirm whether they have comments to provide. I would advise that you continue to update your Aboriginal Consultation Log following the issuance of the Notice of Completion.

Please ensure your Aboriginal Consultation Log is up-to-date in the final report up to the date of issuing the Notice of Completion.

Economic Environment

There is no break-down of costs associated with this project. Section 6.4 of the report indicates that capital costs associated with the planned road extension project will initially be funded through the capital works budget for the municipality. Was this project initially planned for in the budget? Is there a place to direct the public to in order to view what the capital costs for the project are and/or how much of the budget is being attributed to this project? Will the construction of this project result in any surcharges to residents and/or adjacent property owners? If so, have they been advised?

The municipality has agreed to purchase lands from the Seaforth Agricultural Society and undertake the relocation of a racetrack and other associated features impacted by the proposed project. Will this result in any surcharges to residents? If so, have they been advised?

The municipality will maintain the road, water, sanitary and storm water facilities. What are the annual maintenance costs expected to be for the water/wastewater infrastructure and road extensions?

Proposed Road Cross Section (Section 5.4)

This section states in part that the proposed road extensions will be constructed to an “urban standard”. What is the urban standard? Is having an 8.5 metre paved road surface with curbs and gutters to convey surface water flows to the storm drainage collection system all that constitutes the urban standard? Is this a standard set by the municipality? Is there any further information, such as a reference document, that the public could be made aware of should they be interested in more information?

Project Implementation (Section 7.6)

It would be beneficial for nearby residents to be more specific if possible with respect to anticipated construction timelines beyond “2016” for the Centennial Drive construction and “2017” for the Duke Street construction.

Presumably the “Centennial Drive construction” and “Duke Street construction” include the road extension and installation of servicing infrastructure along these road extensions. There is no indication of a timeline for the installation of servicing infrastructure within the internal servicing corridor located on the future development lands or the construction of the stormwater management facility.

Permit to Take Water (Section 8.2)

Please note that a Permit to Take Water may also be required if significant dewatering (over 50 000 L/day) is needed for any construction activity (not just sewer installation).

Finally, should you have any questions with respect to this ministry's comments as presented herein, please feel free to approach me and I will do my best to answer them as best I can. Thank you in advance for your response to this ministry's queries as posed herein.

Yours truly,

A handwritten signature in cursive script that reads "Emilee O'Leary".

Emilee O'Leary
Regional Environmental Planner / Regional EA Coordinator
Ministry of Environment & Climate Change
733 Exeter Road
London ON, N6E 1L3
(519) 873-5012 | emilee.oleary@ontario.ca

CC: Mr. Brad Knight, CAO/Clerk-Administrator, Municipality of Huron East

B. M. ROSS AND ASSOCIATES LIMITED
Engineers and Planners
62 North Street, Goderich, ON N7A 2T4
p. (519) 524-2641 • f. (519) 524-4403
www.bmross.net

File No. 11151
Your File No. #2013-0053

September 9, 2015

Sharilyn Johnston
Environmental Coordinator
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia, ON N7T 7H5

Dear Ms. Johnston:

**Re: Municipality of Huron East
Class EA for the Extension of Duke Street and Centennial Drive
Community of Seaforth**

Further to your previous correspondence regarding this project dated January 21, 2014, we wish to provide an update on the status of this project for your information in advance of the publication of the Notice of Study Completion. The Municipality of Huron East is planning to extend Duke Street and Centennial Drive in the northeast portion of the community of Seaforth in order to service adjacent lands designated for urban development. The proposed road extensions will link Duke Street and Centennial Drive north of the Seaforth Community Hospital creating a new intersection. Municipal servicing which will include sanitary sewers, watermains and stormwater drainage, will also be extended in conjunction with the planned road extensions. The new roads will be constructed to an urban municipal standard, including asphalt surfacing and curbs and gutters.

At this time, the Municipality is proposing to construct the Centennial Drive road extension in 2016, so that the proposed road and servicing extensions can be coordinated with a planned development proposal located on adjacent lands. Municipal sanitary servicing, watermains and stormwater drainage infrastructure will be extended through the development lands within an internal servicing corridor, and then extend into the newly constructed Duke Street and Centennial Drive road allowances (as shown on the attached figure). Construction of Duke Street is tentatively scheduled for the spring of 2017. A communal stormwater management facility, which will service lands designated for urban development located adjacent to the planned road extensions, will be constructed in the northwest corner of the Silver Creek development site.

The planning for this project is following the environmental screening process set out for Schedule 'B' activities under the Municipal Class Environmental Assessment (Class EA) document (approved October 2000, as amended in 2007 and 2011, under the terms of the *Environmental Assessment Act*). The purpose of the Class EA screening process is to identify any potential environmental impacts associated with the proposed works and to plan for appropriate mitigation of any identified impacts. The Class EA process for this project is now nearing completion and a Notice of Study Completion is scheduled for publication on September 16, 2015 (draft Notice enclosed for your information). We trust that the additional information provided in this correspondence will be sufficient to identify any potential concerns your community might have with this project.

For your convenience, a self-addressed stamped envelope is provided for your use. Please provide any feedback by October 16, 2015. If you have any questions on this matter or require further information, please contact the undersigned at 1-888-524-2641 or by e-mail at kvader@bmross.net.

Yours very truly

B. M. ROSS AND ASSOCIATES LIMITED

Per _____
Kelly Vader, RPP, MCIP
Environmental Planner

KV:hv
Encl.

c.c. Brad Knight, Municipality of Huron East

Aboriginal Consultation Log – Duke Street and Centennial Drive Extensions: Class EA

Contact Number	Aboriginal Contact	Date	Type of Contact	Details/Response
1	Chippewas of Kettle & Stony Point	October 28, 2013	Letter sent by BMROSS	- Project Initiation – Initial Contact Sent – No Response Received
2	Chippewas of the Thames FN	October 28, 2013	Letter sent by BMROSS	- Project Initiation – Initial Contact Sent
3	Aamjiwnaang First Nation	October 28, 2013	Letter sent by BMROSS	- Project Initiation – Initial Contact Sent – No Response Received
4	Oneida Nation of the Thames	October 28, 2013	Letter sent by BMROSS	- Project Initiation – Initial Contact Sent – No Response Received
5	Munsee-Delaware Nation	October 28, 2013	Letter sent by BMROSS	- Project Initiation – Initial Contact Sent – No Response Received
6	Aboriginal Affairs and Northern Development Canada	September 19, 2013	Email sent by BMROSS	- Request for information sent via email to UCA-CAU@aadnc-aandc.gc.ca.
7	Chippewas of the Thames FN	November 20, 2013	Letter received from Chippewas of the Thames	- Letter received from Fallon Burch, Consultation Coordinator for the Chippewas of the Thames FN. - Indicated that the project had been screened and no concerns were identified. - Would like to be advised if changes to the project occurred of a substantive nature.
8	Aboriginal Affairs and Northern Development Canada Consultation and Accommodation Unit – Allison Berman	January 15, 2014	Letter received from AANDC via email	- Acknowledged receipt of email requesting information. - Provided details on the use of ATRIS
9	Aamjiwnaang First Nation	January 21, 2014	Letter received from Aamjiwnaang FN	- Letter received from Sharilyn Johnston, Environmental Coordinator for the Aamjiwnaang FN. - Indicated that the project information had been presented to the Environment Committee and it was not recommended to forward the project to the chief and council at this time. - Would like to continue to be advised about the project.
10	Aamjiwnaang First Nation	July 29, 2015	Email sent by BMROSS	- Email sent to Sharilyn Johnston, Environmental Coordinator for the Aamjiwnaang FN. - Asked for direction in what additional project information she

Contact Number	Aboriginal Contact	Date	Type of Contact	Details/Response
				would like to receive regarding the Class EA. - Offered to send Stage 1 & 2 Archaeological Report or Class EA Screening Report
12	Aamjiwnaang First Nation	September9, 2015	Sent by BMROSS	- Project Update and Notice of Study Completion sent to the attention of the Sharilyn Johnston, Environmental Coordinator.
13	Oneida Nation of the Thames	September10, 2015	Sent by BMROSS	- Notice of Study Completion with cover letter sent to the attention of the chief.
14	Munsee-Delaware Nation	September10, 2015	Sent by BMROSS	- Notice of Study Completion with cover letter sent to the attention of the chief.
15	Chippewas of Kettle & Stony Point	September10, 2015	Sent by BMROSS	- Notice of Study Completion with cover letter sent to the attention of the chief.

APPENDIX 'E'

DEVELOPMENT PROPOSAL

Huron Expositor
Sept 2, 2015



PUBLIC MEETING CONCERNING A PROPOSED ZONING BY-LAW AMENDMENT AFFECTING THE MUNICIPALITY OF HURON EAST

Portion of Roll No. 4040-390-012-02930

All of Roll No. 4040-390-012-02920

TAKE NOTICE that Council of the Corporation of the Municipality of Huron East will hold a public meeting on **September 22nd, 2015 at 7:00 pm** in the Huron East Council Chambers to consider a proposed zoning by-law amendment under Section 34 of the Planning Act.

BE ADVISED this application was considered complete by the Corporation of the Municipality of Huron East on August 24, 2015.

ANY PERSON may attend the public meeting and/or make written or verbal representation either in support of, or in opposition to, the proposed zoning by-law amendment.

IF a person or public body does not make oral submissions at a public meeting or make written submissions to the Municipality of Huron East before the by-law is passed, the person or public body is not entitled to appeal the decision of the Municipality of Huron East to the Ontario Municipal Board.

IF a person or public body does not make an oral submission at a public meeting or make written submissions to the Municipality of Huron East before the by-law is passed, the person or public body may not be added as a party to the hearing of an appeal before the Ontario Municipal Board unless, in the opinion of the Board, there are reasonable grounds to add the person or public body.

COMMENTS will be reviewed by Huron County Planning Department and Huron East staff. Please be aware that your comments will become part of the public record on this file.

ADDITIONAL INFORMATION relating to the proposed zoning by-law amendment is available for inspection during regular office hours at the Huron East Municipal Office and the County of Huron Planning and Development Department (519) 524-8394 x 3.

NOTIFICATION OF DECISION: If you wish to be notified of the decision of the Zoning By-law Amendment, you must make a written request to: Brad Knight, CAO/Clerk, Municipality of Huron East, 72 Main Street South, PO Box 610 Seaforth, ON, N0K 1W0

DATED AT THE MUNICIPALITY OF HURON EAST THIS 27 DAY OF AUGUST, 2015.

Brad Knight, CAO/Clerk, Municipality of Huron East
72 Main Street South, PO Box 610 Seaforth, Ontario N0K 1W0 Phone: 519-527-0160
Toll Free: 1-888-868-7513 www.huroneast.com

PURPOSE AND EFFECT

This proposed Zoning By-law Amendment affects 4.257 hectares (approx. 10.52 acres) located at the end of Centennial Drive, and is bounded by a future extension to Centennial Drive and Duke Street. It extends to the west and backs onto the Seaforth Public School property. The subject lands include lands owned by the Municipality of Huron East and the Seaforth Community Hospital Trust which will be merged together to create one large developable parcel to be sold to a third party who proposes to construct a 3 storey, 80 unit retirement home and 40 multiple attached dwellings (townhouses).

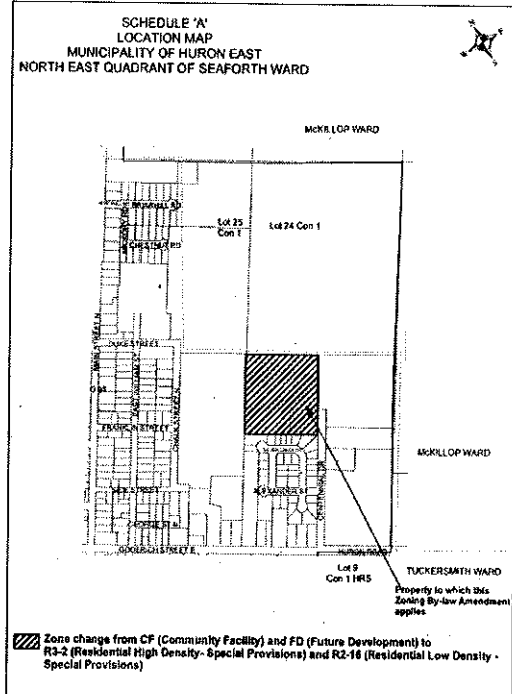
The By-law proposes to change the zoning on the property from "Community Facility" and "Future Development" to "High Density Residential - Special Zone (R3-2)" for the retirement home portion of the site and to "Medium Density Residential - Special Zone (R2-16)" for the multiple attached dwellings. The property is Residential in the Huron East Official Plan.

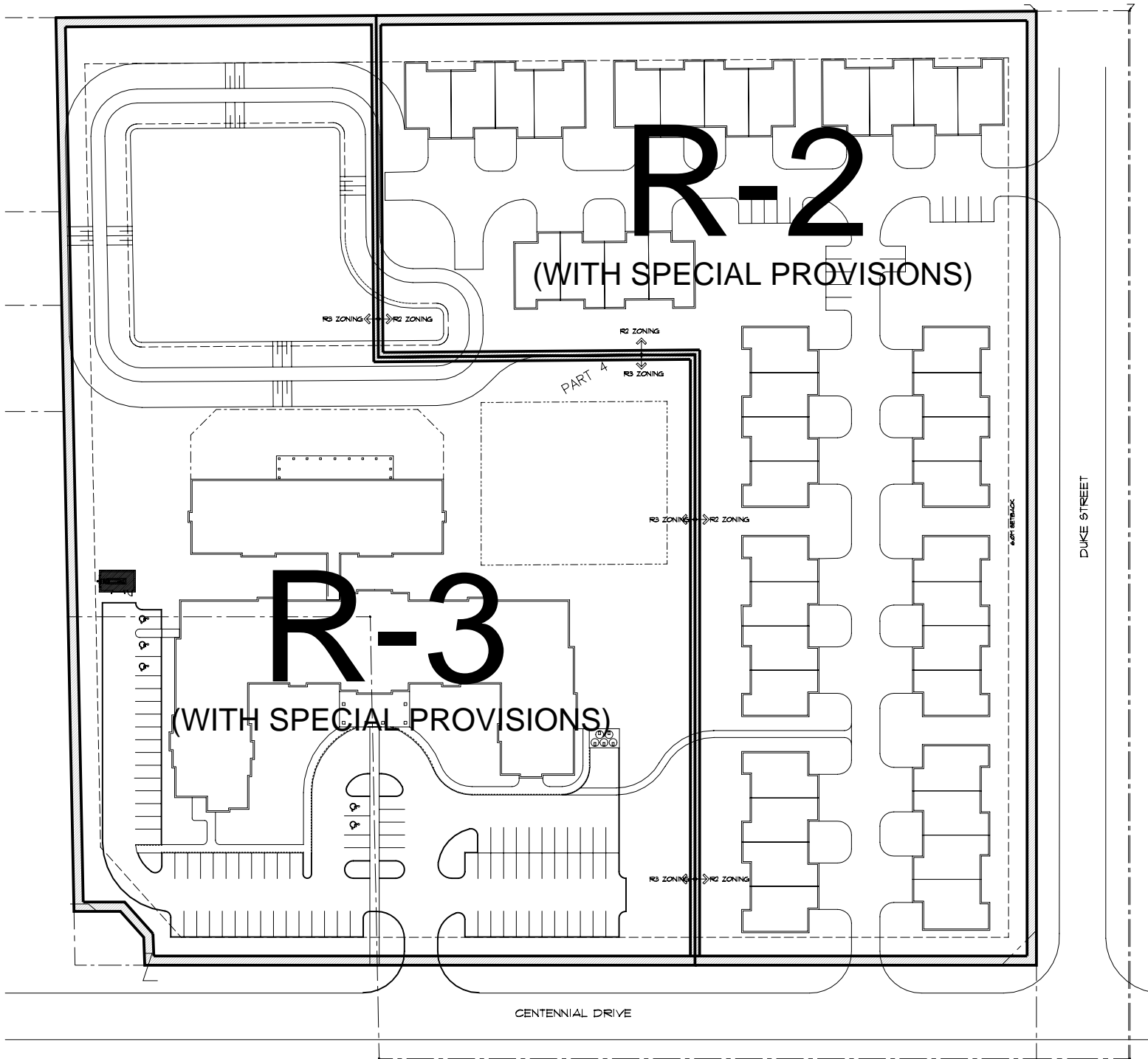
Special zone provisions for the retirement home (R3-2) portion of the site include: permitting two main uses and more than one main building on the property; permitting a stormwater management facility as an accessory use; permitting 0.55 parking spaces per unit for the retirement home; establishing 47m² as the minimum floor area for a 1 bedroom unit; and permitting a maximum of 929 sq. m. of ground floor of the retirement home to be occupied by accessory uses such as clinics for doctors, speech pathologists, social workers, laboratories, fitness area, research & educational facilities and business/professional offices, all related directly to meeting the needs of residents living in the retirement home and serving the aging population from the community at large.

Special zone provisions for the portion of the property for the 40 (4 units x 10 buildings) multiple attached dwellings (R2-16) include: permitting two main uses and more than one main building on the property; and permitting a stormwater management facility as an accessory use.

Access to the development will be from the extension of both Centennial Drive and Duke Street and it will be serviced by extending municipal water and sewer.

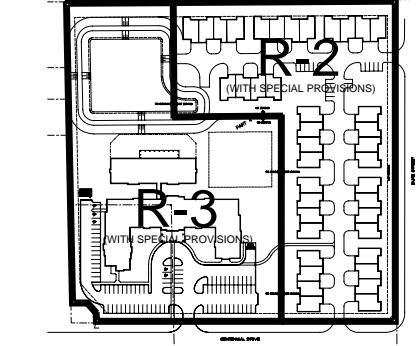
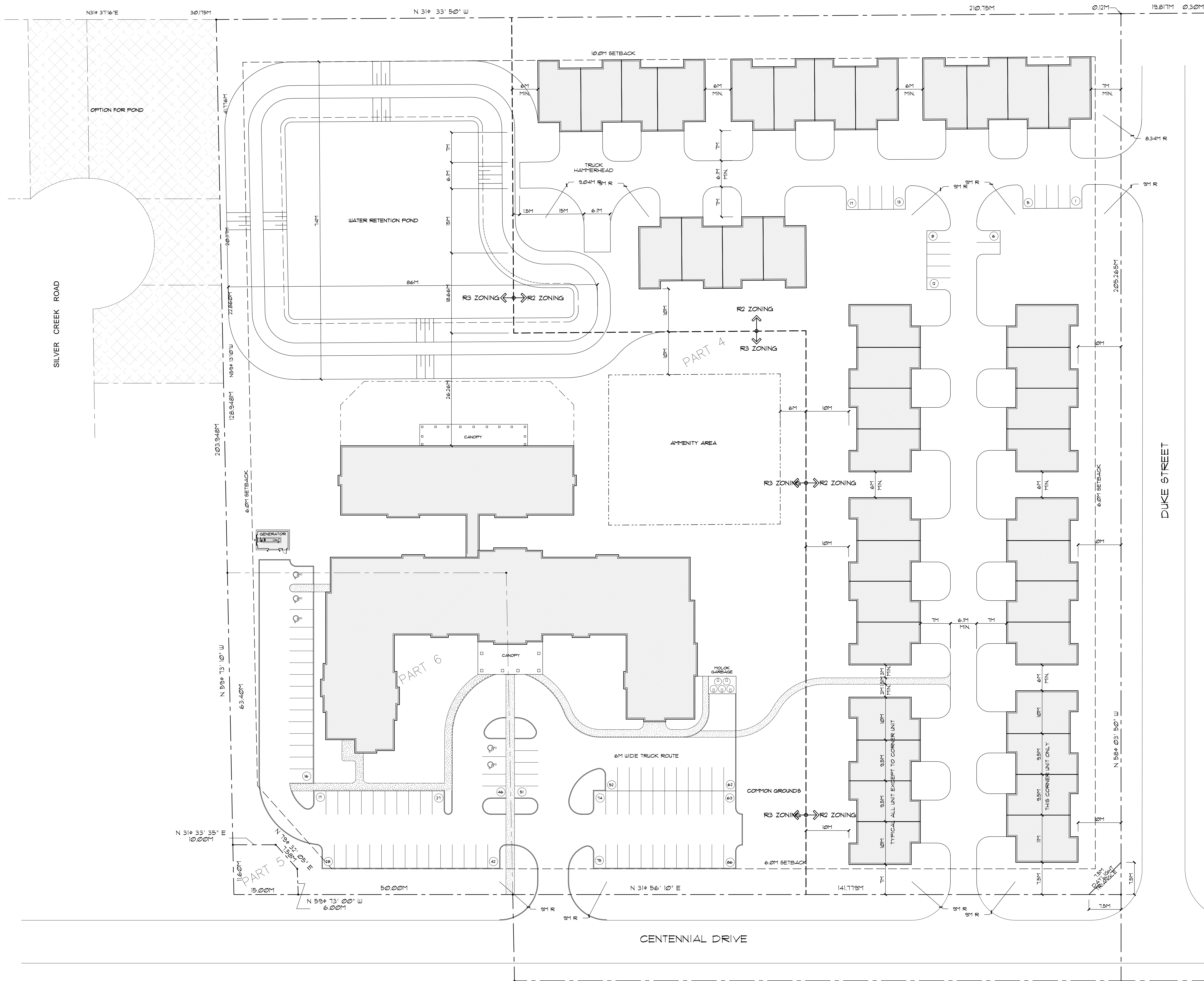
This zoning by-law amendment also proposes to update/replace a number of definitions in the Huron East By-law in order to allow the multiple attached dwellings within the R2-16 zone to be registered as a vacant land condominium in the future. The public will be notified of the public meeting to consider a future condominium application on these lands.





ZONING MAP

NOT TO SCALE



PLAN OF SURVEY
OF PART OF
LOT 24 AND 25
CONCESSION
(GEOGRAPHIC TOWNSHIP OF MCKILLOP)
MUNICIPALITY OF HURON EAST
COUNTY OF HURON
SCALE 1:400

D. CULBERT LTD.
ONTARIO LAND SURVEYORS

ZONING REQUIREMENTS		
ZONING:	PROPOSED ZONING - R2 MULTIPLE RESIDENTIAL LOW DENSITY	PROPOSED ZONING - R3 MULTIPLE RESIDENTIAL MEDIUM DENSITY
SITE AREA:	42,565.49 SQ.M. (4,257 ha.) (10,322 & acres) (100% ±)	
PROPOSED ZONE R2	20,076.60 SQ.M. (2,007 ha.) (47,179 ±)	
PROPOSED ZONE R3	22,488.89 SQ.M. (2,249 ha.) (52,839 ±)	
LOT COVERAGE	BUILDING AREA:	PERCENTAGE:
	ASPHALT AREA:	
SETBACKS:	REQUIRED:	PROPOSED:
FRONT YARD	6.00 M	6.00 M
REAR YARD	6.00 M	6.00 M
EXTERIOR SIDE YARD	6.00 M	6.00 M
PARKING (STALL SIZE - 2.75Mx5.50M)	- 8 SPACES	86 SPACES
LOADING ZONE	1	18 SPACE

* INCLUDES WALKWAYS AND PADS AT NORTH, EAST, WEST & SOUTH SIDES OF BUILDING AS WELL AS ALL PATIOS & PARKING ISLANDS THAT CONTAIN LANDSCAPING

SUITE BREAKDOWN				
SUITE TYPE	MAIN FLOOR	2ND FLOOR	3RD FLOOR	TOTAL FLOOR
STUDIO	-	15	15	30
ONE BEDROOM	-	6	6	12
ONE BEDROOM + DEN	-	3	3	6
TWO BEDROOM	-	6	6	12
ASSISTED LIVING STUDIO	20	-	-	20
TOTAL:	20	30	30	80

TOWNHOMES	36	36
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AREAS	EXISTING		PROPOSED
	m2	Ha	R3 (With Special Provision)
SITE AREA	32,488.71	2,293	100%
BUILDING AREA	3,320	0.320	1%
LANDSCAPE AREA	13,700	1.37	61%

CONFORMANCE SITE DATA					
LOCATION	MIN	MAX	REQUIRED / ALLOWED	PROPOSED	COMMENTS
PARKING SPACES	MIN	120	85	85	SPECIAL PROVISION
LOADING SPACES	MIN	0	1	1	CONFORMS
LOT FRONTAGE (METRES)	MIN	20	110.5	CONFORMS	
LOT DEPTH (METRES)	MIN	38	205	CONFORMS	
LOT COVERAGE (%)	MAX	40%	19%	CONFORMS	
FRONT YARD (METRES)	MIN	6	30	CONFORMS	
REAR YARD (METRES)	MIN	10	25	CONFORMS	
INTERIOR SIDE YARD (METRES)	MIN	6	25	CONFORMS	
EXTERIOR SIDE YARD (METRES)	MIN	6	NA	CONFORMS	
LANDSCAPE OPEN SPACE	MIN	30%	55%	CONFORMS	
HEIGHT (STOREYS)	MAX	4	3	CONFORMS	
FLOOR AREA PER 1 BDR UNIT	MIN	55	47	CONFORMS	SPECIAL PROVISION
FLOOR AREA PER 2 BDR UNIT	MIN	65	66	CONFORMS	
AMENITY AREA (14x 80)	MIN	1120 (m2)	1400 (m2)	CONFORMS	

PROPOSED R3 ZONING		
ZONING	EXISTING	PROPOSED
	CF & FD (Community Facilities & Future Development)	R3 (With Special Provision)
SITE AREA	m2	Ha
	20,076.60	2,007

CONFORMANCE SITE DATA				
NAME	MIN	MAX	ALLOWED / PROPOSED	COMMENTS
PARKING SPACES	MIN	60	60	CONFORMS
LOT FRONTAGE (METRES)	MIN	20	74.5	CONFORMS
LOT DEPTH (METRES)	MIN	38	205	CONFORMS
LOT COVERAGE (%)	MAX	40%	39%	CONFORMS
FRONT YARD (METRES)	MIN	6	7	CONFORMS BUT WITH SPECIAL PROVISION FROM PRIVATE ROAD
REAR YARD (METRES)	MIN	10	10	CONFORMS
INTERIOR SIDE YARD (METRES) FOR END DWELLING UNITS	MIN	6	6	CONFORMS
EXTERIOR SIDE YARD (METRES)	MIN	10	7	CONFORMS BUT WITH SPECIAL PROVISION FROM PRIVATE ROAD
LANDSCAPE OPEN SPACE	MIN	30%	48%	CONFORMS
HEIGHT	MAX	11	11	CONFORMS
FLOOR AREA PER 2 BDR UNIT (METRES)	MIN	65	65	CONFORMS
LOT FRONTAGE FOR EACH (1) WALL DWELLING UNIT	MIN	8	10	CONFORMS
LOT FRONTAGE FOR EACH (2) WALL DWELLING UNIT	MIN	5	9.5	CONFORMS
LOT FRONTAGE FOR EACH CORNER DWELLING UNIT	MIN	11	11	CONFORMS
NUMBER OF DWELLING UNITS PER BUILDING	MIN	4	4	CONFORMS

SITE PLAN
SCALE 1:400

ROBERT J DYCK
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rjd@architect.com

INSPIRED LIVING SEAFORTH
CENTENNIAL DRIVE
SEAFORTH, ONTARIO
SITE PLAN LAYOUT

ISSUED	REVISED LAYOUT / ZONING
01	0-000
02	0-000
03	0-000
04	0-000
05	0-000
06	0-000
07	0-000
08	0-000
09	0-000
10	0-000