

## Member Municipalities

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Brooke-Alvinston

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Township of  
Enniskillen

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Municipality of  
Middlesex Centre

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Oil Springs

Town of  
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Plympton-Wyoming

Village of  
Point Edward

City of  
Sarnia

Municipality of  
Southwest Middlesex

Township of  
St. Clair

Municipality of  
Strathroy-Caradoc

Township of  
Warwick

Planning File No: PL#2020-0077

November 23, 2020

County of Middlesex  
399 Ridout Street North  
London, ON, N6A 2P1

**Attention: Durk Vanderwerff, Director of Planning**

Dear Mr. Vanderwerff:

**Re: Proposed Plan of Subdivision – Poplar Woods (39T-MC1701)  
Ilderton Road, Coldstream  
Lot 6, Concession 8, Geographic Township of Lobo, Municipality of  
Middlesex Centre  
Applicant: Tomar Realty Corporation, (Agent: AGM Limited)**

St. Clair Region Conservation Authority (SCRCA) staff reviewed the above noted application for the Poplar Woods Subdivision. It is our understanding that the ownership of the subject property has changed, and that the new owner, Tomar Realty Corporation, has submitted an updated application for review by the Municipality and the Conservation Authority. SCRCA is providing this review of the applications only as it pertains to Natural Heritage and Natural Hazard features, not the provision of private services.

### Site Characteristics

The subject property is designated Hamlet, Natural Environment and Flood Plain in the Poplar Hill & Coldstream Hamlet Area within the Municipality of Middlesex Centre Official Plan, and contains Significant Woodlands, identified on Schedule B, and Hazard Lands, identified on Schedule C, of the Official Plan. The property is zoned Existing Use Exception 2 (EU-2) and shaded with an overlay to identify the property within the Conservation Authority's regulation limit, in the Municipality of Middlesex Centre Zoning By-law. The proposed applications are to facilitate the development of a 10-lot subdivision. An Official Plan Amendment (OPA) is required to allow for greater than 3 lots to be created on private services, as per Policy 5.1.3 of the Official Plan. A Zoning By-law Amendment (ZBA) is required to rezone the site from Existing Use 2 to Hamlet Residential Density and Open Space.

### Recommendations

SCRCA recommends that the significant woodland and valleyland, and associated buffers, be zoned with a site-specific Open Space zone that allows for only conservation use, excluding buildings and structures, similar to Phase 1 of the Poplar Woods development located immediately adjacent to the subject property. The existing hazard overlay on the subject property in the Zoning By-law should

remain as the subject property is regulated under SCRCA's Ontario Regulation 171/06.

SCRCA does not object to the proposed OPA to allow for more than 3 lots on private services. The number of lots permitted should be based on appropriate lot sizing for private services to ensure increased nitrate runoff to the wetland does not occur. If proposed lot sizes are based on the use of advanced treatment systems, it must be demonstrated that these systems will be monitored to ensure they are functioning properly, and that any systems that require replacement in the future must meet a similar, or higher, standard of nitrate control.

SCRCA supports that the current draft plan of subdivision directs development outside of the significant natural features. SCRCAs recommends that the draft plan of subdivision include conditions related to:

- Ownership of the natural heritage features,
- Protection of the natural heritage features from sediment and erosion during development, including specific protection of Butternut trees,
- Permanent fencing along the hedgerow, as required by the Ministry of Natural Resources and Forestry,
- Control of nitrates from on-site private servicing (through lot sizing and/or provisions regarding maintenance and replacement of advanced treatment systems),
- Stormwater quality and quantity control, and
- A Homeowner's Information Package regarding protection of the natural heritage features.

#### **Documents Received and Reviewed by Staff**

SCRCA has previously provided detailed technical review of the submitted reports and applications on November 6, 2017 and July 9, 2018.

As part of the current application, the following new or revised reports have been submitted. SCRCAs providing review of the documents as it pertains to Natural Heritage and Natural Hazards. As noted in the Planning Justification Addendum, the overall layout of the draft plan has remained the same, with marginal changes from the proposed draft plan in 2017.

- Soil Assessment, Proposed Low Impact Development (LID), prepared by EXP, March 2020,
- Functional Servicing Report, prepared by AGM, August 31, 2020,
- Updated Wastewater Impact Assessment for Phase II Poplar Woods Development – Using Enhanced Infiltration and Excluding Use of Level IV Pre-treatment, prepared by Bos Engineering & Environmental, December 18, 2018,

- Development Assessment Report Addendum, prepared by Sage Earth Environmental, May 22, 2018,
- Wastewater Impact Assessment Addendum, prepared by Bos Engineering, May 14, 2018,
- Hydrogeological Assessment Addendum, prepared by JFM Environmental, April 20, 2018
- Hydrogeological Assessment, prepared by JFM Environmental, January 15, 2018
- Response to Email - Review of Previous Hydrogeological Work, prepared by JFM Environmental, August 25, 2020.

### **DELEGATED RESPONSIBILITY AND STATUTORY COMMENTS**

#### **Provincial Policy Statement Section 3.1 - Natural Hazards**

SCRCA staff provide the following comments as part of SCRCA's delegated responsibility of representing the provincial interest on natural hazards encompassed by Section 3.1 of the Provincial Policy Statement (PPS), 2020.

The subject property contains flooding and erosion hazard associated with the East Sydenham River. The hazard lands include both the estimated floodplain of the river, as well as the erosion hazard associated with the valleyland, as seen on the attached map. All proposed lot creation is directed outside of the floodplain, and the majority of the hazard lands will be contained within the proposed Block 11, which should be zoned Open Space to prohibit buildings and structures.

A portion of the proposed Lot 5 is within the 15 m top of bank setback from the valleyland associated with the Sydenham River. SCRCA recommends that any proposed development on this lot be located outside of the erosion hazard. This will be reviewed through SCRCA's permit process under Ontario Regulation 171/06.

#### **St. Clair Region Conservation Authority - Ontario Regulation 171/06**

SCRCA staff provide the following comments as part of SCRCA's Regulatory Authority under Ontario Regulation 171/06 "*Development, Interference with Wetlands and Alterations to Shoreline and Watercourses*" made under Section 28 of the *Conservation Authorities Act*.

Portions of the subject property have been identified as being regulated under Ontario Regulation 171/06. The policies of the Authority regulate development including: construction/reconstruction of a structure; placement or removal of fill; regrading; altering a watercourse; altering/developing a shoreline; or interfering with the function of a wetland. Written approval from this Authority will be required in order to undertake any of these activities within the regulated area.

The greatest extent of the Regulation Limit on the attached map is the Wetland Adjacent Lands (120 m). Please be aware that the extent of the Regulation Limit as shown on the attached map is an approximation based on the available information. Please refer to Ontario Regulation 171/06 for a full description of the Regulation Limit.

Development within 120 m from the wetland boundary can be permitted by the Conservation Authority, provided that:

- Disturbance to natural vegetation communities contributing to the hydrologic function of the wetland are avoided;
- The overall existing drainage patterns for the lot will be maintained;
- Disturbed area and soil compaction will be minimized;
- Development is located above the high water table;
- Development (including structures, excavation, grading, site alteration, septic systems, etc.) is to be located a **minimum 30 metres** from the wetland boundary, and **septic systems at a minimum of 0.9 metres above the water table**;
- Impervious areas are to be minimized; and
- Best Management practices are used to: maintain water balance, control sediment and erosion and buffer wetland.

Any development on the proposed Lot 5 will be subject to written permission from the Conservation Authority under Ontario Regulation 171/06 to ensure that development is directed outside of the erosion hazard.

### **ADVISORY COMMENTS**

#### **Provincial Policy Statement Section 2.1 - Natural Heritage**

In accordance with Planning Act section 3(5), municipal decisions on planning matters shall be consistent with the Provincial Policy Statement, 2020 (PPS). Municipalities are responsible for the implementation of Section 2.1 of the PPS, pertaining to Natural Heritage. SCRCA provides natural heritage technical review and commenting services on behalf of our member municipalities, as per our understanding.

The subject property includes portions of the Sydenham River Wetland Complex, which has been evaluated by the Ministry of Natural Resources and Forestry as a Provincially Significant Wetland. The wetland is associated with the East Sydenham River, a natural watercourse, which traverses the site through a woodland valley system. All of these natural heritage features have been identified as significant through the Middlesex Natural Heritage Study, 2014.

Under the Provincial Policy Statement,

2.1.4 <i>Development and site alteration</i> shall not be permitted in:
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| a) significant wetlands in Ecoregions 5E, 6E and 7E; and<br>b) significant coastal wetlands. |
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<p>2.1.5 <i>Development and site alteration</i> shall not be permitted in:</p> <ul style="list-style-type: none"><li>a) <i>significant wetlands</i> in the Canadian Shield north of Ecoregions 5E, 6E and 7E;</li><li>b) <i>significant woodlands</i> in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);</li><li>c) <i>significant valleylands</i> in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);</li><li>d) <i>significant wildlife habitat</i>;</li><li>e) <i>significant areas of natural and scientific interest</i>; and</li><li>f) <i>coastal wetlands</i> in Ecoregions 5E, 6E and 7E that are not subject to policy 2.1.4(b)</li></ul> <p>unless it has been demonstrated that there will be <i>no negative impacts</i> on the natural features or their <i>ecological functions</i>.</p>
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<p>2.1.8 <i>Development and site alteration</i> shall not be permitted on <i>adjacent lands</i> to the <i>natural heritage features and areas</i> identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the <i>ecological function</i> of the <i>adjacent lands</i> has been evaluated and it has been demonstrated that there will be <i>no negative impacts</i> on the natural features or on their <i>ecological functions</i>.</p>
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As described in Figure 1 of the Official Plan of the Municipality of Middlesex Centre, the adjacent lands for a Provincially Significant Woodland are those within 120 metres of a wetland, and the adjacent lands for significant woodlands are those lands within 50 metres of a significant woodland. As noted in Section 3.8 of the Official Plan, development or site alterations within natural heritage features and the lands adjacent to the features shall be subject to completion of a Development Assessment Report (DAR) acceptable to the Municipality, in co-ordination with appropriate agencies.

Detailed review of the DAR, prepared by Sage Earth, has been included in SCRCA's previous comments. SCRCA has reviewed the DAR with Mark Brown, Middlesex County Woodlands Conservation Officer.

#### *Protection of Natural Heritage Features*

The DAR recommended that the natural heritage features, as shown in figures 4 and 6 of the report, and associated buffers, including a 10 m buffer from the FOD5-2 woodland edge, should be preserved and protected. The DAR Addendum, 2018, outlined that the existing hedgerow will be maintained to provide a vegetative filter strip between the proposed development and the Provincially Significant Wetland. As described in the DAR, as part of the Poplar Woods Phase 1 Severance Agreement, Poplar Woods Ltd. agreed that "The owner and its successors in title

acknowledge and agree that the existing trees and vegetation on the abutting lands cannot be impacted in any way. Without limiting the generality of the foregoing, the existing natural Woodland and Wetland areas and habitats on abutting lands will be preserved and protected.” The proposed draft plan of subdivision intends to retain the natural heritage features within an Open Space block (Block 11), as shown on the plan by AGM, dated August 2020. SCRCA recommends that this block be given the same zoning as the Open Space lands for Phase 1, which prohibits any buildings or structures. The ownership of Block 11 should be confirmed through the draft plan conditions to ensure the permanent protection of the natural heritage features.

Section 6.2 of the DAR recommends sediment and erosion control fencing to protect the woodland, which includes Butternut trees (species at risk), during the development process. A permanent fence should then be installed to protect the woodland features, as described in Section 6.3 of the DAR. Sage Earth has recommended that a homeowner education guide should be provided to the residents of the subdivision, for those lots adjacent to the woodland features, to inform homeowners how to avoid and/or mitigate human effects on the natural heritage features. As per section 6.5 of the DAR, the education package should include information about wildlife and wildlife habitat. These items should all be addressed through draft plan conditions.

#### *Groundwater Water Quality Impacts*

The DAR indicated that groundwater seeps and groundwater dependent plant species were present within the natural heritage features. The hydrogeological assessment prepared by JFM was previously reviewed by SCRCA. As SCRCA described in our 2017 letter, groundwater quality and quantity flow into the wetland are important to the ecological functions of the wetland. Factors which may negatively impact the groundwater quality connected to the wetland include:

- 1) salt – associated with road salt and water softeners,
- 2) stormwater management, and
- 3) on-site private servicing.

#### Salt

The *Response to Email – Review of Previous Hydrogeological Work* prepared by JFM Environmental in August 2020 addresses some of SCRCA’s previous comments outlined in our letter from July 2018. JFM notes that sodium levels in the shallow groundwater appear to be primarily from road salt, and that levels have decreased from 2015 to 2018, possibly due to the municipality using a sand-salt mixture for road applications. The report notes that “it is recommended that LID techniques implemented should include restrictions on the use of road salt within the development.” It is unclear which low impact development techniques would be used, however this should be outlined in the final reports.

The report does not address SCRCA's concern regarding the impact of water softeners on groundwater via the septic bed, or the impacts of pool water discharge. Previous reports have noted that once the development has been completed it is assumed that water softeners and other water treatment will likely be used, but impacts to the natural features and mitigation measures have not been discussed. Details should be addressed through draft plan of subdivision conditions or the subdivision agreements.

#### Stormwater Management

SCRCA has previously noted that stormwater management on the site must control post-development water quantity and quality to pre-development levels, and must consider the sensitive natural features present on the site.

Some of the stormwater management mitigation measures discussed in the DAR are not in line with what is currently proposed in the *Functional Servicing Report* and the *Soil Assessment – Proposed Low Impact Development Stormwater Management Design*. For example, rainwater harvesting, proposed in the DAR, does not support the infiltration outlined by AGM required for nitrate dilution. In addition, the proposed permeable driveways to allow for increased infiltration does not allow for sufficient water quality control.

The Functional Servicing Report states “the subdivision should achieve 100% infiltration of annual precipitation in order to meet nitrate requirements.” SCRCA has previously commented that the infiltration estimate used in the nitrate calculations is high. This should be reviewed by the Municipality through their review of the technical reports.

SCRCA notes that any practices that contribute to increased infiltration must also take into consideration water quality, including temperature, due to the sensitive groundwater features on site. Details for future maintenance of the LID features should be discussed in the draft plan of subdivision conditions and the subdivision agreement.

#### On-site Private Servicing

The proposed subdivision would be serviced by private on-site sewage services and individual on-site water services. SCRCA has previously provided hydrogeological technical expertise to the Municipality with regards to the D-5-5 Private Wells: Water Supply Assessment and D-5-4 Individual On-Site Sewage Systems: Water Quality Impact Risk Assessment, which are requirements of the Ministry of Environmental and Climate Change. Through discussion with Municipal and County staff, it is SCRCA's understanding that the Municipality has retained external expertise to review the technical reports as it pertains to the on-site private services. As such, SCRCA has not reviewed or provided further comments in regards to the provision of private services.

From a natural heritage perspective, on-site private servicing should not increase the amount of nitrate entering the wetland through the groundwater. When considering the impacts of septic effluent on groundwater quality, nutrients (e.g. nitrogen and phosphorus), pathogens, dissolved inorganic constituents (e.g. chloride and sodium), and heavy metals are of concern. Nutrient pollution from excess nitrogen and phosphorus can stimulate the growth of harmful algae and microbes, which can cause eutrophication, lead to the depletion of dissolved oxygen and negatively impact aquatic species density and diversity.

Negative impacts to the wetland from private servicing can be mitigated through either the use of advanced septic treatment systems or by increasing the proposed lot sizes. If advanced treatment systems are proposed to mitigate nitrate for the development, then;

- 1) landowners must be educated regarding the proper use and maintenance of the system,
- 2) controls must be in place to regularly monitor the system to ensure proper function, and
- 3) mechanisms must be in place to ensure future replacement of the system meets a similar, or higher, level of nitrate control.

If the above conditions cannot be addressed, increasing lot sizes can also reduce the impacts of nitrates on the wetland by providing greater area for treatment.

### **Thames-Sydenham and Region Source Protection Plan**

As per Authority Board direction, we also provide the following information as part of our “disclosure service”. The Thames-Sydenham and Region Source Protection Plan has been approved and is designed to identify and help address drinking water source protection concerns. The Approved Plan, supporting documents and relevant maps are available at: <http://www.sourcewaterprotection.on.ca>. Portions of the subject property have been identified as being within a vulnerable area or an area where drinking water threat policies apply. These policies have been developed with the intent to reduce risks posed by identified water quality and quantity threats. These approved policies are also available on the website.

### **SUMMARY**

Given the above comments, it is the opinion of the SCRCA that:

1. Consistency with Section 3.1 of the PPS has been demonstrated;
2. Ontario Regulation 171/06 does apply to the subject site. A permit from SCRCA will be required prior to any development taking place within the regulated area;
3. Consistency with Section 2.1 of the PPS can be demonstrated through conditions relating to natural heritage feature protection, stormwater management, and landowner stewardship; if the control of nitrates from on-site private servicing can be demonstrated; and



4. The subject site is located within an area that is subject to the policies contained in the Source Protection Plan.

Thank you for the opportunity to comment. We respectfully request to receive a copy of the decision and notice of any appeals filed.

If you have further questions, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in blue ink that reads "Sarah Hodgkiss". The signature is written in a cursive, flowing style.

Sarah Hodgkiss  
Planning Ecologist


Encl. Map

cc: Marion Cabral, Planner, County of Middlesex  
Jake DeRidder, Development Review Coordinator, Middlesex Centre  
Robert Cascaden, Director of Public Works and Engineering, Middlesex Centre





## Poplar Woods Subdivision

-  Erosion Hazard
-  SCRCA Estimated Floodplain
-  Wetlands (MNR, May, 2020)
-  Wetland Adjacent Lands (30 m)
-  Wetland Adjacent Lands (120 m)
-  Watercourse
-  Woodlands (SCRCA 2015)

0 30 60 120  
Meters



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THIS IS NOT A PLAN OF SURVEY | Aerial Photography Date: Spring 2015  
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