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Sent by e-mail

Lindsay Lambert
Senior Planner
Township of Leeds and the Thousand Islands
1233 Prince Street
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Dear: Lindsay Lambert

Re: Application for Zoning By-law Amendment D14-2023-007
507 1000 Islands Parkway, 515 1000 Islands Parkway
14 McCrae's Bay Lane, 26 McCrae's Bay Lane,
30 McCrae's Bay Lane, 36 McCrae's Bay Lane;
Township of Leeds and the Thousand Islands
St. Lawrence River & Ivy Lea Complex Provincially Significant Wetland

Cataraqui Conservation staff have reviewed the letter provided by Riggs Associates dated July 31, 2023 in response to our comments submitted for the first technical circulation of the above-noted application.

Cataraqui Conservation offer the following additional comments for the consideration of the Township. These comments are provided based on Cataraqui Conservation's roles as a commenting agency on *Planning Act* applications responsible for natural hazards and drinking water source protection and as administrator of Ontario Regulation 148/06: *Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses*. ***Additional comments are bolded and italicized for ease of reference.***

Summary of Proposal

The application proposes to consolidate the existing zoning, permit the continuation of rural industrial and marine manufacturing uses, open storage and one new storage building. It is proposed to change the zoning of the subject lands from 'Shoreline Residential' (RS), 'Shoreline Residential Special Exceptions 9 and 22' (CT-9) (CT-22), 'Open Space' (OS) and 'Provincially Significant Wetland' (PSW) to 'Rural Industrial Special Exception XX' (MR-XX).

Discussion

Cataraqui Conservation's main interests with respect to this application, in accordance with a change in our scope of review as a result of recently approved changes under the

Conservation Authorities Act through Bill 23, are the avoidance of natural hazards associated with the St. Lawrence River & Ivy Lea Complex Provincially Significant Wetland, the provision of adequate stormwater management controls, and the protection of drinking water sources.

Natural Hazards / Ontario Regulation 148/06

Cataraqui Conservation, through our implementation of Ontario Regulation 148/06 and, in accordance with the natural hazards policies of the 2020 Provincial Policy Statement (PPS), directs development away from lands subject to natural hazards, such as flooding and erosion.

Flooding

The regulatory flood plain for the St. Lawrence River is made up of the 100-year flood level plus a factor for wave uprush. Based on a study completed for Cataraqui Conservation (Anthony 1993), the regulatory flood plain is anticipated to reach an elevation of 76.2 metres GSC. Any new development (buildings and structures) and site alteration (excavating, grading and placement of fill) is required to occur outside a minimum of 6 metres from the regulatory flood plain.

A hydraulics study was prepared by Riggs Associates LTD in 2022, in support of the CRCA Board approved permit F-222-20-SLR which involves modifying approximately 127 metres of shoreline with the construction of a sheet steel retaining wall extending into the St. Lawrence River and backfilling. The study determined that the shoreline alteration would result in an elevation of 76.3 metres and provide significant protection against wave overtopping. The study was based on model predictions which ultimately will need to be verified once the shoreline alteration is complete. Current proposals for development and site alteration are reviewed base on the existing extent of regulatory flood plain of 76.2 metres GSC.

Erosion

The erosion hazard for the St. Lawrence River is based on an engineering study conducted by Paine (1995). For low till shorelines the erosion hazard is the stable slope allowance (3(h):1(v)) plus an erosion allowance. On portions of the subject property the erosion hazard was found to reach approximately 11.5 metres inland from the toe of slope.

As proposed, the storage facility is 34.2 metres from the water which is well outside the minimum setbacks associated with natural hazards however the proposed addition of a new formal open storage area within the southern portion of the subject property, abutting the shoreline does not meet the minimum 6 metre setback from the flooding and erosion hazard. If the new formal open storage area involves additional fill such as paving which was indicated in the SWM Brief, the quantity of fill will need to meet the requirements for the placement of fill within the flooding and erosion hazard outlined in our Guidelines for

Implementing Ontario Regulation 148/06. Flood proofing requirements should be reviewed and reflected in elevation drawings to ensure the proposed storage areas will protect property from potential flood damage. Such design details can be further refined during the permitting stage.

Hydrologic Function of Ivy Lea Complex Provincially Significant Wetland

Under Ontario Regulation 148/06: *Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses*, all new development must take place outside a minimum 30 metre setback from the boundary of all wetlands greater than 0.5 hectares. The 30 metre setback is required to protect the hydrologic function of the wetland especially as it relates to the wetland's ability to store water during high water levels or peak flow events, provide shoreline protection and ultimately assisting in flood and erosion prevention.

In support of the above-mentioned shoreline alteration involving the construction of a sheet steel retaining wall extending into the St. Lawrence River and backfilling, the Ministry of Natural Resources and Forestry completed a wetland assessment for Ivy Lea Complex PSW which resulted in portions of the wetland boundary being slightly setback from the shoreline adjacent to Kehoe Marine. Despite the updated mapping of Ivy Lea Complex PSW, the proposed new storage area remains partially within 30 metres of the PSW boundary.

As proposed, the new storage building will be outside the minimum 30 metre setback from Ivy Lea Complex Provincially Significant Wetland (PSW) however the proposed addition of the open storage area within the southern portion of the subject property falls within 30 metres of Ivy Lea Complex PSW boundary.

As a result of Bill 23, Cataraqui Conservation can no longer review and comment on matters relating to natural heritage. As such, our review of the Environmental Impact Assessment (Ecological Services, April 26, 2023) relates only to impacts to the hydrologic function of the Ivy Lea Complex Provincially Significant Wetland. As noted in the EIA, the proposed location for the open storage area is occupied by residential buildings, ornamental trees and lawn that has been kept mown to the river with no natural buffers. Although the site is currently somewhat disturbed with dwellings and no natural buffers, the transition from manicured lawn to a gravel storage area establishes a greater percentage of hardened surface where natural hydrologic processes may be impaired. The EIA indicates that the value of the adjacent upland to wetland features and functions is considered when evaluating the potential impact of the proposed development on the wetland. However, staff request that any potential impacts specific to the hydrologic function of the wetland be addressed in the EIA as it relates to the open storage area abutting the shoreline.

Based on the above information, staff request additional details for the site alteration involved with the additional open storage area proposed abutting the southern shoreline. Details are required to ensure that grading and placement of fill are consistent with the

Cataraqui Conservation's Board approved permit F-222-20-SLR. It must also be demonstrated that any additional fill quantities (including paving) meet the requirements for the placement of fill within the flooding and erosion hazard outlined in our Guidelines for implementing Ontario Regulation 148/06.

Staff recommend that the portion of the property zoned 'Provincially Significant Wetland' (PSW) remain as currently zoned which reflects the recently updated mapping submitted by the Ministry of Natural Resources and Forestry (April 20, 2022). Staff also encourage the use of additional best management practices such as planting or maintaining a healthy native vegetated buffer where feasible to help protect the hydrologic function of the wetland and prevent shoreline erosion and flooding.

The letter provided by Riggs Associates dated July 31, 2023 confirmed that the proposed open storage area would not have significant impacts on the hydrologic function of Ivy Lea Complex Provincially Significant Wetland. The letter also made recommendation to implement a 3 metre wide clear stone buffer strip immediately in shore of the shoreline gabion baskets which would be constructed to a depth of 1 metre and extend over approximately 30 metres in length. The buffer would provide approximately 27 metres cubed of storage and would assist in decreasing the rate of runoff into the wetland. Staff agree with this suggestion and believe it will help address our concerns about impacts to the wetland. Staff request that the proposed 3 metre buffer strip be included in a detailed site plan at the Site Plan Control stage.

Stormwater Management

With the addition of a new storage building and open storage area, on-site stormwater management to prevent flooding and erosion to neighbouring properties is necessary for this site. A Stormwater Management Plan, Brief and Planning Rationale were provided in support of the proposed rezoning and associated development. Staff have reviewed the above-mentioned documents and feel that it has been demonstrated through lot level controls and grading that post-development peak flows will not impact neighbouring properties.

Staff note that increased SWM drainage from the site will ultimately be directed into Ivy Lea Complex PSW which is an important hydrologic feature essential to additional flood water compensation. Although not within our scope of review, staff encourage that the level of quality control for stormwater management proceed with achieving an "enhanced" level (80% TSS removal) of control which has been indicated as such in the SWM Plan. Achieving 80% TSS removal will limit the impact on the hydrologic function of Ivy Lea Complex PSW.

Drinking Water Source Protection

The subject lands are located partially within an area identified as a Significant Ground Water Recharge Area (SGRA) by Cataraqui Conservation in a 2011 Assessment Report

for the Cataraqui Source Protection Area. We note that this is not uncommon, as nearly 90 percent of the entire Cataraqui Region is considered to be within an HVA or SGRA due to underlying soils and geology (e.g. fractured limestone).

As mandated by the Clean Water Act, 2006, the Cataraqui Source Protection Plan identifies specific activities that are considered to be low drinking water threats within an SGRA. As per Section 5.5.1 of the Plan, certain activities such as the handling or storage of large quantities of dense non-aqueous-phase liquids, organic solvents, commercial fertilizer, pesticide, liquid fuel, salt storage etc. are considered a potential risk within an SGRA. Section 5.5.1 of the Plan states that proposals (through the *Planning Act*) involving a risk activity should incorporate measures/management practices to adequately manage the risk to groundwater associated with the activity.

It is our understanding that the proposed land use may include one or more of the listed activities (e.g. vehicle repair, fuel storage, salt storage). As such, it is important that the proponent review applicable source protection policies and resources to ensure measures/management practices are incorporated.

The Cataraqui Source Protection Plan is available here:

<http://cleanwatercataraqui.ca/studies-and-reports/cataraqui-source-protection-plan-explanatory-document/>.

To see what activities may pose a moderate or low threat in an SGRA, the [Source Water Protection Information Portal tool](#) can be used (Click on “2021 Threats”, click “search” in the left column, under zone and score you can search by vulnerable area – in this case SGRA – click “SGRA”, Moderate and Low under Risk, chemical and pathogen under parameter of concern and 6 under scores. The threats results will populate on the right and show all potential moderate or low threat activities).

Staff request that the Cataraqui Source Protection Plan policies be reviewed and addressed with a subsequent submission of the Zoning By-Law Amendment application. If any of the listed activities under Section 5.5.1 of the Source Protection Plan are identified to be associated with the use of the subject property, staff request that measures/management practices be included at the Site Plan Control stage which will be required to facilitate the proposed development.

The letter provided by Riggs Associates dated July 31, 2023 identified activities listed under Section 5.5.1 of the Cataraqui Source Protection Plan which are associated with the use of the subject property and include:

i. The handling and storage of more than 25 litres of dense non-aqueous-phase liquids (DNAPLs) and/or organic solvents, (e.g., metal manufacturing, electroplating and fabrication industries, automotive or equipment repair shops, furniture refinishing shops, dry cleaning establishments),

ii. The handling and storage of more than 2,500 litres of liquid fuel (e.g., gas stations), and

iii. The handling and storage of more than 500 tonnes of road salt (e.g., public or private maintenance yards).

Measures/management practices were also provided for each of the identified activities and include:

i. DNAPL : Potential DNAPL product use at the KMC site is expected to be limited to degreasers, solvents and adhesives. While a specific list of products has not been developed, it is expected that such products may at times be used in relatively small quantities for vehicle maintenance and/or in some of the manufacturing processes. KMC has advised that these activities take place in shop areas where any spill or wash-off of the chemicals would drain to sumps within the building. The sumps would prevent the release of the chemicals to the environment, and provide for containment until properly cleaned.

ii. Liquid Fuel : There are a number of fuel tanks on site, used to refuel equipment on a regular basis for use in the marine construction business. KMC has provided specification details for the fuel tanks on the property. This information is included in Attachment A. The tanks are double walled tanks with a vacuum monitoring system to identify any potential tank leak. The redundancy of the double tank wall and the vacuum monitoring provides for advanced warning of a potential spill/leakage risk with opportunity to address the risk. Potential fuel spills which might occur during filling of machinery would be expected to be of relatively small volumes given the manned operations of fueling equipment. KMC typically maintains fuel spill kits on site and on their marine equipment due to environmental regulations, and as such is in a position to respond in a timely manner to such a spill. Where a minor spill is not managed through the use of a spill kit, the capture of all asphalt areas within the oil-grit filtration unit provides a level of protection to the waterway. It is noted that the surfaces where fueling activities take place and where fuel is stored are to be impervious areas, and therefore do not present an effective pathway for the fuel to infiltrate to the groundwater area.

iii. Salt Storage : KMC has advised that they do not presently store salt on site. Road salt is applied to the work yard occasionally during winter months. The proposed paving of the majority of the work yard will reduce potential for this salt to infiltrate to groundwater in those areas. Following construction of the new storage building (Catchment Area N), KMC may opt to store some road salt for winter maintenance operations. This material would be stored within the covered storage building on a concrete pad, and therefore would not be subjected to runoff processes.

Staff recommend that the provided response letter which now acknowledges Cataraqui Source Protection Plan be included as part of the Site Plan Control Agreement.

Recommendation

Cataraqui Conservation continues to recommend deferral of application D14-2023-007 until such time that our comment regarding the rezoning of the area currently zoned 'Provincially Significant Wetland' (PSW) to Rural Industrial Special Exception XX' (MR-XX) is addressed. Staff do not support the rezoning of the area currently zoned PSW and recommend that it remains as currently zoned which reflects the recently updated mapping submitted by the Ministry of Natural Resources and Forestry (April 20, 2022).

Staff understand that due to the nature of the use associated with the subject property there is limited area available for natural areas to be maintained for surface water infiltration, however where feasible staff recommend that a native vegetated buffer be planted along the shoreline to protect the hydrologic function of the wetland as well as protect against erosion and aid in surface water attenuation during peak flow events.

Ontario Regulation 148/06

We note that the subject property is located within a regulated area under Ontario Regulation 148/06: Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses. **Permit approval will be required from Cataraqui Conservation prior to any development (buildings, structures, septic system, etc) and site alteration (placement of fill, grading, excavation).**

If you have any questions, please contact the undersigned at (613) 546-4228 ext. 258, or by e-mail at esu@crca.ca. Please inform this office of any decision made by the Township regarding these applications.

Yours truly,



Emily Su, EPt
Resource Planner

cc: applicant, by e-mail