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## REPORT FOR WATERSHED ADVISORY BOARD

RE: PERMIT APPLICATION NO: 178/20

DATE: APRIL 15, 2021

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An application for development has been submitted Mark Daprato with regards to Ontario Regulation 159/06 the Development, Interference with Wetlands & Alterations to Shorelines & Watercourses Regulation of the CVCA.

### Executive Summary

An application to develop lands along Chandos Lake can **not be approved** by CVCA Regulations Officers as it fails to meet the requirements as per the CVCA Watershed Planning and Regulations (O.Reg 159/06) Policy Manual (Policy Manual). The development proposed is as follows: to construct an addition, 1431.5 square feet, that wraps around an existing cottage (~720 sq. ft.) to allow for the cottage to become wheelchair accessible, and to move the septic system away from the lake and a low-lying/ephemeral wetland area that seasonally floods. The application does not meet our policies for development around watercourses. The proposed development is within the setbacks described in Section 5.1 and the Quick Reference Guide in the CVCA Watershed Planning and Regulations (O.Reg 159/06) Policy Manual (Policy Manual).

### Background and Subject Lands

On September 7, 2020 a permit application was submitted for the proposed development. The proposed dwelling is maintaining the same number of bedrooms/habitability, but due to the space requirements to make all rooms and areas accessible for wheelchair access the addition was outside of the total allowable addition square footage, especially as it includes a screened in porch area which is to enable a safe and comfortable “outdoor” area for the applicants son. Robert Cole discussed the proposed works with the applicant and the applicant proceeded to reduce the size as much as possible by reducing the spacing from the wider “recommended” spacing to the minimum requirements outlined in other Ontario legislation. With the spacing/clearance widths reduced to the minimum the total additional habitable space proposed was 1431.5 square feet, including 420 square feet of 3-season sunroom and covered porch. The existing dwelling is ~24 feet by 30 feet, 720 square feet, so by our policy manual an addition could only be 360 square feet of habitable space. The application exceeds this limit by 1071.5 square feet, down to 651.5 square feet if you exclude the 3-season sunroom.

While discussing the purpose of the 15m setback staff detailed that it is linked to the standard assumed setbacks for flood hazards on lakes without an engineered floodplain. Mr. Cole explained that Chandos Lake has not had an engineers study to define the floodplain so 15m assumed hazard is applicable. The discussion detailed other considerations with flood risks and staff explained that Peterborough County Road 620 across the north of the lake spans the outflow of Chandos with two large culverts and the potential for ice jamming would likely be considered during any analysis of a floodplain on Chandos Lake, and the lowest point on the road (~313.79 meters above sea level/MASL as per LiDAR over Peterborough County) could potentially be observed. Staff did state that if there was an event that caused the overflow of County Road 620 the swamp that surrounds the outflow and the Crowe River (an area approximately 2km wide and 8km long) would need to entirely filled before going higher, which would require at least one additional jam or clogging of the Crowe River before the village of Glen Alda.

While assessing the permit and gathering information on the lot it has been determined that the land on which the cottage is located is within 0.10m of the lowest point of County Road 620 (as per Peterborough County LiDAR). The entire cottage is to be on footings to the same elevation of the existing cottage and the existing small crawl space for utilities would be enlarged to allow for easier access and maintenance. Based on this information all habitable space will be over 0.30m above the elevation of County Road 620. The shoreline is granite bedrock and the slopes on the property are less than 3:1 therefore no erosion hazards exist.

The area surrounding the existing septic is lower than the elevation of County Road 620 (~313.76MASL) and the proposed location is over 10cm above it (~313.86MASL). The relocation will move the septic away from the wetland area and region that floods almost annually, and reduces the contaminant potential of the septic by reducing the potential for the bed to be “drowned” killing the bacteria and allowing untreated effluent into the lake.

Mark Daprato, the applicant, has requested a hearing for his application on April 15, 2021.

## **CVCA Regulations & Policy Manual**

Based on the information submitted, the CVCA staff can not approve the permit application for the following reasons:

Our policies will permit development/additions to dwellings within a flood hazard (assessed or assumed) but can not exceed an additional 50% of the original total square footage to an upper limit of 500 square feet.

The proposed addition is maintaining the existing setback of 35’ (10.7m) from the shoreline (within the assumed flood hazard).

The subject site is located in a regulated area as described in Ontario Regulation 159/06. The proposed development of a dwelling of the proposed size will not be permitted in accordance with Section 2. (1) (b) which states:

*Section 2. (1) Subject to section 3, no person shall undertake development, or permit another person to undertake development in or on the areas within the jurisdiction of the Authority that are,*  
*(b) hazardous lands;*

The *Conservation Authorities Act* and the Crowe Valley Conservation Authority Watershed Planning and Regulations Policy Manual (2017) defines *hazardous lands* as “land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock.” In this case, processes associated with flooding are our concern.

The manual is intended to provide CVCA staff with policies for the purpose of administrating our Regulation (159/06). When reviewing development applications, the Authority must have regard for its objectives of preventing loss of life and minimizing property damage.

The individual policies that apply to this application are listed below and are specific to Administrative Policies and Policies for Flooding Hazards. Sections that are not relevant to this application have been removed.

## **Administrative Policies**

The following sections speak to over-arching policies that every application must be tested against. The One Zone concept explains that the entire CVCA watershed is within a single zone where all applications adhere to the same policies. In other Conservation Authorities that have a two zone concept there are different policies depending on what zone development is proposed within. Areas subject to the regulation include several different items with hazardous lands being a critical component. Hazardous lands include all lands that are or could be flooded.

### **3.2 One Zone Concept**

*Under the one zone approach, construction activities are restricted within the Regulatory Flood Plain. Permitted development may include reconstruction or minor additions to existing structures as well as extension to existing agricultural operations. Other uses, such as open space, that is not likely to create damage to other properties from floodwater, or cause a threat to public safety, or are not of a polluting nature may be permitted within the flood plain. Examples of uses or structures that would create adverse impacts in the flood plains of our riverine systems include, but are not limited to, new buildings, swimming pools, filling activities, septic tile fields and tanks, as well as manure storage and handling facilities.*

*The One Zone Concept of floodplain management is applied throughout the entire Crowe Valley Conservation jurisdiction.*

### **3.4 Areas Subject to the Regulation**

*Ontario Regulation 159/06 sets out areas where development is prohibited as well as setbacks from various ecological features. The features that are encompassed by the regulation are as follows: (irrelevant sections have been removed)*

#### ***Hazardous Lands***

*This component of the Regulation applies to development within hazardous lands which is defined under Section 28 of the CA Act as land that could be unsafe for development due to naturally occurring processes associated with flooding, erosion, dynamic beaches, or unstable soil or bedrock. Unstable soil and bedrock include, but is not limited to sensitive marine clays, organic soils, and karst topography. Sensitive marine clays are not identified within the watershed. Organic soils are normally formed by the decomposition of vegetative and other organic materials. Peat soils are the most common type of organic soil in Ontario. Karst topography may be present in limestone or dolomite bedrock and are extremely variable in nature.*

### **Hazardous Lands Policies**

The following policies are specific to development in the flood hazard. Any development within a flooding hazard requires permission from the CVCA. In general development within the regulatory floodplain shall not be permitted except in accordance with the policies contained below. Policies that do not apply to this case have not been included.

The following policies apply to the development proposed:

#### ***Defining the Flooding Hazard and Associated Regulated Area***

**5.1** *... The Regulated Area Includes the Floodplain and for not apparent valley systems, an allowance. The allowance is not to exceed 15m from the hazard.*

*The Crowe Valley watershed uses the 1:100 year storm to delineate its regulated area. With the exception of the lakes in Table 1 that have a known 1:100 year elevation, the CVCA regulates 30m from all shorelines.*

With the 30m regulated area, 15m of which being the allowance, there is 15m that is assumed to contain the flooding hazards and emergency access on all lakes that have not had the flood elevation studied.

#### ***General Flood Hazard Policies***

**5.2.1** *Development within the Regulatory floodplain shall not be permitted;*

## **Minor Residential Additions**

**5.3.1.3** Additions (including ground floor, second storey or an attached garage) to existing residential dwellings located, even partially, within a flooding hazard will be permitted provided it can be demonstrated that:

- the addition is 50% or less of the original habitable floor space\* to a maximum footprint of 46.5 square metres (~500 square feet), whichever is less, or in the case of multiple additions, all additions combined are equal to or less than 50% of the original habitable floor space to a maximum footprint of 46.5 square metres (~500 square feet), whichever is less;
- the number of dwelling units is the same or fewer;
- the addition will not be subject to flows that could cause structural damage;
- where feasible, an improvement in the existing dwelling will occur with respect to floodproofing of the structure;
- safe access (ingress/egress) is present;
- the addition will be floodproofed to an elevation of 0.3 metre above the regulatory flood elevation as per floodproofing standards outlined in Appendix C – Floodproofing Guidelines;
- the structure is properly anchored to prevent flotation, is not subject to damage by flooding or other hazards and flood flows and flood water storage are not impeded;
- no basement is proposed and any crawl space is designed to facilitate service only;
- the proposed development will not prevent access for emergency works, maintenance, and evacuation;
- the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
- natural features and/or ecological functions associated with conservation of land are protected, pollution is prevented, and erosion hazards have been adequately addressed; and,
- the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of the CVCA.

## **5.4 Development Within the Allowance of the Flooding Hazard**

**5.4.1** Development will be permitted within the allowance of the flooding hazard provided it can be demonstrated that:

- it will not aggravate the flooding hazard or create a new one;
- it does not impede access for emergency works, maintenance and evacuation;
- floodproofing will be undertaken in accordance with floodproofing standards identified in Appendix C – Floodproofing Guidelines;
- for additions to existing buildings or structures located within the setback allowance the addition cannot encroach further into the setback from the regulatory floodplain than the original building or structure;
- for reconstruction of buildings or structures located within the setback allowance the new building or structure is constructed in the same location as the original building or structure provided that there are no reasonable alternatives to locate the new building or structure outside of the required setback, and the new building or structure cannot encroach further into the setback from the regulatory floodplain than the original building or structure;

- *the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/ restoration plans;*
- *the natural features and/or ecological functions associated with conservation of land are protected, pollution is prevented and erosion hazards have been adequately addressed; and*
- *the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of the CVCA.*

## **Application Conformity**

For this application the General Flood Hazard Policies and Minor Residential Additions policies apply. The proposed addition and relocation of the septic meet all requirements within the policy manual with one exception being the proposed addition is larger than the allowed square footage.

## **Staff Assessment and Recommendation**

While the permit does not meet the CVCA Policy Manual it is my professional opinion that the application does meet the purposes of the Regulation and the core purpose of the Conservation Authorities Act.

The proposed addition is larger than allowed due size requirements for wheelchair accessibility and the inclusion of a screened in 3-season sunroom. The sunroom accounts for ~420 square feet of the total addition (1431.5square feet). If the sunroom was proposed as just a roofed deck with roof to deck screens (no walls) that square footage would not be considered in the total, bringing the addition down to 1011.5square feet. Please note that the maximum size for a non-habitable structure within a hazard is 500 square feet.

The applicant reduced the sizing as much as possible by bringing the widths for clearance to the minimum requirement working with CVCA Staff. These space requirements are related to both the mobility or persons within wheelchairs as well as space necessary for medical/emergency assistance.

The proposed addition and relocation of the septic satisfies the “Five Tests” by:

1. Not impact the control of flooding/not impacted by flooding.
  - a. All habitable area is likely above the area which would flood in a major flood event based on its elevation above the road across the outflow of Chandos Lake;
  - b. There is no increase to number of rooms/habitation ability;
  - c. The driveway and access is within the flood access standards (<30cm) compared to the lowest elevation of County Rd 620; and,
  - d. The displacement of water by footings and a slightly enlarged mechanical room would be limited/offset by the relocation of the septic.
2. Not impact/be impacted by the erosion hazard.
  - a. There is no erosion hazard on the property.
3. Not increase the potential for pollution.
  - a. The relocation of the septic will reduce the amount of excess nutrient/pollution into Chandos Lake.
4. Not impact/be impacted by dynamic beaches.
  - a. Dynamic Beaches are limited to the Great lakes, Lake Simcoe, and Lake Nipissing.
5. Conservation of land.
  - a. The addition is limited to the extent possible utilizing previously cleared lands, will not require extensive grading/lot alteration, and the relocation of septic will allow for more natural function of the wetland it was encroaching.

While the application does not meet the CVCA Policy Manual Regulations Officer Robert Cole recommends the application be approved with conditions, including a statement that no future additions on the lot will be permitted, and have the

Advisory Board consider a condition for the plans to be amended to make the sunroom a covered deck with an alternative approach to screen/insect protection, and any other additional conditions the Advisory Board deems applicable.

## **Summary**

The application for the relocation of a septic and addition does not meet the requirements detailed in the Policy Manual due to the assumed flood hazard on Chandos Lake. The applicant, Mark Daprato, was made aware of the size restrictions associated with development on this property and made some modifications to reduce the size as much as possible. As the application does not meet the requirements of the Policy Manual the application can not be approved by Regulations Officer Robert Cole but his assessment of the application is that it satisfies the five tests for permitting and is in line with the purpose of the CA Act and Regulation. As such he recommends the permit be approved with conditions.

Figures Enclosed: Original and Revised Site Plans/Application Documents  
CVCA Generated Maps