

RE: Newell Consent M20046

From: MacLean Plewes (m.plewes@greysauble.on.ca)
To: lswanson@dmrconsulting.ca
Cc: ronalddavidson@rogers.com; drobins@dmrconsulting.ca
Date: Thursday, June 27, 2024 at 11:23 a.m. EDT

Hi All,

Appreciate your patience in our office considering the below.

Our office is accepting of the justification and proposed 4m access setback provided from Darryl's email from June 4, 2024.

Please let me know if you need anything else from our office at this time.

Best regards,

Mac Plewes

Manager of Environmental Planning

519.376.3076
237897 Inglis Falls Road
Owen Sound, ON N4K 5N6
www.greysauble.on.ca



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From: Laura Swanson <lswanson@dmrconsulting.ca>
Sent: Wednesday, June 26, 2024 2:38 PM
To: MacLean Plewes <m.plewes@greysauble.on.ca>
Cc: 'Ron Davidson' <ronalddavidson@rogers.com>; 'Darryl Robins' <drobins@dmrconsulting.ca>
Subject: FW: Newell Consent M20046

Good afternoon Mac,

It has been over 3 weeks since Darryl has sent the email below. I wanted to check if you have had time to review? Our client is eager to move forward with the severance and would like to confirm the setback requirement of 4m is acceptable?

Kind Regards,

Laura Swanson, P.Eng.

DARRYL M. ROBINS CONSULTING INC.

4844 Highway No. 6, Miller Lake, ON
519-795-7094
lswanson@dmrconsulting.ca

From: drobins@dmrconsulting.ca <drobins@dmrconsulting.ca>
Sent: Tuesday, June 4, 2024 9:39 AM
To: 'MacLean Plewes' <m.plewes@greysauble.on.ca>
Cc: 'Ron Davidson' <ronalddavidson@rogers.com>; 'Laura Swanson' <lswanson@dmrconsulting.ca>
Subject: RE: Newell Consent M20046

Hello Mac,

Thank you for reviewing the proposal and considering some options.

This project is unique as typically for projects on the Great Lakes shorelines, the development boundaries are directly on the shoreline and the review of the specific shoreline and wave processes determine the development's setback from the 100 year flood level. For this project the Old Mill Road road structure provides the coastal protection barrier for wave processes and as such the regulatory 15m wave uprush setback has been established from where the 100 year flood level occurs on the lakeside of the Old Mill Road road structure. The 100 year flood level also occurs on the landward side of Old Mill Road and this presents a unique consideration in determining appropriate setbacks.

I have completed a review of Part 7.4.2 – (Part 7 - “Addressing the Hazards”) of the *Technical Guide for Great Lakes – St. Lawrence River Shorelines* (TG) and wish to provide the following in respect to this project:

The TG specifies three (3) types of shoreline flooding:

1. *Higher, lakewide, static water levels or water levels in connecting channels*; - For our situation, flooding would result from higher, lakewide, static water levels, but not water levels in connecting channels (ex. Connecting channels connecting Great Lakes).
2. *Wind setup; and* – Wind setup is included in the establishment of the 100 year flood level (177.9m GSC).
3. *Wave uprush and overtopping and other water-related hazards (e.g., ice and boat and ship generated waves)*. – Wave uprush and overtopping concerns have been dealt with in the project-specific coastal report and to reiterate, the Old Mill Road road structure acts as the coastal protection barrier, thus protecting the landward site.

The TG states that the following flooding characteristics must be considered when evaluating floodproofing measures:

- a. *Depth of expected flooding and, in shoreline areas, height of wave crests, which will determine the required elevation of a building and the hydrostatic and hydrodynamic forces to be expected.* – The proposed development building envelopes are upland of the 100 yr. flood level; therefore, the depth of flooding should be nil landward of the 100 year flood level. Hydrodynamic and hydrostatic forces should be negligible as well. Height of wave crests are considered in the project-specific wave uprush and overtopping review of the coastal report and are diminished by the Old Mill Road road structure.
- b. *Velocity of flood waters and waves, which influences both horizontal hydrodynamic forces on building elements exposed to the water and debris impact loads from water-borne objects....* - As per the project-specific coastal report, the Old Mill Road structure will be the location of wave uprush and overtopping and the subject site will not receive significant overland flows thus velocity of flood waters/waves and debris impact loads are not a concern.

- c. *Frequency of flooding, which is the amount of time between occurrences of damaging floods. This will have an important influence on site selection.* – The design situation for this project is the 100 year flood level which is the peak instantaneous water level that has a probability of being equalled or exceeded in any given year of 1%; therefore, the frequency of flooding is minimal.
- d. *Duration of flooding, which affects the length of time a building may be inaccessible, as well as the saturation of soils and building materials.* – The duration of flooding for this site should be directly relative to the amount of time that the 100 year flood situation exists for Georgian Bay in that vicinity. It is assumed that the water surface of the 100 year flood level would subside somewhat after 24 hours, but to what level and timing is difficult to determine. The dry floodproofing elevation specified for the project is 178.7m which is above the 100 year flood level (177.9m), the modelled wave uprush elevation (178.46m) and the crown of Old Mill Road (178.2m). The proposed driveways and habitable floor elevations will be installed above the flood level and the crown of Old Mill Road; therefore, even if severe flooding was to occur, driveways and first floor elevations are above the road surface of Old Mill Road and protected with access/egress stability as flood levels would overtop Old Mill Road and flow to Georgian Bay before flooding driveways and homes. A fill grading skirt is to be implemented around each proposed home above the 100 year flood level; therefore, house structure building materials will not be in contact with the flood waters and wave spray is not a consideration.
- e. *Rate of rise, which indicates how rapidly water depth increases during flooding. This determines warning time before a flood, which will influence the need for access routes (ingress/egress) to be elevated above floodwaters and whether valuable possessions should/can be kept underneath the structure and moved only when flooding is imminent.* – As mentioned in the previous item above, driveways and first floor elevations are above flood water levels, thus this item is taken care of.
- f. *Ice and debris, which can cause serious damage to structures. Wind-driven ice or ice jams have, in some cases, completely demolished bridges, homes and businesses, snapped off large trees and pushed buildings completely off their foundations. Floating debris can be equally dangerous in this regard....* - The specific area of concern is not subject to wave spray or wind-driven ice or debris.

A maintenance allowance from the 100 year flood level during storm events is a proactive consideration; however, during the 100 year flood with minimal flow velocities for erosion of the proposed building grading skirt/driveways and wave processes being diminished on the Old Mill Road structure, the requirements for construction equipment or material supply to reinforce building grading skirts would seem minimal. With the abundant local availability of compact track loaders, smaller excavators and their respective attachments, it would seem likely that these smaller units would be used to support existing residences and an allowance could be narrower.

Based on the above discussion, we respectfully request the GSCA to consider a reduction of the proposed 6m development setback from the 100 year flood level to 4m.

If you have any questions or concerns, please do not hesitate to contact the writer.

Thanks and regards,

Darryl M. Robins, P.Eng,
President/Treasurer
DARRYL M. ROBINS CONSULTING INC.

4844 Highway 6
Miller Lake, ON
N0H 1Z0

519-795-7094

From: MacLean Plewes <m.plewes@greysauble.on.ca>
Sent: Tuesday, April 23, 2024 8:47 AM
To: drobins@dmrconsulting.ca
Cc: 'Ron Davidson' <ronalddavidson@rogers.com>; 'Laura Swanson' <lswanson@dmrconsulting.ca>
Subject: RE: Newell Consent M20046

Hi Darryl,

You would need to justify a lesser setback. There may be wording in the natural hazard tech guide on this, but I would have to take a look. We went through this very recently, but it was from the erosion hazard limit for valley slopes. In that case there was wording in the natural hazard technical guidelines. Ian and I worked through that scenario and the least amount we were comfortable accepting was 4 m when you factor in various machine sizes and potential working area. The consultant wanted less.

Thanks,

Mac Plewes

Manager of Environmental Planning

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From: drobins@dmrconsulting.ca <drobins@dmrconsulting.ca>
Sent: Monday, April 22, 2024 10:02 PM
To: MacLean Plewes <m.plewes@greysauble.on.ca>
Cc: 'Ron Davidson' <ronalddavidson@rogers.com>; 'Laura Swanson' <lswanson@dmrconsulting.ca>
Subject: FW: Newell Consent M20046

Hello Mac,

Thank you for your response.

Is there any way a reduction to the 6m would be considered by the CA?

Thanks and regards,

Darryl M. Robins, P.Eng,
President/Treasurer
DARRYL M. ROBINS CONSULTING INC.

4844 Highway 6
Miller Lake, ON
N0H 1Z0

519-795-7094

From: MacLean Plewes <m.plewes@greysauble.on.ca>
Sent: Monday, April 22, 2024 4:45 PM
To: drobins@dmrconsulting.ca
Cc: 'Laura Swanson' <lswanson@dmrconsulting.ca>
Subject: RE: Newell Consent M20046

Hi Darryl,

I understand it refers to 6m from protection structures and that protection structures are not necessary. If they were, they would be proposed at the 100-year line. However, it is still necessary from our perspective to have a maintenance access from the flood limit. This is so access can be achieved around the proposed structures and it would not be suitable for the structures to be located right up against the flood limit. Our policies take the same 6 m maintenance access approach for other hazards as well (floodplains, erosion hazards, etc).

Thanks,

Mac Plewes
Manager of Environmental Planning

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From: drobins@dmrconsulting.ca <drobins@dmrconsulting.ca>
Sent: Monday, April 22, 2024 8:51 AM
To: MacLean Plewes <m.plewes@greysauble.on.ca>
Cc: 'Laura Swanson' <lswanson@dmrconsulting.ca>
Subject: Newell Consent M20046

Morning Mac,

We just wanted to confirm the information from Para. 3 of Page 2 of the CA's letter (attached) that a 6m access/setback is required from the flood hazard for the Great Lakes.

We have checked O. Reg. 41/24 and the GSCA policy handbook, and we can see only where the 6m allowance/setback is required to support maintenance and access to existing/proposed protection structures. We can't see where a Great Lakes flood hazard setback is explicitly mentioned.

If the CA could confirm the above, it would be greatly appreciated.

Thanks and regards,

Darryl M. Robins, P.Eng,
President/Treasurer
DARRYL M. ROBINS CONSULTING INC.

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