

Brodylo Farms Ltd.

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August 4 2020

Members of the Calgary Planning Commission
City of Calgary
Calgary, AB

Dear Members of the Calgary Planning Commission:

**Re: Items 7.2.12 and 7.2.13 Outline Plan in Alpine Park (Ward 13) at 5315 - 146
Avenue SW, LOC2017-0378, CPC2020-0785 and LOC2017-0378, CPC2020-0786
CALGARY PLANNING COMMISSION Meeting August 06, 2020 at 1:00 PM**

We are making a submission to the Calgary Planning Commission in response to the proposed Outline Plan for Alpine Park (Providence ASP) in Ward 13 for the upcoming meeting on August 6, 2020. We have a number of concerns related to pre- and post-development drainage, flood risk and inequities in the local and regional water budget across ownership boundaries. Many of these issues are summarized in the attached May 25, 2020 letter from Burgess Environmental that was sent to City of Calgary file managers for LOC2017-0378, Brendyn Seymour and Brian Smith, as well as City of Calgary Water Resources, Qualico, EXP Services Inc. and A.E.P.

We received a proposal from a consultant (EXP Services Inc.) working on behalf of Providence Land Inc. (Qualico) on July 28, 2020 related to a drainage boundary condition and have requested further information and clarification as it will significantly affect drainage on our property. Our property is located directly adjacent to this proposed development and will be critically affected by any changes in grade. We have a number of questions and concerns related to EXP's letter. At this time we have not received any of the requested information or clarification in order to properly evaluate this proposal and the potential for significant flooding risk posed by the offsetting development proposed by Qualico. As serious drainage issues remain completely unsettled, we have not agreed to this last minute proposal or any other proposal, either in principal or otherwise.

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We are requesting that the Calgary Planning Commission add a condition of approval to the Outline Plan.


Prior to Tentative Plan Approval; the applicant provide confirmation of the locations, pipe sizes, depths of the sanitary and storm sewers to accommodate the flows from all lands that drain through the Qualico Lands.

We also request that the Outline Plan should be amended to indicate the location of any connection locations for the sanitary and storm sewers. Notably, connections should be made available along 53rd Street between Verbena Link and Verbena Gate. In addition, we request confirmation of the proposed offsite grading, future elevation of 53rd Street S.W and the plan to take away storm water that will collect in the trap-low indicated between Verbena Link and Verbena Gate. Further, we request confirmation of the emergency escape route proposed for storm water across Qualico lands from the lowest elevation within this trap-low on 53rd Street S.W. and confirmation that no water will be allowed to back-flow from this trap-low onto Brodylo lands via either major or minor systems.

We feel it is premature to approve this development until all issues surrounding drainage and boundary conditions have been properly resolved according to best practices and storm water policy. We ask that you include our submission in the record for your consideration as we received this late communication from Qualico after the CPC filing deadline for the August 6th 2020 meeting.

Thank you for your time and consideration. If you have any questions please feel free to contact us at the above address for service, email or phone.



 Reid Brodylo, B.Sc., P.Geol.
President and Director Brodylo Farms Ltd.

Cc. Members of Calgary Planning Commission
Kim Holverton, Administrative Assistant to the Calgary Planning Commission
Director M.Tita, Chair
R. Davies, Vice-Chair
Director R. Vanderputten, Vice-Chair
Councillor G. Chahal
Councillor E. Woolley
Commissioner H. Cameron
Commissioner P. Gedye
Commissioner L. Juan

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Commissioner A. Palmiere

Commissioner K. Schmalz

Commissioner J. Scott

Mayor N. Nenshi

Brendyn Seymour, City of Calgary, Outline Plan file manager

Brian Smith, City of Calgary, Strip and Grade file manager

Richard McNeil, P.Eng. Manager, Land Development Design Services, EXP Services Inc.

Clark Piechotta, Providence Land Inc., Qualico

Gord Johnson, P.Eng. M.Sc. Burgess Environmental Ltd.

Ross Thurmeier, P.Eng. Branch Manager, Scheffer Andrew Ltd.

Alan Pentney, Alberta Environment & Parks

Michal Ubar, City of Calgary Water Resources

Leslie Chisholm, B.Sc., M.Sc., P.Geol.

John Brodylo, B.Sc., Geol/Geoph, P.Geol.

Ellen Brodylo

Burgess Environmental

24 Strathlorne Crescent SW
Calgary, Alberta, T2P 1M8
Telephone: (403) 249 1684
burgessenv@shaw.ca

May 25th, 2020

Project #: BROD-01

Brodylo Family Farm
15015 53rd Street SW
Calgary, Alberta

Attn: Reid Brodylo
President

Dear Reid:

Subject: Qualico Proposed Outline Plan and Land Use Re-designation

Introduction

Qualico has submitted revised applications for an Outline Plan and Land Use Re-designation for the NW ¼ of 36-22-2 W5M, between 53rd Street SW and 45th Street SW, and 146th Avenue SW and 154th Avenue SW, Calgary. The Outline Plan was completed by B&A Planning Group and contemplates the development of 43.8 hectares of land within the NW ¼ of 36-22-2 W5M. This information has been provided to the Brodylo Family with the objective of obtaining feedback and comments from potentially affected stakeholders in the area.

Burgess Environmental Ltd. (Burgess) has been retained by the Brodylo Family to assist in reviewing this information. The NW ¼ of 36-22-2 W5M is located immediately east of the north half of the Brodylo Family Farm that is located within the East ½ of 35-22-2 W5M. This letter provides my assessment of how the development proposed by Qualico may affect the wetlands and drainage features on the Brodylo Family Farm. The focus of this assessment is on surface water management and the potential for the Qualico development to impact surface water flows within the Brodylo Family Farm.

The Brodylo Family, through their council Waddell Phillips Professional Corporation, had previously retained (Burgess) to review a Water Act Application for Qualico's lands (Burgess, 2019). Most of the information and opinion communicated within the Burgess assessment of Qualico's Water Act Application remains relevant. The runoff estimates completed in this previous assessment have been superseded by runoff modeling described below.

Development Plan and Drainage

Figure 1 illustrates the proposed Outline Plan and Land Use Re-designation, which consists primarily of low density residential land use, with some multi-residential use, supporting commercial/retail areas, and municipal reserve. A stormwater pond will be constructed in the northeast corner of the development.

Stormwater runoff is to be managed by a network of storm-sewers and catch-basins that are positioned along most of the internal roads and each of the major streets and avenues noted in Figure 1. These perimeter roads will service the proposed Qualico land development as well as other adjacent land developments that may occur in this region of Calgary. The network of storm-sewers drains into the stormwater pond, which is used to regulate flow to Fish Creek and acts as a sedimentation basin to control water quality. From the perspective of surface water management, the proposed development appears to collect and treat runoff collected from 53rd Street SW, but it is not clear whether runoff from west of 53rd Street SW is collected by the system.

Overview

Figure 2 illustrates the proposed Qualico development area along with the primary drainage course that flows through the two properties and associated wetlands. The purple lines delineate drainage areas, the blue lines delineate flow paths and the brown shaded areas with numerical designations represent the wetland on the Qualico property that were assessed by Trace Associates (2018).

The drainage area originates primarily on the Brodylo Family Farm, within the south half of NE ¼ of 35-22-2 W5M. Two wetlands on the Brodylo Family Farm are fed by this drainage, which overflowed to the east through a culvert beneath 53rd Street SW that fed wetlands 3 and 4 on the Qualico property. The presence of this culvert was the subject of some disagreement between the Brodylos, the City and representatives of Qualico during a meeting held in January 2019. A 300 mm diameter culvert was subsequently identified by the Brodylos and exposed by Qualico. It was found to be dilapidated and filled; hence, 53 St SW now blocks flow to the east, causing runoff to accumulate in the wetlands on the Brodylo Family Farm.

The stormwater management plan incorporated into the Outline Plan (Figure 1) includes a storm-sewer beneath the centre of 53rd St SW. Flow in this storm-sewer converges at the intersection of Verbena Gate and 53rd Street SW, then flows east into the collector system that ultimately drains into the stormwater pond located in the northeast corner of the proposed Qualico development. Although not specifically shown in the Outline Plan, the intersection of Verbena Gate with 53rd Street SW appears to coincide with the point where the drainage from the Brodylo Family Farm crosses 53rd St SW.

A Master Drainage Plan (EXP, 2020) for the area, which includes the Brodylo Family Farm, was recently accepted by the City of Calgary (City) on the condition that the minor system on the Qualico land be sized to accommodate 2.42 l/s/ha of area that drains out of these wetlands on the Brodylo Family Farm. Presumably these storm-sewers and the stormwater pond would be designed to accommodate this flow rate over the 25.5 ha catchment area outlined in the Master Drainage Plan, resulting in accommodation of 62 l/s.

Stormwater modelling has been completed as part of the MDP (EXP, 2020), although this modelling does not appear to have accounted for the culvert or overflow from the wetlands in the north portion of the Brodylo Family Farm. Potential runoff from this portion of the Brodylo property was analyzed on behalf of Brodylo Farms by Ross Thurmeier of Scheffer Andrew Ltd. using the same catchment area parameters defined in the MDP. Modelling completed using the City of Calgary Water Balance Spreadsheet tool confirms the accounts of the Brodylos, that the water level in these wetlands would reach the culvert elevation during high rainfall years and spring runoff events. The 24 hour 1:100 year peak pre-development runoff from the catchment was calculated to be 420 l/s (16 l/s/ha). Assuming the existing culvert is repaired, the peak flows through the culvert onto Qualico's land were calculated to be 70 l/s at full flow and 130 l/s at road crown. If the culvert is upgraded to the current City standard of 450mm @

2%, the peak flows through the culvert were calculated to be 220 l/s at full flow and 380 l/s at road crown. The peak runoff and potential pre-development culvert flows are far in excess of the 2.42 l/s/ha (62 l/s) required by the City to accommodate the post-development flows.

Assessment and Opinions

The conclusions and opinions expressed in my assessment of Qualico's Water Act Application remain valid and are reiterated and updated to include recent information, as follows.

1. The blockage of the culvert beneath 53rd St SW is causing water to back up on the Brodylo Family Farm, which increases the size of these wetlands and floods farmland on the Brodylo Family Farm. In my opinion, these are adverse effects as contemplated by Alberta's Water Act and Environmental Protection and Enhancement Act.
2. At a minimum, this culvert should be replaced to replicate its current invert elevation and in accordance with current standards, which I understand to be 450 mm diameter sloped at a minimum of 2% in the downstream direction.
3. There have been references to phasing of the Qualico development, but the timing of these phases is not clear. If 53rd Street SW is to be upgraded as part of initial development, then the outflow from the north wetland should be connected to the related storm-sewer as part of the road upgrade. If 53rd Street SW is not upgraded as part of initial development, then the downstream stormwater management system on the Qualico lands should be constructed to accommodate overflows from the north wetlands on the Brodylo Family Farm. The proposed regrading of the area of the Qualico property downgradient of the culvert involves substantial filling, which should not be allowed unless and until infrastructure is in place to accommodate these flows.
4. The design outflow from the north wetlands on the Brodylo property should be the predicted rate of outflow under current conditions, assuming a 450 mm diameter culvert constructed at the same invert elevation as the existing culvert (220 to 380 l/s). This is because the Brodylo Family has not committed to developing their property; hence, this pre-development outflow rate should determine the capacity of the downstream infrastructure associated with the Qualico Outline Plan.
5. Replacement of the culvert should not be opposed by any of the stakeholders in this process. I attended meetings with the Brodylo Family, the City, the Province (1 meeting), Qualico and its consultants on two occasions.
 - a. During a meeting held in January 24, 2019, Mr. Pablo Lopez Hernandez of the City said that the City was prepared to reconstruct the culvert (if present), but was unsure whether the Province would allow the culvert to be reconstructed.
 - b. During a meeting held in June 12, 2019, Mr. Alan Pentney of Albert Environment and Parks stated that the Province would have no objection to reconstructing the culvert.
 - c. During that same meeting of June 12, 2019, Mr. Ben Mercer/ Mr. Clark Piechotta of Qualico stated that they could not see Qualico objecting to reconstructing the culvert but needed to check with other project stakeholders.

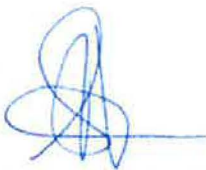
Assuming that these representatives were consulting with the Brodylos in good faith, there is no reason that I can anticipate for any of the parties to alter their positions on this issue.

Closure

I trust that this assessment is clear and properly addresses stormwater management issues associated with Qualico's proposed Outline Plan and Land Use Re-designation. If you have any questions or require additional information, please contact the undersigned.

Yours sincerely,

BURGESS ENVIRONMENTAL LTD.

A handwritten signature in blue ink, appearing to be 'G. Johnson', with a horizontal line extending to the right.

Gordon J. Johnson, M.Sc., P.Eng.
President

Modeling Completed by:
SCHEFFER ANDREW LTD.

A handwritten signature in blue ink, appearing to be 'Ross Thurmeier', with a horizontal line extending to the right.

Ross Thurmeier, P.Eng.
Branch Manager, Calgary



CLIENT	
BRODYLO FAMILY	
PROJECT	
QUALICO PROPOSED OUTLINE PLAN	
TITLE	
EXISTING SURFACE WATER DRAINAGE PATTERN	
Burgess Environmental	YYYY-MM-DD 2020-05-11
	PREPARED EJ
	REVIEWED GJ
Project No. BROD-01	FIGURE 2