



Muncaster
Environmental
Planning Inc.

June 19, 2020

Mr. Dave Meikle
Ottawa D-squared Asphalt Limited
6811 Hiram Drive, PO Box 14
Ottawa, ON
K4P 1A2

Dear Mr. Meikle:

RE: 5455 Boundary Road
Review of Channels

Michelle Muncaster and I reviewed the channels present on the above site on June 5th and offer these comments.

Historically the site was in agricultural in 1976, with regeneration of woody vegetation showing in 1991. Between 2008 and 2011 the regenerating woody vegetation was removed and the site is currently highly disturbed from a natural environment perspective with an active compound of stockpiled materials and associated scales, offices, and heavy equipment.

There are three channels on the site, as shown on Figure 1 at the end of this assessment. The general topography of the area is a very gentle slope to the east. All three channels originate on the site, with only up to 200 metres of channel length on the site.

South Channel

The south channel does not show on the aerial photography until 2014. It does not continue to the east of the site (Photo 2) and appears to have been recently dug as part of the on-site activities. The south channel extends for approximately 200 metres and confined entirely on the site (Photo 1). The south channel begins about 200 metres east of Boundary Road and ends approximately 40 metres west of the east site edge. There is no natural habitat of note along the banks or adjacent to the south channel, with some cattails in the channel. On June 5th, standing clear water was present in the south channel, with widths up to four metres wide and water depths up to 25cm. There appeared to be no outlet for the standing water.



Photo 1 – South channel with view looking west to upstream end of the channel on-site



Photo 2 – South channel with view looking east showing no connection to a downstream channel further to the east

Middle Channel

The middle channel also does not appear present on historical aerial photography, though a scratch swale may be between agricultural fields. On June 5th no water was present and there was no evidence of a low flow channel or standing water of note (Photos 3 and 4). The length of the middle channel on-site is approximately 135 metres, with the channel beginning about 310 metres east of Boundary Road. Further east of the site, slender willow shrubs were growing in the channel, along with broad-leaved cattails and European bur-reed.



Photo 3 – Middle channel on site at access road crossing. View looking north



Photo 4 – Middle channel looking east to adjacent land to the east

North Channel

The north channel is present as a straight channel on historical aerial photography, with the channel appearing more defined in 2014 than previous years. Standing water was present in the north channel on June 5th (Photo 5), extending for about thirty metres east of the access road crossing (Photo 6). Aquatic vegetation in the channel included broad-leaved cattail and purple loosestrife. The on-site length of the north channel is approximately 165 metres, with the channel beginning about 270 metres east of Boundary Road.



Photo 5 – North channel, with view looking west to the on-site west end of the channel



Photo 6 – North channel, with view looking east to the east site edge

In 2018, a Headwater Drainage Features Assessment was completed by Golder Associates for the site to the east and south of 5455 Boundary Road. This site is known as the Capital Region Resource Recovery Centre lands. Any surface flow leaving 5455 Boundary Road during major events would enter an intermittent tributary to the Regimbald Municipal Drain, and then the Municipal Drain itself at Highway 417, approximately 700 metres northeast of the site.

Correspondence from South Nation Conservation has approved the recommendations in the Headwater Drainage Features Assessment for the downstream channels. These channels will be removed, with mitigation provided for in the design of the stormwater management for the Resource Recovery Centre. The stormwater will be held for longer periods and over a greater surface area than the pre-development conditions. Golder Associates concluded that these measures will provide appropriate mitigation by increasing the amount of amphibian breeding habitat in comparison to current conditions, including providing improved potential for fish habitat.

The on-site channels all originate on 5455 Boundary Road and contain no natural features of note. Given that South Nation Conservation and the Department of Fisheries and Oceans, through a Letter of Advice, have approved the removal of the downstream channels, the very limited potential for marginal habitat to occur on 5455 Boundary Road will be lost once the downstream channels are removed.

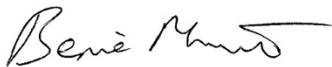
Recommendations

It is important that contributions to downstream channels are maintained and enhanced where possible. To achieve this, all surface water will be kept in the existing drainage area. The linear stormwater management feature planned for the rear of the development will maintain hydration in the downstream channels and provide water quality treatment, an improvement over the existing conditions. Planting of native trees and shrubs around the stormwater management feature will provide some thermal mitigation and local wildlife habitat. It is helpful to utilize local stock to improve the success of the plantings.

Please call if you have any questions on this assessment.

Yours Sincerely,

MUNCASTER ENVIRONMENTAL PLANNING INC.



Bernie Muncaster, M.Sc.
Principal

Boundary Road Channels

FIGURE 1 – CHANNEL LOCATIONS



Legend



Approx. Scale 1:3,300

