APPENDIX A

Project Terms of Reference
Background Information

A-1 – Terms of Reference

A-2 – Ministry of Natural Resources and Forestry Notice

A-3 – Legal Survey

A-4 – Restoration Approach

APPENDIX A-1

Terms of Reference

ABOUD & ASSOCIATES INC.
Consulting Arborists•Ecologists•Landscape Designers

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Guelph . Ontario
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October 30, 2014

Our Project No: AA12-137A
Sent by email: ryan@aboudtng.com

Mr. Chris Clark
Triton Engineering Services Limited
105 Queen Street West, Unit 14
Fergus, ON N1M 1S6

Re: Terms of Reference for Station Street Dam Natural Heritage Existing Conditions Report as part of the Municipal Class Environmental Assessment

Dear Chris,

This letter outlines the draft Terms of Reference (ToR) of the Station Street Dam Natural Heritage Existing Conditions Report. This report is part of the Municipal Class Environmental Assessment (EA) to address the structural state of the existing earthen berm and dam.

Background and Context

The proposed study area for the project is a total of 83.8 hectares, centered on the Station Street Dam and extending up stream to include the Hillsburgh pond, surrounding wetland and associated tributary sections. The study area also extends downstream from the dam to Wellington Road 22 and includes the associated wetlands and woodlands (see Study Area Map). The larger landscape level context of the area will also be examined to evaluate the significance of the natural heritage features within the broader region.

The study area is contained entirely within the Town of Erin's municipal boundaries and the Credit Valley Conservation's (CVC) jurisdiction. The majority of the study area contains naturalized environments and hosts a wide variety of flora and fauna. Large sections of the study area contain part of the Provincially Significant West Credit Wetland Complex. The open water community of the Hillsburgh pond, created by the Station Street dam is considered a 'rare community' within the region according to Phase 1 Erin Service and Settlement Master Plan - Environmental Component. The tributaries above and below the dam are classified as cold water tributaries with associated cold water fish communities, whereas the on-line ponds and adjoining sections of tributaries are classified as warm water systems and fish communities. According to the Credit River Fisheries Management Plan, the Hillsburgh Dam (Station Street Dam) is known to have negative fish community impacts through changes to the thermal regimes and imposed barriers to movement.

Proposed Terms of Reference

The ToR, provided below will be based on background natural heritage information (where available) and site visits by Aboud & Associates to collect detailed natural heritage information related to Ecological Land Classification (ELC) communities, flora, fauna, habitat, watercourses and fish. A description of these existing natural heritage features will be detailed. A preliminary assessment will be provided to determine potential impacts and opportunities to natural heritage features from potential design options to address the structural state of the dam.

ToR for the Natural Heritage Existing Conditions Report are listed below.

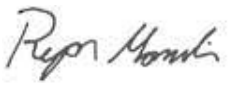
1. Conduct background screening of relevant documents, material and online mapping sources (e.g. NHIC, CVC, MNR-Guelph District, and Wellington County).
2. Conduct ELC evaluation and prepare ELC community mapping using available background resources, supplemented with 3 season ELC field evaluations and desktop analysis.
3. Complete a 3 season botanical inventory and review of past available inventories to develop a comprehensive list of flora species present. Review and update status of all identified species (SRank; GRank; COSEWIC; COSSARO; Local significance, as listed in Dougan & Associates and Snell & Cecile. 2009).
4. Provincially Significant Wetland:
    a. Review Wetland Evaluation file to determine presence of potentially significant features.
    b. Confirm accuracy of current wetland boundaries through desktop analysis and consultation with Ontario Ministry of Natural Resources and Forestry(MNRF).
    c. (Provisional): Confirm and re-stake wetland boundary of areas that are not current and that may be altered through changes to the dam structure. Work with MNRF to have new boundaries approved.
5. Bird Surveys:
    a. Complete breeding bird survey of study area, following the protocol of the Breeding Bird Atlas (Bird Studies Canada. 2001). Confirm the presence or absence of Eastern Meadowlark and Bobolink.
    b. Assess for the presence of the following Significant Wildlife habitat (MNR. 2000):
        i. Waterfowl Stopover and Staging areas
        ii. Shorebird migratory stopover area
        iii. Song bird migratory area
        iv. Raptor Wintering area

6. Winter Wildlife Survey:
    a. Conduct a survey for signs or sightings of winter wildlife and their associated habitat. Location of observed species will be recorded and mapped.
    b. Assess for the presence of the following Significant Wildlife habitats (MNR. 2000):
        i. Deer wintering yards
        ii. Deer Movement Corridors

7. Anuran Survey: Complete three evening anuran (frog and toad) call counts surveys for all potentially suitable habitat locations. Protocols described in the Marsh Monitoring Program will be followed (Marsh Monitoring Program. 2003).
8. Record incidental wildlife observations made during field investigations and combine data with existing wildlife inventories to create a comprehensive wildlife species list. Review and update status of all identified species (SRank; GRank; COSEWIC; COSSARO; Local significance, as listed in Dougan & Associates and Snell & Cecile. 2009).
9. Identify, describe and map wildlife habitat areas and assess for significance using Significant Wildlife Technical Guide (MNR. 2000) and MNRF input.
10. Identify specialized habitat or potential SAR habitat for SAR's known to occur in Wellington County. Will be completed using MNRF Wellington County SAR and Habitat Requirements Table along with ELC community maps, field investigation and aerial photo interpretation.
11. Fish:
    a. Compile fish community records from MNRF and CVC to create a comprehensive fish species list; supplement existing data with additional field sampling if necessary.
    b. Characterise fish habitat within the study area based on thermal regime, vegetation, barriers to movement, depth, pools and riffles, and substrate.
12. Assess the landscape level context of the study area within the broader region, including drainage line, migratory corridors, extended ELC communities, wetlands, and adjacent habitat and wildlife linkages. Specific focus of the landscape level context will be on fish communities and their movement within the West Credit River System.
13. Prepare an interim summary report of existing natural heritage conditions and a preliminary assessment of potential impacts and opportunities to natural heritage features. Detailed project information of species lists, maps, photographs and GIS files will be provided.

Yours truly,

ABOUD & ASSOCIATES INC.



Ryan Hamelin
Terrestrial and Wetland Ecologist

cc. P. Ziegler, Triton Engineering Services LTD.
L. Van Wyck, Town of Erin

S:\A+A Projects\2012\12-137A Station Street Dam\Proposal

REFERENCES

Bird Studies Canada. 2001. *Ontario Breeding Bird Atlas Guide for Participants*. Environment Canada, Ministry of Natural Resources, Bird Studies Canada, Federation of Ontario Naturalists, and Ontario Field Ornithologists. 43 pp

Dougan & Associates and Snell & Cecile. 2009. *Guelph Natural Heritage Strategy. Appendix A: Significant Plant List for Wellington County & Appendix B2: List of Significant Wildlife in Wellington County*. Guelph, Ontario.

Marsh Monitoring Program. 2003 Edition. *Training Kit and Instructions for Surveying Marsh Birds, Amphibians, and Their Habitats.* Published by Bird Studies Canada in cooperation with Environment Canada and the U.S. Environmental Protection Agency. 44 pp

MNR. 2000. Significant Wildlife Habitat: Technical Guide. Ministry of Natural Resources.

Chris Clark

From: Ryan Hamelin <ryan@aboudtng.com>
Sent: February-02-15 3:29 PM
To: Whalen, Rose (MNRF)
Cc: Chris Clark
Subject: RE: Hillsburgh Dam and Bridge Class EA - Natural Heritage Component - Project Terms of Reference

Follow Up Flag: FollowUp
Flag Status: Flagged

Hi Rose,

Thanks for the comments on the Hillsburgh Dam ToR. We don't have any follow up questions at this point, but will let you know if we have any further questions later on.

We are in the process of trying to gain access to the various private properties within the study area, but acknowledge that a lack of access could limit some studies. If there are portions of the study area where access is not granted, we will have to assess from adjacent lands and rely on orthophotography and background resources to complete our various study.

Thanks again,

Ryan

From: Whalen, Rose (MNRF) [mailto:rose.whalen@ontario.ca]
Sent: January-26-15 2:02 PM
To: Ryan Hamelin; Steven Aboud
Cc: Chris Clark; 'Slaght, Tyler (TSlaght@creditvalleyca.ca)'; Buck, Graham (MNRF); Timmerman, Art (MNRF)
Subject: Re: Hillsburgh Dam and Bridge Class EA - Natural Heritage Component - Project Terms of Reference

Hi Ryan,

Please see the response from MNRF regarding the project terms of reference for the natural heritage component of the Hillsburgh dam and bridge Class EA.
If you have any questions or concerns, please do not hesitate to contact me.

Regards,

Rose Whalen
Lands and Waters Technical Specialist | Guelph District
Ministry of Natural Resources and Forestry
1 Stone Road West, Guelph, ON, N1G 4Y2
T: 519 826 4910 | F: 519 826 4929 | E: rose.whalen@ontario.ca

Ministry of Natural Resources and Forestry

Ministère des Richesses naturelles et des Forêts

Guelph District
1 Stone Road West
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N1G 4Y2

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Ontario

January 26, 2015

Ryan Hamelin
Aboud & Associates Inc.
591 Woolwich Street
Guelph, ON
N1H 3Y5

Dear Mr. Hamelin

Re: Terms of Reference for Hillsburgh Dam, Natural Heritage Existing Conditions Report As Part of the Municipal Class Environmental Assessment

The Ministry of Natural Resources and Forestry Guelph District Office (MNRF) had a chance to review the attached terms of reference (ToR) for the Hillsburgh dam regarding the existing natural heritage conditions report as part of the Municipal Class Environmental Assessment and offer the following comments:

- If the order in which the surveys/screening presented in the ToR is in chronological order, it may be beneficial for the survey to identify specialized habitat or potential SAR habitat for SAR to occur immediately after the Ecological Land Classification (ELC) evaluation.
  This may inform the types of surveys required for the subject properties.
- Some of the described surveys may be limited due to property access. How does Aboud & Associates plan to resolve this?
- A proposed clarification in the Background and Context section, regarding the comment "whereas the on-line ponds and adjoining sections of tributaries are classified as warm water systems and fish communities". This should be amended to reflect that the stream sections between the Hillsburgh and Ainsworth pond and between Ainsworth and Rudd pond have coldwater fish communities.
- Regarding 5 a. Bird surveys, confirm the presence of other SAR along with Eastern Meadowlark and Bobolink.
- Regarding 6 b. i, Deer wintering yards are referred to as Deer Winter Congregation Areas in this area.

Thank you for giving us the opportunity to review. If you have any questions, please do not hesitate to contact me

Sincerely,

Rose Whalen
T: 519-826-4910

From: Ryan Hamelin
To: Slaght, Tyler
Cc: Chris Clark; Larry Van Wyck
Subject: RE: Hillsburgh Dam and Bridge Class EA - Natural Heritage Component - Project Terms of Reference
Date: January-23-15 10:34:53 AM
Attachments: image001.jpg

Hi Tyler,

We appreciate this additional feedback. I think these responses answer all of our questions at this point, but we will let you know if any other questions come up. We will forward you a copy of the natural heritage studies ToR for your records once they are finalized.

If you are able to forward any fish or bird data/metadata that would be great.

Thanks again for the input in developing the ToR.

Ryan Hamelin

Ryan Hamelin, B.S.c (Env). M.Sc. Terrestrial and Wetland Ecologist
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From: Slaght, Tyler [mailto:TSlaght@creditvalleyca.ca]
Sent: January-23-15 10:13 AM
To: Ryan Hamelin
Cc: 'Chris Clark'
Subject: RE: Hillsburgh Dam and Bridge Class EA - Natural Heritage Component - Project Terms of Reference

Hi Ryan,

We've put together some responses to your questions, see below. If have you any further questions, perhaps our ecology staff can chat with you, it probably makes more sense for something like this. Let me know which points you still have questions about and I'll arrange to have them call you.

#4. The 2 ponds downstream of the Station Street pond are also managed the same way (i.e. warmwater species present but managed for the coldwater species that are up and downstream). The only other "formal" management action that was in the Credit River Fisheries Management Plan would be requesting a 30m buffer rather than a 15m buffer.

#5. Continuous Temperature logging data for six sites in the summer of 2014 is available. CVC has no data on water temperatures or dissolved oxygen levels in the pond. This would be useful for assessing the existing impacts of the pond (e.g. does it stratify, do anoxic conditions exist) and benefits of some mitigation options (e.g. installation of a bottom draw and determining discharge volumes).

#6. No additional surveys for Round Goby are needed.

#7: Additional surveys are required as Bob Curry's surveys were completed over a smaller study area and did not include the pond. The meta data can be provided.

#8: As above, no concerns with providing the data.

#12: As indicated in the ToR, CVC is of the understanding that staking of the wetland boundary is provisional and dependent upon consultation with MNRF. If MNRF determines that the PSW boundary requires staking, CVC requests an invitation to be present.

For the additional information above we will put that together and send it to you as soon as possible.

Regards,

Tyler Slaght
Regulations Officer
Credit Valley Conservation
tslaght@creditvalleyca.ca | 905.670.1615 ext 406

From: Ryan Hamelin [mailto:ryan@aboudtng.com]
Sent: January 21, 2015 11:01 AM
To: Slaght, Tyler
Cc: 'Chris Clark'
Subject: RE: Hillsburgh Dam and Bridge Class EA - Natural Heritage Component - Project Terms of Reference

Hi Tyler,

I know you have been out of the office for a while are probably still catching up, but I was wondering if you would have some time to discuss the comments that were provided on the Hillsburgh Dam ToR and our responses.

I am in the office all day today and tomorrow morning, but will be out of the office on Friday and all of next week.

Please feel free to call me at your convenience, or let me know if there is a time that works that I can call you.

Thanks,

Ryan Hamelin

Ryan Hamelin, B.S.c (Env). M.Sc. Terrestrial and Wetland Ecologist
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From: Ryan Hamelin
Sent: January-06-15 10:34 AM
To: 'Slaght, Tyler'
Cc: Chris Clark; Steven Aboud; Larry Van Wyck
Subject: RE: Hillsburgh Dam and Bridge Class EA - Natural Heritage Component - Project Terms of Reference

Hello Tyler,

Thank you for your comments on our proposed Terms of Reference (ToR) for the Hillsburgh Dam EA.

Throughout this process we want to be as efficient as possible in our project, and to make sure we are not completing any unnecessary work or analyses. Based on that, is there any proposed actions in our initial ToR that the CVC feels would not need to be included as part of the EA process?

Based on your provided comments there are a few points that we would like some clarification on before finalizing our ToR. I have addressed each of your comments below and where applicable requested additional information or clarification on a few of the points (4,5,7,8,9).

CVC Comments and Aboud & Associates Notes:

1. CVC recommends the limits of the study area on the eastern tributary upstream of the pond be a formal reach break (e.g. road crossing, feature boundary) rather than an arbitrary break.
    - This can be accommodated by moving the study boundary downstream approximately 100 m to Covert Lane in Hillsburgh. The further upstream reaches will still be included in the landscape level analysis already proposed. An updated study area map has been provided to show the new limits of the study area.

2. List and describe the natural areas on site, including any natural area designations as defined by CVC, the Town of Erin, Wellington County and/or the Ministry of Natural Resources.
    - This is already accounted for as part of the background screening outlined in Term 1 of the proposed Terms of Reference. We will re-write the Term to more directly address your comment in the final ToR.

3. Outline relevant federal, provincial, municipal and agency legislation and policies related to the natural areas and designations that will be applied to options associated with the dam.
    - This is already accounted for as part of the background screening outlined in Term 1 of the proposed Terms of Reference. We will re-write the Term to more directly address your comment in the final ToR.

4. Please note that while the fish community in the Hillsburgh Pond is characterized by warm

water species, the pond is managed as coldwater due to the presence of Brook Trout upstream and downstream of the pond. Mapping in the EA and mitigation measures (e.g. timing windows) should reflect this.

- This difference between the actual thermal regime and associated fish species vs. how the Hillsburgh Pond is managed will be noted and may have implications around recommended mitigation measures. Are the two ponds directly downstream from the Hillsburgh Pond also managed in the same way (i.e. Cold water)? Besides timing windows, are there other CVC active fish management decisions or actions associated with cold water management?

5. Review CVC's available water temperature data (to be provided) and fill data gaps as required. A thermal profile of the pond over as long a period as possible should be considered to assess stratification and the dissolved oxygen profile.
    - We have already received temperature Data from CVC that has continuous monitoring from June 3rd to November 15th for 2013. From this data we can assess temperature profiles of the distinct tributary reaches and comment on the seasonal fluctuations. Does CVC have Temperature data for additional years? The data we have already received appears to be a complete and accurate temperature profile for the study area and I would not anticipate collecting additional temperature data.

    - Does CVC already have the data on lake stratification and dissolved oxygen profile, or would this be something that has to be collected? If the data has not been collected could you expand on the expectation of the study as well as the relevance to the Dam EA and how it should be used to assess impacts or determine best options?

6. Please note that Round Goby, an invasive aquatic species, have been found upstream and downstream of Hillsburgh Dam. The presence and potential spread of this species should be considered in the EA.
    - We can specifically assess the potential impact of Round Goby movement and habitat as part of our already proposed background fish screening studies to be completed. Since the CVC and MNRF already have records of the Goby upstream and downstream of the Dam I wouldn't expect any additional sampling to be required.

7. Breeding bird surveys are to be completed in accordance with the Marsh Monitoring Program (CWS and Bird Studies Canada). That is, two surveys must be conducted at least 10 days apart between late May and July 5th. The surveys must be conducted in either the early morning and/or early evening depending on habitat and potential species present, as per the protocol.

    - This was part of our initial ToR, but was under a different protocol reference. The actual study methodology is the same between the ToR and CVC comments and will be completed in accordance to the Marsh Monitoring Program.

- Part of the data already received from the CVC includes a two visit Breeding Bird Survey Completed by Bob Curry in June and July 2009. Can this data be used to fulfil the Breeding Bird Survey Requirements of the EA, or does a new full Breeding Bird Survey need to be completed? If the CVC survey suffices, could the meta data such as study area maps be provided ?

8. In addition to the Significant Wildlife Habitat Technical Guide (MNR 2000), the assessment of Significant Wildlife habitat should follow the MNRF's SWH Ecoregion 6E Criterion Schedule. Based on criteria for Ecoregion 6E, data collected by CVC in 2011 and 2012 indicates that the Hillsburgh Pond is Significant Wildlife Habitat for Waterfowl Stopover and Staging Areas (Aquatic).
    - The SWH Ecoregion 6E Criterion Schedule will be used in conjunction with the Significant Wildlife Habitat Technical Guide.

    - Can the detailed data from the past CVC SWH studies be provided?

9. Surveys for Species at Risk should target all possible Species at Risk based on the presence of suitable habitat, and not just Meadowlark and Bobolink. Based on the habitat features present CVC questions whether surveys for Meadowlark and Bobolink are warranted. Target species may include, but are not limited to: Blanding's Turtle, Snapping Turtle, Least Bittern, Butternut, Chorus Frog, Barn Swallow, and Species-at-Risk bats. MNRF should be contacted for Species at Risk screening.

    - Our initial Terms of Reference proposed a background Species at Risk Habitat Screening using the Wellington MNRF SAR list. Consultation with MNRF has started regarding their requirements for Specie at Risk surveys, techniques and to identify specific target species. The CVC will be provided a list of proposed species at risk to be surveyed for based on consultation with MNRF.

10. Complete turtle surveys and provide discussion on the suitability of features within the study area for overwintering, nesting and movement habitat.

    - Will be added to our terms of reference. Consultation with MNRF has started regarding requirements and methodology for Turtle surveys.

11. In addition to assessing local rarity based on *Guelph Natural Heritage Strategy* (Dougan & Associates and Snell & Cecile, 2009), GPS the location and describe the distribution of all rare or uncommon species based upon *Vascular Plant Flora of the Region of Peel and the Credit River Watershed* (Kaiser, 2001 and amendments). CVC may request detailed mapping of the species occurrence at a later date.

- This component will be added to our ELC surveys and plant inventories field surveys and mapped.

12. CVC requests an invitation to be present for the staking of the PSW with the MNRF.
    - Wetland boundary delineation was included as a provisional item in the ToR if the existing wetland boundary was found to be inaccurate and needed to be refined. If boundaries are staked and re-delineated for any portions of the study area CVC would be informed and invited to participate in the approval of the new boundary delineation. Based on preliminary interpretation of the current wetland boundary and ortho images it appears the delineated boundary may be a reasonably accurate representation of the actual wetland feature. It is our opinion that the wetland boundary would only need to be re-delineated if found to be inaccurate and unsuitable for identifying preferred EA options.

    - Could you please comment as to CVC's position regarding if portions of the wetland boundary need to be re-delineated as part of the existing features study, or if the 2005 MNRF updated boundary should suffice.

13. Identify mitigation measures/restoration opportunities to eliminate and/or minimize negative impacts associated with the preferred option.
    - As part of the EA, opportunities for mitigation / restoration of the preferred options will be provided.

It should also be noted that the majority of the study area is on private property and access has not yet been granted for large sections of the Natural Heritage study area. Communication with landowners is ongoing and permission to access properties has been requested. However, it is still likely that much of the proposed study area will not be accessible. In these instances, where access to portions of the study area are not granted, alternative study methods such as observation from adjacent lands, orthophotography analysis, and background materials will be used to characterise the existing conditions of the property.

Thank you Tyler for reviewing the ToR and providing detailed comments. Perhaps it would be best to have a phone conversation to clarify the above points and to better understand the CVC's positions. If you could let me know if there is a time we could talk that would be appreciated.

We look forward to hearing back from you.

Ryan Hamelin

Ryan Hamelin, B.S.c (Env). M.Sc. Terrestrial and Wetland Ecologist
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From:	Slaght, Tyler
To:	"Ryan Hamelin"
Cc:	Cheryl-Anne Ross; Chris Clark; Paul Ziegler; Whalen, Rose (MNRF)
Subject:	RE: Hillsburgh Dam and Bridge Class EA - Natural Heritage Component - Project Terms of Reference
Date:	April-13-15 1:05:31 PM
Attachments:	image001.jpg image002.jpg

Hi Ryan,

This looks good to us.

Regards,

Tyler Slaght
Regulations Officer
Credit Valley Conservation
tslaght@creditvalleyca.ca | 905.670.1615 ext 406

From: Ryan Hamelin [mailto:ryan@aboudtng.com]
Sent: April 10, 2015 2:41 PM
To: Slaght, Tyler
Cc: Cheryl-Anne Ross; Chris Clark; Paul Ziegler; Whalen, Rose (MNRF)
Subject: FW: Hillsburgh Dam and Bridge Class EA - Natural Heritage Component - Project Terms of Reference

Hi Tyler,

I hope you are doing well.

In response to Comment 9. of CVC's earlier Terms of Reference review, Aboud & Associates have completed a SAR Targeted Survey proposal for all SAR possibly present within the Hillsburgh Dam Study Area, based on available habitat. A SAR habitat assessment was completed based on winter field observations, background resources and orthophotography interpretation. A proposed list of possible SAR was circulated to MNRF Guelph District for comments and recommendation on survey protocol.

The attached letter details our proposed survey protocol for specie specific targeted surveys or desk top analysis's. The accompanying table outlines the proposed action for all Wellington County SAR. Please let us know if you have any comments or recommendation regarding our proposed SAR Survey approach.

Also, I would like to introduce you to Aboud & Associates newest staff Member, Cheryl-Anne Ross. Cheryl-Anne is our new Wildlife Ecologist and will be leading the wildlife portion of the Hillsburgh Dam EA.

Thanks,

Ryan Hamelin

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From: Slaght, Tyler [mailto:TSlaght@creditvalleyca.ca]
Sent: December-17-14 2:43 PM
To: 'Chris Clark'; 'rose.whalen@ontario.ca'
Cc: Steven Aboud; Ryan Hamelin; Paul Ziegler
Subject: RE: Hillsburgh Dam and Bridge Class EA - Natural Heritage Component - Project Terms of Reference

Hi Chris,

CVC has reviewed the terms of reference for the natural heritage component and provide the following comments:

1. CVC recommends the limits of the study area on the eastern tributary upstream of the pond be a formal reach break (e.g. road crossing, feature boundary) rather than an arbitrary break.

2. List and describe the natural areas on site, including any natural area designations as defined by CVC, the Town of Erin, Wellington County and/or the Ministry of Natural Resources.

3. Outline relevant federal, provincial, municipal and agency legislation and policies related to the natural area/s and designations that will be applied to options associated with the dam.

4. Please note that while the fish community in the Hillsburgh Pond is characterized by warm water species, the pond is managed as coldwater due to the presence of Brook Trout upstream and downstream of the pond. Mapping in the EA and mitigation measures (e.g. timing windows) should reflect this.

5. Review CVC's available water temperature data (to be provided) and fill data gaps as required. A thermal profile of the pond over as long a period as possible should be considered to assess stratification and the dissolved oxygen profile.

6. Please note that Round Goby, an invasive aquatic species, have been found upstream and downstream of Hillsburgh Dam. The presence and potential spread of this species should be considered in the EA.

7. Breeding bird surveys are to be completed in accordance with the Marsh Monitoring Program (CWS and Bird Studies Canada). That is, two surveys must be conducted at

least 10 days apart between late May and July 5th. The surveys must be conducted in either the early morning and/or early evening depending on habitat and potential species present, as per the protocol.

8. In addition to the Significant Wildlife Habitat Technical Guide (MNR 2000), the assessment of Significant Wildlife habitat should follow the MNRF's SWH Ecoregion 6E Criterion Schedule. Based on criteria for Ecoregion 6E, data collected by CVC in 2011 and 2012 indicates that the Hillsburgh Pond is Significant Wildlife Habitat for Waterfowl Stopover and Staging Areas (Aquatic).

9. Surveys for Species at Risk should target all possible Species at Risk based on the presence of suitable habitat, and not just Meadowlark and Bobolink. Based on the habitat features present CVC questions whether surveys for Meadowlark and Bobolink are warranted. Target species may include, but are not limited to: Blanding's Turtle, Snapping Turtle, Least Bittern, Butternut, Chorus Frog, Barn Swallow, and Species-at-Risk bats. MNRF should be contacted for Species at Risk screening.

10. Complete turtle surveys and provide discussion on the suitability of features within the study area for overwintering, nesting and movement habitat.

11. In addition to assessing local rarity based on *Guelph Natural Heritage Strategy* (Dougan & Associates and Snell & Cecile, 2009), GPS the location and describe the distribution of all rare or uncommon species based upon *Vascular Plant Flora of the Region of Peel and the Credit River Watershed* (Kaiser, 2001 and amendments). CVC may request detailed mapping of the species occurrence at a later date.

12. CVC requests an invitation to be present for the staking of the PSW with the MNRF.

13. Identify mitigation measures/restoration opportunities to eliminate and/or minimize negative impacts associated with the preferred option.

Please let me know if you have any questions. Please note I will be out of the office between December 24 returning January 19.

Regards,

Tyler Slaght
Regulations Officer
Credit Valley Conservation
tslaght@creditvalleyca.ca | 905.670.1615 ext 406

From: Chris Clark [mailto:cclark@tritoneng.on.ca]
Sent: December 8, 2014 2:40 PM
To: Slaght, Tyler; 'rose.whalen@ontario.ca'
Cc: Steven Aboud; Ryan Hamelin (ryan@aboudtng.com); Paul Ziegler
Subject: Hillsburgh Dam and Bridge Class EA - Natural Heritage Component - Project Terms of Reference

Hi Tyler/Rose,

I have attached the Natural Heritage portion of the project's Terms of Reference for CVC and MNR review and comment. The Fluvial Geomorpholgy and Hydro technical Terms of Reference will follow under separate cover.

Let us know if you have any questions or require clarification on anything.

Thanks,

Chris Clark, M.A.Sc. E.I.T.

Triton Engineering Services Limited
105 Queen Street West, Unit 14 Fergus, ON N1M 1S6
Tel - (519) 843-3920 • Fax - (519) 843-1943 • www.tritoneng.on.ca

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ABOUD & ASSOCIATES INC.
Consulting Arborists•Ecologists•Landscape Designers

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URBAN FORESTRY
ARBORIST REPORTS
MANAGEMENT PLANS
TREE PRESERVATION PLANS
TREE RISK ASSESSMENT
GIS TREE INVENTORIES
TREE APPRAISALS
MONITORING

ECOLOGICAL RESTORATION
NATURAL SYSTEMS DESIGN
HABITAT RESTORATION
EDGE MANAGEMENT PLANS
RAVINE STEWARDSHIP PLANS
NATURALIZATION PLANS
INTERPRETIVE DESIGN
MONITORING
CONTRACT ADMINISTRATION

ENVIRONMENTAL STUDIES
SUBWATERSHED STUDIES
ENVIRONMENTAL IMPACT STATEMENTS
ECOLOGICAL LAND CLASSIFICATION
WETLAND EVALUATION
VEGETATION ASSESSMENT
BOTANICAL INVENTORIES
WILDLIFE SURVEYS
MONITORING

LANDSCAPE ARCHITECTURE
MASTER PLANNING
RESIDENTIAL COMMUNITIES
COMMERCIAL/INDUSTRIAL
HEALTHCARE AND EDUCATION
STREETSCAPES
PARKS AND OPEN SPACES
TRAIL SYSTEMS
GREEN ROOFS
CONTRACT ADMINISTRATION

EXPERT OPINION
OMB TESTIMONY
LEGAL PROCEEDINGS
PEER REVIEW
RESEARCH
EDUCATION

April 10, 2015

Our Project No: AA12-137A
Sent by email: cclark@trotoneng.on.ca

Tyler Slaght
Credit Valley Conservation
1255 Old Derry Road
Mississauga, Ontario
L5N 6R4

c/o:

Chris Clark
Triton Engineering Services Limited
105 Queen Street West, Unit 14
Fergus, Ontario
N1M 1S6

Re: Proposed Targeted Species at Risk Survey

Dear Tyler,

As requested, Aboud & Associates Inc. have undertaken a review of all Species at Risk (SAR) which may occur in the project location using the Wellington County MNRF species at risk list.

The following targeted surveys for SAR are proposed for the Hillsburgh dam, existing conditions report. Species which were not considered likely in the project location are discussed in brief, following the recommended surveys, and the specifics of their exclusion. The accompanied summary table includes proposed surveys for all SAR within Wellington County, including SAR surveys which follow general survey protocols (e.g. Breeding Bird Protocol).

Jefferson Salamander Surveys
Likelihood of occurrence: Possible, populations located north-east of project location in Orangeville area and east of project location, south of Caledon.

Proposed field work:

1. In 2015, Visual surveys for *Ambystoma* egg masses in candidate ponds identified during initial site visit will be inspected in early April by a qualified wildlife ecologist to determine the presence or absence of any *Ambystoma* species occurring in the project location. Jefferson Salamanders are one of three *Ambystoma* species in Ontario, these survey will help to determine the possible presence of Jefferson Salamander within the Study area. Site visit timings will occur within less than 15 days of approximate salamander movement windows, in order to ensure salamander egg hatches have not yet occurred.

   Survey Methods: Visual inspection of any candidate pools will be performed on sunny cloudless days in April, using polarized lenses, with no entry into candidate pools. All egg masses will be identified based on characteristics as frog, toad or salamander, with no effort to determine salamander species in order to avoid disturbance of egg masses and entry into ponds.

2. Should *Ambystoma* egg masses occur in candidate habitat during 2015 visual surveys, application for permits and subsequent field planning for salamander trapping surveys would be expected to occur in late March-early April 2016, after acquiring all permits and training personnel. Survey methods will follow the Jefferson Salamander sampling protocol as provided by the Guelph MNR (2013).

Bat Maternity Roost Surveys
Likelihood of occurrence: probable, all three species are found throughout Ontario.

Target Species: Eastern small-footed Myotis (*Myotis Leibii*), Little Brown Myotis (*Myotis lucifugus*), and Northern Myotis (*Myotis septentrionalis*)

Proposed Desktop work:

1. Identification of all ELC communities (FOD, FOM, FOC, SWD, SWM, SWC) which may be considered candidate bat maternity habitat, following guidelines provided in the bat and bat habitat: guidelines for wind projects (2011), will be treated as confirmed habitat and appropriate mitigation will be applied as outlined below. This proposed methodology is based on communication with Guelph District MNRF, which “only recommend surveys if there is potential for impacts to the hibernation or roost habitat.” (pers. comm. Graham. Buck 2015)

Mitigation recommendations- tree removal must occur outside bat maternity season, from September-April, in all habitats considered candidate bat maternity habitat based on ELC results.

Turtle Basking Surveys
Likelihood of occurrence: Blanding's turtle-Possible, populations occur in the vicinity of Guelph and Luther Marsh. Snapping turtle-Probable, populations occur throughout southern Ontario. Spotted turtle-unlikely, populations of spotted turtle are generally found in the vicinity of Georgian Bay and along the Lake Erie shoreline.

Target species: Blanding's turtle (Emydonidea Blandingii), snapping turtle (chelydra serpentine), spotted turtle (Clemmys guttata)

Proposed field work:
A total of 5 Basking surveys in all candidate habitats within the project location will be conducted in 2015 following the MNR Guelph district Blanding's survey protocol (2012). Basking surveys, including overwintering (late march-early April) and summer habitat (late April-June 15), will be conducted in all waterbodies and wetlands.
Methods: All shorelines and potential basking sites in the project location will be surveyed from the sunlit side using high power binoculars or a spotting scope. If shorelines are obstructed by vegetation, surveys will be conducted from canoe or while wearing waders in water as required; provided that access is granted. Between late March and early May, surveys will be conducted between 9am and 5pm. between late May and early June turtles are less reliably found late in the day, as a result surveys will occur between 9am and 12pm. When temperatures fall between 6c and 10c, surveys may only occur on sunny days with no wind between 10am and 5pm, at full sunlight basking sites. When temperatures fall between 10c and 25c, surveys will be conducted between 9am and noon on sunny days.

Snake Visual Encounter and Active Hand Search Surveys
Target Species: Eastern ribbonsnake (*Thamnophis sauritus*), milksnake (*Lamptropeltis Triangulum*)

Proposed field work:
Visual encounter and active hand search surveys will occur from late April through late June in all candidate habitats identified during initial ELC screening and site visit. A minimum of 3 surveys, two weeks apart, searching all suitable habitats and flipping any natural or naturalized cover, will occur in all suitable habitat identified in the project location.

Methods: surveys will occur on sunny days when air temperatures are between 8c and 25c, and on overcast day's air temperatures must be above 15c. Surveys will follow pre-determined transects, traversing all areas of suitable habitat for both eastern ribbonsnake and milksnake.

West Virginia White Visual Survey
Likelihood of occurrence: possible, species host plant occurs in the project location.

Proposed field work:
Visual surveys for adults and caterpillars will occur within moist, deciduous woodlands in areas where two-leaved toothwort has been previously identified by the CVC. Surveys will be conducted during spring botanical surveys. Caterpillars feed on the two-leaved toothwort which blooms from April to June. Caterpillars will be looked for carefully on the host plant.

Species that are unlikely to occur in the project location for which targeted surveys exist:

Barn Owl- No habitat is present within the project location, barn owl have not been identified as occurring in the vicinity of the project location. During the second breeding bird Atlas, a single Barn owl was identified in Wellington County with no confirmation on breeding status. This species is unlikely to occur in the project location.

Bobolink and Eastern meadowlark- these grassland bird species are unlikely to occur in the project location, no grassland habitat, pasture or fallow fields were identified through air photo interpretation or initial site visits. Presence/absence will be confirmed through Breeding bird Surveys.

Nightjar survey (Common nighthawk and Whip-poor-will) – habitat for these species was not identified in the project location based on air photo interpretation and initial site visit. As a result, no additional targeted surveys are recommended.

Least bittern – No suitable habitat was identified in the project location. Targeted surveys are not recommended. General Marsh monitoring playback surveys for marsh birds will occur in appropriate habitat in the project location.

Short-eared owl - No suitable habitat was identified in the project location. Targeted surveys are not recommended.

Fish Species at Risk- Black redhorse, Redside Dace and Silver Shiner were not documented in past fish surveys conducted by MNRF or CVC. Ideal habitat is not present. No surveys to be conducted.

Rusty-patched bumble- Not documented in project location. No suitable habitat was identified in the project location. Discussion with Graham Buck at the MNRF indicates that there is no requirement to complete targeted surveys for this species in the project location, if a bee is identified as suspect, photos and UTM will be recorded during botanical surveys.

Mollusc Species at Risk –Rainbow mussel and Wavy-rayed lampmussel have not been identified in the Upper Credit River, Ideal habitat is not present in project location, not detected during previous aquatic sampling.

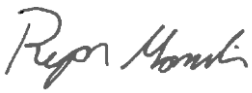
Butler's gartersnake- Ideal habitat for this species is unlikely to occur in the project location based on air photo interpretation and initial site visit. Butler's gartersnake occur in fragmented populations in Ontario, the nearest population is located in Luther marsh, which is ~30km from the project location. One home range study in Michigan indicated that Butler's gartersnake occupy a very small home range, with a maximum distance of 300m. It is unlikely that Butler's gartersnake would occur in the Project location as a result of the distance to the nearest known population.

Massasauga rattlesnake- Ideal habitat is unlikely to occur in the project location. This species is only known to occur historically in Wellington County; as a result, it is unlikely to occur in the project location.

Yours truly,

ABOUD & ASSOCIATES INC.

Cheryl-Anne Ross, B.Sc., Wildlife Ecologist



Ryan Hamelin, M.Sc, Terrestrial and Wetland Ecologist

cc. P. Ziegler, Triton Engineering Services Ltd
C. Clark, Triton Engineering Services Ltd
R. Whalen, Ministry of Natural Resources and Forestry

APPENDIX A-2

Ministry of Natural Resources and Forestry Notice

Ministry of
Natural Resources
Southern Region
Engineering Services
P.O. Box 7000, 300 Water Street
Peterborough, Ontario K9J 8M5

Ministère des
Richesses naturelles

Telephone: (705) 755-3200
Facsimile: (705) 755-3291

Ontario

July 19, 2012

Town of Erin
5684 Trafalgar Rd.,
R.R. #2
Hillsburgh, ON N0B 1Z0

Attention: Ms. Kathryn Ironmonger, Acting CAO

Dear Ms. Ironmonger,

Subject: Request for Consideration of Non-Application - Emergency Work
Under the Lakes and Rivers Improvement Act
Station Street Dam/Road, Credit River – Erin Branch, Community of Hillsburgh

We are in receipt of your of July 12, 2012 letter providing additional supporting information related to your May 16, 2012 request for utilizing Section 14(11) *Non-Application – Emergency* for immediate repairs at the Station Street Dam/Road in Hillsburgh. We are also in receipt of revised sealed and signed drawings dated July 19, 2012 and Temporary Works Hydraulic Summary, dated July 18, 2012.

This additional supporting information addresses our request for additional information that was contained within the directions provided by the Ministry in our June 05, 2012 letter. Based on the information available to us, we find your submission to be acceptable, and you may proceed with the repairs proposed in your July 12, 2012 submission (as amended by July 18 and 19, 2012 revisions), subject to the directions provided in this letter.

In accordance with Section 14(12)b of the Lakes & Rivers Improvement Act, you are required to comply with the following directions during the completion of the identified emergency works:

- The construction shall generally proceed as described in the June 12, 2012 submission, as supplemented by revised sealed and signed drawings dated July 19, 2012 and Temporary Works Hydraulic Summary, dated July 18, 2012. Where it is necessary to change the proposed work in any way, the Town shall immediately notify the Ministry of the proposed changes, and obtain the acceptance of the Ministry.

- The work shall be designed by a professional engineer and inspected by the design engineer, or his/her representative, as frequently as may be required to ensure compliance with the plans and specifications, and directions provided by this letter.

- The proposed repair works must be completed as soon as possible, and within ninety (90) calendar days of our June 05, 2012 letter.

.../2

- The issuance of this letter under the Lakes and Rivers Improvement Act does not confer authorization to the Town of Erin, or its contractors, to enter the property of third parties without permission of the land owner(s).

- The Town of Erin, and its contractors, shall not allow any deleterious material, (as defined within the Canada Fisheries Act) caused by his/her activity, to enter or re-enter the water body.

- Sediment control techniques shall be employed to minimize sediment from surface activities. Prior to any construction, all sediment and erosion controls (ie. Silt fences, rock check dams, coffer dams, etc.) must be in place and functioning effectively. During de-watering, silt-laden waters shall be pumped and filtered through geotextile filter bags or approved stilling basin(s) prior to re-entry into the watercourse. If siltation results from the construction activities, the Ministry of Natural Resources reserves the right to stop the work and request additional siltation control(s) to be installed prior to further construction activities.

- Additional stoplogs may be removed provided permission of the dam owner is obtained, reservoir sediment is not released, and/or reservoir sediment is removed and/or stabilized. Where stoplogs are removed, they shall not re-installed without approval of the Ministry.

- All materials being used must be free and clean of fine particulate matter or debris that upon wetting would result in a sediment release. The finished side slopes on the repaired roadway and dam embankment shall be no steeper than 2 horizontal to 1 vertical.

- Suitably sized rock protection shall be placed at the outlet of the proposed 600 mm diameter culvert to prevent scour and erosion.

- Any earth surfaces within the stream, stream banks, and floodplain that are disturbed in the process of providing access and/or completing the work shall be immediately stabilized upon completion of the work. All vegetation disturbed shall be restored to its original condition or better.

- Upon completion of the proposed repairs, the proposed sheet piling cofferdam shall be completely removed, or lowered to the elevation of the bed of the downstream pond.

- Within sixty (60) calendar days after completing the repair works, the Town of Erin must submit a drawing showing the 'as-constructed' condition of the completed work, and a report documenting how the preceding directions have been complied with.

.../3

- The proposed repair works are considered temporary. Acceptance of this work by the Ministry is conditional upon the Town of Erin making an application for approval of the permanent works. It is understood that the Town of Erin may have a requirement to commence a Municipal Class Environmental Assessment process to assist in determining the permanent works. Please circulate all Environmental Assessment notices to our Guelph District Office. Application for the permanent works must be made immediately following completion of any required environmental assessment, and prior to June 01, 2014.

This letter does not relieve you from approvals that may be required from other agencies (ie. Credit Valley Conservation, Federal Department of Fisheries and Oceans, Transport Canada, Ministry of the Environment, Ministry of Labour)

Please contact either Doug Ryan at (705) 755 – 3277 or the undersigned should you have any questions or require any clarification.

Yours truly,

Mark Stephen, P.Eng.
Regional Engineer
Southern Region

Attachments

cc: Al Murray, MNR Guelph District
Credit Valley Conservation

A4603H
B5092A
→ CPC ✓

Ministry of
Natural Resources and Forestry
Southern Region
Engineering Services
P.O. Box 7000, 300 Water Street
Peterborough, Ontario K9J 8M5

Ministère des
Richesses naturelles et des forêts

Telephone: (705) 755-3200
Facsimile: (705) 755-3233

Ontario

July 28, 2014

Town of Erin
5684 Trafalgar Rd.,
R.R. #2
Hillsburgh, ON N0B 1Z0

Attention: Ms. Kathryn Ironmonger, CAO/Town Manager

Dear Ms. Ironmonger,

Subject: Request for Extension of Non-Application - Emergency Work
Under the Lakes and Rivers Improvement Act
Station Street Dam/Road, Credit River – Erin Branch, Community of Hillsburgh

We are in receipt of your June 25, 2014 letter requesting an extension to the June 01, 2014 deadline for an application for the permanent works for the above noted project, as described in our July 19, 2012 Non-Application – Emergency Work letter (copy attached).

We are hereby granting the requested 18 (eighteen) month extension. The revised condition of our July 19, 2012 letter now reads as follows;

- *The proposed repair works are considered temporary. Acceptance of this work by the Ministry is conditional upon the Town of Erin making an application for approval of the permanent works. It is understood that the Town of Erin may have a requirement to commence a Municipal Class Environmental Assessment process to assist in determining the permanent works. Please circulate all Environmental Assessment notices to our Guelph District Office. Application for the permanent works must be made immediately following completion of any required environmental assessment, and prior to* ***December 01, 2016****.*

We trust this is satisfactory. Please contact either Doug Ryan at (705) 755 – 3277 or the undersigned should you have any questions or require any clarification.

Yours truly,

Mark Stephen, P.Eng.
Engineering Supervisor – Southern Region

Attachments

cc: Al Murray, MNR Guelph District
Credit Valley Conservation

APPENDIX A-3

Legal Survey

PARTIAL LEGAL BOUNDARY SURVEY

PART OF

STATION STREET, REGISTERED PLAN 280

Village of Hillsburgh

TOWN OF ERIN

COUNTY OF WELLINGTON

A. BRUCE DONALDSON – Ontario Land Surveyor

2012

SCALE 1 : 750

0 25 50 75 METRES

METRIC: DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

BEARINGS HEREON ARE UTM GRID BEARINGS NAD83 (CSRS) AND ARE DERIVED FROM GPS OBSERVATIONS.

SURVEYOR'S CERTIFICATE

I. THE SURVEY WAS COMPLETED ON THE

_____ DATE

_____ A. BRUCE DONALDSON
ONTARIO LAND SURVEYOR

—□—	DENOTES SURVEY MONUMENT PLANTED
—■—	DENOTES SURVEY MONUMENT FOUND (375 UNLESS SHOWN OTHERWISE)
SSIB	DENOTES SHORT STANDARD IRON BAR
SIB	DENOTES STANDARD IRON BAR
IB	DENOTES IRON BAR
375	DENOTES BLACK, SHOEMAKER, ROBINSON & DONALDSON LIMITED O.L.S.'s
WIT	DENOTES WITNESS
UP	DENOTES UTILITY POLE

BLACK, SHOEMAKER, ROBINSON & DONALDSON LIMITED

BSR&D Ontario Land Surveyors Urban and Rural Planners

351 Speedvale Avenue West
Guelph, Ontario N1H 1C6
TEL: (519) 822-4031
FAX: (519) 822-1220
WWW.BSRD.COM

DATE: MAY 24, 2012
DRAWN BY: BW
PROJECT NO: 12-9198

APPENDIX A-4

Restoration Approach

ABOUD & ASSOCIATES INC.
Consulting Arborists•Ecologists•Landscape Designers

591 Woolwich Street
Guelph . Ontario
N1H 3Y5

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EXPERT OPINION
OMB TESTIMONY
LEGAL PROCEEDINGS
PEER REVIEW
RESEARCH
EDUCATION

April 29, 2016

Our Project No: AA12-137A
Sent by email: cclark@tritoneng.on.ca

Chris Clark,
Triton Engineering Services Limited
39 Elora Street South, Unit 7, 8, & 9
Harriston, Ontario, N0G 1Z0

Re: Hillsburgh Pond Removal Alternatives
Landscape *Restoration Approach and Cost Analysis*
(Vegetation Establishment)

Dear Chris Clark:

As per your request, we have completed an outline of the proposed Landscape Restoration approach for the potential removal of the Hillsburgh Pond, as described in Alternative C and D, Option 1 and 2 of the Municipal Class Environmental Assessment.

The potential removal of the Hillsburgh Pond as shown in Alternative C and D, Option 1 and 2 will result in the exposure of floodplains requiring landscape restoration. Leaving the floodplains to establish with volunteer species will likely result in a monoculture of invasive exotic species such as *Phragmities australis*. Allowing an invasive, exotic, monoculture vegetation community to establish is contrary to the Credit Valley Conservation Authority Watershed Planning and Regulation Policies to *"Protect, restore or enhance native terrestrial and aquatic plant and animal species, community diversity and productivity."* A balanced landscape restoration approach that considers site specific conditions, constructability and cost is required.

Restoration Approach

The restoration approach, goals and tools are intended to guide the decision making process with stakeholders and agencies during detailed design.

The goals of the landscape restoration approach are:

- Increase native vegetation communities;
- Reduce invasive exotic vegetation;
- Enhance Significant Wildlife Habitat.

The tools use to achieve the goals of the restoration approach include:

- Site Preparation
  - Control existing invasive exotic vegetation using an Integrated Pest Management approach.
  - Amend soils to meet specific vegetation community needs.
- Seeding and Planting
  - Identify existing native species suitable for soil seed bank salvage;
  - Seeding and planting native species to establish a mosaic of targeted swamp (30% of restored floodplain) and marsh (70% of restored floodplain) vegetation communities.
- Wildlife Habitat Enhancement
  - Create habitat features and structures for marsh and swamp wildlife (e.g. woody debris, nesting tubes, nesting boxes etc.).
- Short-Term Management
  - Monitoring the establishment of seeded and planted native species and adapting establishment maintenance requirements
  - Continued control of invasive exotic vegetation using an Integrated Pest Management approach and adapting methods/frequency to meet control targets.

Based on the use of all tools in the landscape restoration approach, the preliminary construction cost estimate for each option is shown in table 1, subject to detailed design. These estimates assume that earthworks is already complete, existing soils are able to be retained/amended and typical construction access to floodplain restoration areas is available.

Table 1: Hillsburgh Pond Removal - Vegetation Restoration Construction Cost Estimate

Options	Estimated Cost
Option 1 - Decommission Dam Create naturalized watercourses; Restore floodplain area.	**$1,285,000** (Approximately 9ha of Vegetation Establishment)
Option 2 - Decommission Dam, Construct Offline Pond Create naturalized watercourses, construct offline pond; Restore area around pond & watercourse.	**$865,000** (Approximately 6ha of Vegetation Establishment)

Yours truly,

ABOUD & ASSOCIATES INC.

Ryan Hamelin, M.Sc, Terrestrial and Wetland Ecologist

Erin Eldridge, OALA, CSLA, Landscape Architect

cc. P. Ziegler, Triton Engineering Services Ltd