



905.336.1158  
Fax: 905.336.7014  
2596 Britannia Road West  
Burlington, Ontario L7P 0G3  
conservationhalton.ca

Protecting the Natural  
Environment from  
Lake to Escarpment

July 17, 2019

Milton Logistics Hub Project Review Panel  
c/o Canadian Environmental Assessment Agency  
160 Elgin Street  
Ottawa, ON K1A 0H3  
Attention: Ms. Leslie Griffiths, Panel Chair

**By MAIL AND EMAIL**

Dear Ms. Griffiths,

**Re: Environmental Assessment - Milton Logistics Hub Project  
Conservation Halton Closing Written Remarks  
CEAA Reference No. 80100  
CH File No.: MPR 208**

On behalf of Conservation Halton ("CH"), thank you for the opportunity to participate in the Review Panel hearing process for the proposed Milton Logistics Hub Project (the "Project") environmental assessment.

**A. Introduction**

As the Panel is aware, CH has participated from the outset of the Review Panel Process. Attached to these submissions is a list of documents submitted on behalf of CH with CEAA document numbers. CH has sought to support the Panel in providing useful information to assist in its review of the Project and the development of its Report and recommendations to the Federal Minister of Environment and Climate Change.

CH provided key expertise to the Panel's review to determine if the Project has adverse environmental effects. CH's expertise derives from its regulatory and planning roles, including protecting life and property from natural hazards, conserving natural resources, and protecting watersheds and the natural environment within its jurisdiction. CH's jurisdiction includes a large portion of the Region of Halton.

All development within areas regulated by CH in accordance with the *Conservation Authorities Act, RSO 1990, c C27, as amended (the "Conservation Authorities Act")*, must obtain CH approval. These regulated areas include floodplains, erosion hazards

(including valley walls) wetlands and watercourses. Furthermore, CH regulates interference to wetlands and alteration to watercourses.

**O Reg 162/06, ss 2, 5, made under the *Conservation Authorities Act*.**

The Project proposes development that is within these regulated natural features and involves substantial removal and alteration of watercourses and interference with wetlands.

CH's expertise as a regulator of activities within natural hazards and hazardous lands, and its environmental planning advisory capacity, allows it to assess potential environmental effects against the accepted standards to which others are held throughout CH's jurisdiction. CN has not adequately demonstrated that their proposal meets these accepted standards.

Throughout the environmental assessment review process, CH's focus has been on providing the Panel with (1) a clear understanding of CH's regulatory mandate, role, and expertise within Ontario's land use planning and environmental approval process; and (2) the results of CH's technical review of the Project, including:

- the identification of gaps and deficiencies in the Environmental Impact Statement ("EIS") and CN's supplementary information provided in response to the Panel information requests ("IR"), and
- CH's professional technical opinion on the likely adverse environmental impacts of the Project regarding flood and erosion hazards, watercourses, fisheries, wetlands, terrestrial impacts, and impacts to the overall natural system of the Bronte Creek Watershed, including Indian Creek.

The following closing remarks will:

- summarize CH's findings as presented to the Panel on the key aspects of the Project that are likely to cause significant adverse environmental effects specifically related to:
  - human health and safety arising from floodplain impacts (Section B);
  - watercourse alterations and related fisheries impacts (Section C);
  - other identified areas of environmental effects within CH's role and expertise, including wetlands and terrestrial wildlife (Section D);
- address CN's consultation with CH to date and the recommended approach for future consultation between CN and CH should the project proceed (Section E);
- address the relevance of CH's regulatory role to the Panel's mandate to advise the Minister on whether or not the Project is likely to cause significant adverse environmental effects referred to in subsection 5(1) and 5(2) of the *Canadian*

*Environmental Assessment Act, 2012, SC 2012, c 19, s 52, as amended ("CEAA 2012") (Section E);*

- summarize the conditions that CH recommends be imposed in the event that the Project is approved, pursuant to section 53 of CEAA 2012, which are necessary to mitigate adverse environmental effects related to the construction and operation of the Project, should the Project be approved to proceed (Section F); and
- provide CH's overall conclusions and position as to whether or not the Project should proceed based on the outcomes of its review (Section G).

As a result of its review of the Project, CH does not support approval of the CN project as currently proposed.

## **B. Floodplain Protection**

### **1) Flood Hazard**

CH does not support development that results in increased flood hazard risk for the Project subject lands or on adjacent lands.

CH has made multiple attempts to obtain the floodplain modeling for this project in accordance with the standards and rigour normally applied within this watershed. CH requires copies of hydrologic and hydraulic modeling, which incorporates the conceptual design and has been calibrated and validated to CH standards. In the absence of this modeling, CH is unable to determine the full nature and extent of the flood hazards resulting from the Project.

**From Conservation Halton to the Review Panel re Comment on Information Request Responses, July 16, 2018, CEAA Doc. No. 665, Appendix C at 3-5.**

**From Conservation Halton to the Review Panel re: Public Comment on Environmental Impact Statement , March 13, 2017, CEAA Doc. No. 544 at 3-6.**

As CH stated in its review of the EIS, the IR responses, and during the hearing, the modeling CN used to determine the regulatory flood hazard does not meet the accepted practices established by the Conservation Authorities of Ontario. These practices are applied by CH to all development applications within its jurisdiction. While CH has been unable to complete a comprehensive review of the modeling, CH has identified the following concerns:

1. There are discrepancies between baseline drainage area data used in the CN hydrologic modeling and the mapping information CH has on existing conditions.
2. The conceptual design does not take into account riparian storage, specifically riparian storage for Tributary A. This watercourse runs directly through the Project Development Area ("PDA") and the proposed Project would cause it to be significantly altered. CH's review of the cut and fill information for Tributary A indicates that there may be a decrease in riparian flood storage due to excess fill

placement. A loss of riparian flood storage would result in an increased flood risk elsewhere within the sub-watershed.

**From Conservation Halton to the Review Panel re: Public Comment on Environmental Impact Statement, March 13, 2017, CEEA Doc. No. 544 at 3-6.**

**From Conservation Halton to the Review Panel re Comment on Information Request Responses, July 16, 2018, CEEA Doc. No. 665, Appendix C at 3.**

In this regard, the modeling results are uncertain. Without a reliable estimate of the Project's flood impacts, there is a high potential that proposed flood prevention infrastructure will be undersized. As a result, the Project may be susceptible to flooding or may exacerbate flooding upstream or downstream. Moreover, CN's hydraulic models rely upon the output flows produced CN's hydrologic model. In the opinion of CH staff, the inadequacies of the CN hydrologic model will compound any inaccuracies of the hydraulic model, increasing the likelihood that the flood risks have been underestimated.

**From Conservation Halton to the Review Panel re Conservation Halton Hearing Panel Written Submission, May 29, 2019, CEEA Doc. No. 790, Appendix A, s 1.1 at 5—6.**

Given the uncertainty of information and the need for the Panel to make an informed decision, CH requested that a figure showing the anticipated regional storm floodplain elevations be provided within the vicinity of the subject lands (Undertaking 20). CN fulfilled Undertaking 20 on July 8, 2019.

**Hearing Transcript Volume 6: June 27, 2019, CEEA Doc. No. 887 at 1666, lines 7—13.**

**Undertaking 20: From the Canadian National Railway Company - Floodplain Mapping, CEEA Doc. No. 928, July 8, 2019.**

While the figure provided does not satisfy the need for comprehensive review of the flood modeling (hydrologic and hydraulic), it does provide some level of certainty that there will be no increase in flood risk to adjoining properties. However, upon reviewing the figure, there appears to be an increased risk to Stormwater Management ("SWM") Pond 1 due to the works associated with realigning Tributary A and backwatering within the old Tributary A channel from Indian Creek. A geotechnical analysis would be needed to ensure the long-term stability of the pond embankment under Regional storm flood conditions.

To further support Undertaking 20, CH has completed its own preliminary flood assessment based on the information provided by CN in its EIS documents and CH's current models (which includes the Boyne hydrologic model). The results of this analysis support the figure provided by CN. However, as stated previously, this figure should not be considered conclusive in determining potential flood impacts until a comprehensive assessment of floodplain models and supporting design has been completed.

At the request of the Halton Municipalities, CN provided Undertaking 22 to show examples of the floodplain berm proposed along Indian Creek. CH understands that the berm was proposed to prevent scour due to floodplain expansion. The three examples provided in the undertaking are in areas where the channel is at a steeper grade (i.e. Alberta, Colorado, Kentucky) than Indian Creek. It is CH's opinion that this berm may not

be needed due to the flat topography of the PDA. However, this cannot be confirmed without being able to comprehensively review the supporting modeling or designs in detail.

**Undertaking 22: From the Canadian National Railway Company – Examples of Valley Wall/Floodplain Berm Use Method, July 3, 2019, CEAA Doc. No. 923.**

Based on the review of the information included in the EIS for the Project, additional information provided by CN, and CH's cursory assessment, CH still has a concern with respect to flood risk CN has completed neither a comprehensive assessment of the floodplain models nor a riparian storage analysis for Tributary A. Should the Project be recommended for approval, the approval conditions listed below in Section F of these closing remarks should be imposed to address identified deficiencies and the risk of flood hazards.

## **2) Erosion Hazard**

The EIS and IR responses provided by CN do not adequately or accurately describe the existing and predicted post-development erosion hazards within the Project study area. The documentation provided by CN does not provide a complete assessment of existing and potential post-development erosion hazards regarding the stability of steep valley slopes for Indian Creek and Tributary A or the stream meander of these watercourses.

The Provincial Policy Statement, 2014 ("PPS") and CH policies both outline requirements that development not create or aggravate erosion hazards. The PPS and CH policies also require that development be located outside of such hazards. Typically, a regulatory setback, 15 metres in the case of the Project, is required that prevents development of buildings and structures such as pad sites. The purpose of these requirements is to reduce risk to life and property.

**Conservation Halton, Policies and Guidelines for the Administration of Ontario Regulation 162/06 and Land Use Planning Policy Document, April 27, 2006, s 3.2(a).**

At the request of the Panel, through Undertaking 17, CN provided a slope stability assessment for Indian Creek and all tributaries within the PDA where the slope height exceeds 2 metres. In CH's opinion, this work was completed in accordance with the provincial technical guidelines and the results properly characterize and delineate the slope stability erosion hazard for the PDA.

**Undertaking 17: From the Canadian National Railway Company - Slope Stability Analysis, July 5, 2019, CEAA Doc. No. 938.**

Should the Project be recommended for approval, CH recommends the approval conditions listed below in Section F of these closing remarks should be imposed to address identified deficiencies and the risk of erosion hazards.

## **C. Watercourse Alteration and Fisheries Impacts**

### **1) Indian Creek**

The loss of over 500 metres of Indian Creek channel would be a significant loss to fish habitat. CN has stated that the net loss is only 61 metres, rather than 500 metres, based on compensation being provided by the portion of Indian Creek that is being disconnected through re-alignment.

**Hearing Transcript Volume 7: June 28, 2019, CEEA Doc. No. 889 at 1786, lines 7—11 and 2077, lines 18—24.**

CH does not support this justification as it has not been demonstrated that this surviving watercourse will provide functional fish habitat once restored without having consistent flow through the feature. With flows diverted, and water presence dependent on backwatering from the realigned creek, the watercourse will effectively be the same type of headwater drainage feature (“HDF”) found elsewhere in the PDA, which CN does not consider to be fish habitat.

**Environmental Impact Statement, December 7, 2015, CEEA Doc. No. 57, s 6.3.5 at 141—144.**

**From the Canadian National Railway Company to the Review Panel re: Partial Response to Information Request Package 1, April 21, 2017, CEEA Doc. No. 561, at 1—2.**

To prevent and minimize impacts to the greatest extent possible, an alternative re-alignment that reduces the total loss of channel length and direct fish habitat should be implemented. Watercourse impacts should be minimized prior to consideration of channel removal and compensation. Any channel habitat compensation for lost creek reaches should be provided elsewhere on site or as near to the site within the watershed as possible.

**Hearing Transcript Volume 7: June 28, 2019, CEEA Doc. No. 889 at 1823, lines 9—14.**

CN proposes the enhancement of an extra-wide riparian zone along the shortened creek channel section. This enhancement does not adequately compensate for the direct loss of fish habitat. The re-aligned corridor, plus any necessary compensation channel length, including full riparian restoration, should be equal to or exceed the watercourse length impacted or lost through realignment. This should be undertaken to ensure fish habitat is not lost.

**From the Canadian National Railway Company to the Review Panel re: Response to Information Request Package 4.1 (Group 1), March 21, 2018, CEEA Doc. No. 632, Attachment IR4.49-1: Watercourse Realignment.**

CN should demonstrate that the proposed watercourse alterations will not impact stream functions downstream such as flow velocity, flow volume, sediment transport, and other



fluvial processes. The shortening of the channel, without proper analysis, poses an unacceptable risk of altering these stream functions.

Should the Project be recommended for approval, the approval conditions listed below in Section F of these closing remarks should be imposed to address the identified deficiencies and the loss of ecological functions resulting from the proposed alterations to Indian Creek.

## **2) Tributary A**

During the hearing process, the Department of Fisheries and Oceans (“DFO”) stated its opinion that the proposed culvert crossings meet its criteria and, if installed correctly, will not represent a barrier to fish passage.

**Hearing Transcript Volume 7: June 28, 2019, CEAA Doc. No. 889 at 1864, lines 3—19.**

However, DFO has not established which criteria will guide the installation of the culverts or how CN will demonstrate that they are installed correctly to avoid the creation of a barrier to fish passage. Any criteria provided by DFO should be compared with CH's criteria and the Boyne Survey Area standards to determine that they are comparable to similar crossings in the watershed.

At a minimum, CN should provide a Fish Passage Analysis to demonstrate the availability of these crossings to fish of various size classes under the typical, minimum, and maximum flow conditions expected. CN has not provided this analysis to date. Furthermore, CN should fully implement natural channel design principles through and between culvert crossings.

**Environmental Impact Statement, December 7, 2015, CEAA Doc. No. 57, ss 3.3.10 and 3.3.11 at 50—51.**

Since CN has stated the position that open-bottom culverts are not feasible from an engineering perspective, CN should provide an evaluation and justification that demonstrates this is the case. This evaluation and justification is necessary as there is an ecological impact from the use of closed-bottom culverts. Open-bottom culverts can be designed to a wide range of specifications, including through the use of larger footings. CN should transparently evaluate and compare these options and alternatives.

CN should also assess alternatives to mitigate the impacts of closed-bottom culverts. These should include counter-sinking the culverts, construction of a low-flow channel, and provision of dry banks or ledges for terrestrial passage.

## **D. Other Likely Impacts**

### **1) Wetlands**

The Ontario Wetland Evaluation System ("OWES") evaluation of wetlands on the site provided by CN in Undertaking 23 demonstrates that the wetlands in question are not Provincially significant wetlands.

**Undertaking 23: From The Canadian National Railway Company - Wetland Assessment, July 8, 2019, CEEA Doc. No. 929.**

However, CN's OWES evaluation lacks the following:

1. Consideration of all wetlands within 750 metres of existing wetlands in the PDA. This information is needed, as it determines if individual wetland units form a complex. A wetland complex consists of connected wetland units and must be considered in an OWES evaluation.
2. The assessment has been based on inadequate information. For example, the Waterfowl Staging area of the wetlands assessed was rated as zero, although no surveys were conducted at the appropriate time of year to substantiate this.
3. The wetlands assessed differ in area from those reported and mapped through the EIS and IR process (for example, section 6.4.3 of the EIS cites 3.7 hectares of wetland habitat while the OWES assessment considers 5.1 hectares of area between two features).

These discrepancies cause uncertainty about the size, significance, and function of the wetland features and the appropriate management and mitigation approaches which should be taken.

The limits of the wetlands should be delineated in the field with CH in order to confirm their size and boundaries. This delineation is required for all wetlands impacted by development in the Halton Region. The wetland proposed for alteration on site is greater than 2 hectares in area. CH policy does not typically permit alteration or removal of similar features on other developments in its jurisdiction, and would require a 30 metre development setback to buffer the feature. CH policies may permit such alterations when it has been demonstrated, through a comprehensive study that is deemed appropriate by CH, that there is no reasonable alternative. At this time CH's opinion is that wetland impacts have not been appropriately assessed or mitigated.

Should the Project be recommended for approval, the approval conditions listed below in Section F of these closing remarks should be imposed to address the identified deficiencies and the loss of these wetlands.

### **2) Wildlife**

The wildlife analysis conducted focuses on an evaluation of discrete features and fails to assess impacts to the overarching natural heritage system. The proposed Project does not adequately mitigate effects on the natural heritage system of the Indian Creek



watershed. Specifically, it is CH's opinion that the proposed alterations to Tributary A create an ecologic barrier, fragmenting the upstream branch of this watercourse from the rest of the natural heritage system.

**Hearing Transcript Volume 7: June 28, 2019, CEAA Doc. No. 889 at 2017, line 6 to 2018, line 4.**

The Project does not follow the process established under the PPS for assessing significant wildlife habitat ("SWH") within the PDA. Consequently, the proposal does not demonstrate that impacts to wildlife will be avoided or mitigated. CN's wildlife habitat assessment and mitigation is limited to select groups of wildlife and rests on unsubstantiated assumptions about the extent of impacts and the viability of mitigation measures.

**Environmental Impact Statement, December 7, 2015, CEAA Doc. No. 57, s 6.3 and 6.5 at 130—159, and 165—264.**

**From the Canadian National Railway Company to the Review Panel re: Response to Information Request Package 4.1 (Group 1), March 21, 2018, CEAA Doc. No. 632, ss 4.52 and 4.53, at 94—100.**

Should the Project be recommended for approval, the approval conditions listed below in Section F of these closing remarks should be imposed to address the identified deficiencies and the risk of significant adverse impacts to wildlife.

## **E. Regulatory Gap**

### **1) The Relevance of CH's regulatory role to the Panel's mandate**

CN is taking the position that it is not subject to CH's approval authority. CH, together with the Halton Municipalities, disagrees with, and has challenged, this legal position. The Panel has indicated it will not provide advice to the Minister on this legal issue.

**From the Canadian National Railway Company to the Review Panel re: Response to Information Request Package 2, August 31, 2017, CEAA Doc. No. 592, Attachment IR2.1-1 at 4.**

**Hearing Transcript Volume 1: June 19, 2019, CEAA Doc No. 860 at 167-169.**

**Hearing Transcript Volume 6: June 27, 2019, CEAA Doc. No. 887 at 1672, lines 17-23.**

The consultation efforts between CH and CN before the hearing provide important context for determining the CN-CH consultation arrangement following the completion of the environmental assessment ("EA") process. Before the hearing, CH made efforts to obtain information from CN regarding the EIS and the Project through the Review Plan Process. Many of CH's attempts were unsuccessful. For example, CH requested CN's hydrologic and hydraulic modelling and a significant wetlands assessment. CN did not provide these documents before the hearing and only provided the wetlands assessment as an undertaking during the Panel hearing.

**From Conservation Halton to the Review Panel re: Public Comment on Environmental Impact Statement, March 13, 2017, CEAA Doc. No. 544 at 3-6.**

**From Conservation Halton to the Review Panel re Comment on Information Request Responses, July 16, 2018, CEAA Doc. No. 665, Appendix C at 3-5.**

In order to ensure a comprehensive evaluation and mitigation of the environmental impacts of the proposed Project, it is CH's recommendation that it is necessary to determine a clear consultation and approval arrangement that will be in place following the EA process.

The question of whether CN should be required to comply with CH's regulatory requirements with respect to floodplain protection is relevant to the Panel's report to the Minister. This issue relates to the Panel's statutory mandate to advise the Minister on whether or not the Project is likely to cause the significant adverse environmental effects referred to in subsections 5(1) and 5(2) of CEAA 2012.

CN is proposing that, if the Project is approved to proceed, CN will address flood protection, erosion hazard, wetland interference and watercourse alteration issues at the final design stage.

**Correspondence from CN to CH, March 29, 2017, CEAA Doc. No. 554.**

For developments within its watersheds, CH reviews and makes approval decisions on the final design of developments located within, or that alter, the regulatory floodplain and erosion hazards including stream meander and slope stability.

It is important to emphasize that CH is the sole regulatory agency responsible for ensuring the public health and safety issues related to development within floodplains within the Bronte Creek Watershed and the area surrounding the PDA. Through its approval authority under the *Conservation Authorities Act* and its regulations, all development impacting floodplains must obtain approval from CH.

## **2) Potential Regulatory Gaps**

Should the Project proceed, there is no federal agency comparable to CH with regulatory oversight and expertise in floodplain and erosion issues. CH has specialized expertise and local knowledge of the Bronte Creek Watershed and surrounding watersheds. Unlike Natural Resources Canada, Environment and Climate Change Canada, and Fisheries and Oceans Canada, natural hazard management is a central part of CH's mandate.

As flood and erosion risk is a significant matter of public health and safety, CH's regulatory role is crucial.

A similar regulatory gap arises regarding project design for the proposed watercourse realignments. Specifically, there is no federal authority comparable to CH that assesses and regulates stream function and processes such as channel erosion, sedimentation, and flow volumes, while considering the broad ecological functions the streams provide from a watershed perspective.

The relevant federal agencies do not have CH's local expertise in managing the flood and erosion risk in this watershed. As a result, in the absence of CH's regulatory authorization, the final design of the Project may cause unforeseen long-term environmental impacts. Therefore, the regulatory gap regarding flood and erosion risks, watercourse realignments, and interference with wetlands poses a risk of significant adverse environmental effects.

### **3) Solutions**

There are two ways to fill this regulatory gap. The most efficient and effective method is to require that the Project be subject to the CH review and approval process. This is efficient as it avoids the need to recreate an existing approval process through a federal agency. This arrangement would also allow CH to apply its local knowledge of current provincial and watershed-wide standards to the Project and ensure issues are addressed in a manner that protects the interest of the local public. Further, this arrangement will best ensure that the Project does not undermine or degrade floodplain and watercourse protections achieved upstream and downstream of the Project through previous CH approvals.

Alternatively, the Panel may require CN to enter into an agreement with CH. During the hearing, at the proposition of the Panel, CN and CH both demonstrated intent to formalize their consultation process following the hearing process through an agreement.

**Hearing Transcript Volume 2: June 20, 2019, CEAA Doc. No. 862 at 309-310.**

**Hearing Transcript Volume 6: June 27, 2019, CEAA Doc. No. 887 at 1578-1579.**

This agreement would require that CH review and approve the final design of Project as it relates to floodplain protection, erosion hazard management, watercourse realignment and impacts to wetlands. This agreement is described in more detail in Condition 14, in Section F below.

### **F. Conditions in Relation to Environmental Effects (CEAA 2012, s.53)**

Throughout its review, CH has identified several aspects of the Project that pose a risk of significant adverse environmental effects. Therefore, CH does not support the Project as proposed. Should the Project be recommended for approval, it is CH's view that the Project should only be approved on the conditions described below:

#### **Flood Hazards**

1. A condition requiring CN to update all flood modelling (hydrologic and hydraulic) in accordance with CH standard practices and protocols. This condition should require CN to update the modelling to the satisfaction of CH. These updates should include but are not limited to the following:
  - a. A requirement that the existing hydrologic models that have been verified through studies immediately upstream in the Boyne area of Milton be used for the Project.

- b. Alternatively, a requirement that the hydrologic model used within the EIS be re-calibrated with data covering an extended period that accounts for variations in weather patterns (minimum of 2 years), and that drainage areas be confirmed.
  - c. A requirement that CN conduct further analysis of riparian storage within Tributary A and provide an updated design that ensures no loss in flood storage. This may result in wider creek corridors or the designation of additional lands to store flood flows.
2. A condition requiring CN to conduct a geotechnical assessment for SWM Pond 1 to ensure long-term stability under Regional flood conditions due to the backwatering of Indian Creek, to the satisfaction of CH.
  3. A condition requiring CN to change, to the satisfaction of CH, the Project design to remediate the risks associated with flood plain alterations through the PDA to ensure that flood hazards are not increased upstream or downstream and not created on nearby lands. Satisfaction of this requirement would be based on CH acceptance of the flood modeling per Condition 1 above.

#### **Erosion Hazards**

4. A condition requiring CN to address the slope stability issue with respect to the meander of Indian Creek and valley slope where the mainline is currently at risk, to the satisfaction of CH.

#### **Watercourses and Headwater Drainage Features**

5. A condition for a post-construction monitoring and adaptive management plan, to the satisfaction of CH, with a minimum of the following components.
  - a. Annual fluvial geomorphic monitoring for a minimum of 10 years. This monitoring must measure and evaluate the form and function of the watercourse as a result of the proposed watercourse alterations and identify any negative impacts that arise over time.
  - b. The incorporation of adaptive management strategies to ensure that adverse impacts are not only identified but will be appropriately mitigated. These strategies must include provisions requiring modification of altered watercourse reaches as well as implementation of a storm water management (SWM) strategy. The adaptive management strategy must expressly provide for changes to the SWM strategy where impacts are identified. For example, it should be documented that modifications to the SWM strategy may be required to introduce increased flows in areas experiencing increased sedimentation, or conversely to decrease flows in areas where increased erosion is observed.
  - c. Establishment within the plan of the triggers for implementing adaptive management measures. These measures must include requirements to

take action in the event of any changes in cross-sections in excess of 20%, restoration or substrate grain size adjustments in excess of an order of magnitude, or annual migration rates in excess of 15 cm/year.

- d. Completion of Rapid Geomorphic Assessments and Rapid Stream Assessment Technique assessments for all watercourses at three intervals: (1) preconstruction to establish baseline conditions, (2) five years after completion of construction, and (3) ten years after completion of construction. This work must encompass the items listed under point 3 under section 3.2 of CH's written submission of May 29, 2019.
  - e. Monitoring and adaptive management strategies for all compensation habitat created to ensure that restoration efforts achieve their intended ecologic contribution.
  - f. Thermal monitoring and adaptive management principles requiring the modification of the SWM, as needed.
6. A condition requiring CN to complete the following, to the satisfaction of CH:
- a. a complete analysis of stream processes and form and function, and modified designs to stream alterations as needed to address the outcomes of the analysis in sections 3.3-3.4 of CH's written submission of May 29, 2019; and
  - b. a full assessment of Tributary B using the current headwater drainage feature assessment methodology to determine the appropriate management approach. (Refer to Evaluation, Classification and Management of Headwater Drainage Features Guideline. Toronto and Region Conservation Authority and Credit Valley Conservation, TRCA Approval July 2013 (Finalized January 2014).)

### **Stormwater Management**

7. A condition requiring CN to revise the stormwater management strategy and design to include the following, to the satisfaction of CH:
- a. quantity controls which ensure that there is proper management of the regulatory flows, thus preventing aggravation of flood hazards;
  - b. quality controls which conform to the standards and targets established for other development within the Indian Creek watershed;
  - c. preparation of a monitoring plan, with requirements consistent with those established for other developments within the Indian Creek watershed, to evaluate the potential impacts of the proposed stormwater management strategy and unforeseen impacts associated with development of the Project in accordance with the standards already established for this watershed; and

- d. an adaptive management plan, including triggers and action requirements to ensure that any impacts identified through the monitoring plan are mitigated.

## **Wetlands**

8. If wetland impact, alteration, or removal is permitted on this project, a condition requiring CN to provide compensation habitat through habitat restoration and/or habitat creation elsewhere on the site, or as near to site as possible. This habitat compensation must demonstrate net gain through qualitative enhancement and must be to the satisfaction of CH.
9. A condition requiring the delineation and evaluation of all wetlands, along with provisions to ensure their long-term viability, to the satisfaction of CH. This condition includes requirements to:
  - a. stake all wetlands with Conservation Halton to determine their extent in accordance with Ontario Regulation 162/06, made under the *Conservation Authorities Act*;
  - b. conduct a feature-based water balance of all wetlands where surface drainage is affected by the Project (e.g. where development is to occur within a wetlands drainage area); including hydroperiods (time periods of inundation, broken down monthly), to understand hydrological impacts of site alteration on these features, and to inform wetland compensation requirements for newly created features;
  - c. develop and implement a revised stormwater management strategy that ensures hydrologic viability of all wetlands, including those that are created or restored compensation wetlands;
  - d. where protection of existing wetlands is not feasible, develop and implement measures to replicate their function, demonstrating net gain through qualitative enhancement;
  - e. buffer all existing and restored or created wetlands to protect their hydrological and ecological functions, as well as to protect development from the hazard that extends naturally from wetland fluctuation.

## **Terrestrial – Significant Wildlife Habitat**

10. A condition requiring CN to conduct a desktop assessment of SWH to demonstrate where candidate SWH may exist and whether SWH criteria are met or not, to the satisfaction of CH.
11. Where further field studies (to confirm or refute candidate SWH) are not feasible, a condition requiring that SWH be assumed and protected in conformity with the PPS and in accordance with the precautionary principle, to the satisfaction of CH.



## **Terrestrial – Watercourse and Headwater Drainage Features**

12. A condition requiring CN to provide unimpeded terrestrial passage in the vicinity of Tributary A around or through the PDA, to the satisfaction of CH, including but not limited to the five means listed under section 3.1 of CH's written submission of May 29, 2019. At a minimum the passage design should implement road ecology principles per the CH Road Ecology Best Management Practices ("BMP") guideline in addition to, or in conjunction with, other mitigation approaches.

### **General Conditions**

13. A condition requiring CN to obtain a permit from CH for development pursuant to the *Conservation Authorities Act* and section 2 of Ontario Regulation 162/06, made under the *Conservation Authorities Act*. This permitting process would allow CH to review and make an approval decision on the final design of the Project in accordance with CH policies and best practices.
14. As an alternative to requiring a CH permit, a condition requiring CN and CH to enter into an agreement requiring:
  - a. CN to consult CH before filing the final design and supporting studies with CH, in order for CH to establish submission requirements and details, among other things;
  - b. CN to file with CH the detailed design and supporting studies with respect to floodplain protection, erosion hazards, interference with wetlands, and watercourse realignments; this may be an iterative process until CN and CH agree on a design and supporting details;
  - c. CH review and approval of the final design of the Project with respect to floodplain protection, erosion hazards, interference with wetlands, and watercourse realignments;
  - d. in the event of a technical disagreement between CN and CH, referral of specific areas of disagreement to the federal Minister of Environment and Climate Change for final determination.

### **G. Conclusion**

CH has identified significant adverse environmental effects that will result from the Project as proposed. There are significant floodplain and erosion risks associated with the proposed Project. Further, adverse impacts are predicted to result from the loss of 500 metres of Indian Creek. The proposed design of the Tributary A will result in the loss of significant fish habitat, result in interference with wetlands, and create an ecologic barrier.

Accordingly, CH cannot support approval of the Project as proposed.

If the Project is approved, CH recommends that conditions of approval be imposed to minimize the significant adverse environmental impacts of the Project. Please see Section F of these closing remarks for CH's recommended conditions.

All of which is respectfully submitted,

<Original signed by>

Barbara J. Veale, RPP, MCIP, RPP  
Director, Planning and Watershed Management  
Halton Region Conservation Authority

Encl: List of Documents Submitted by CH

CC: William McMurray, Review Panel Member (c/o Review Panel secretariat)  
Isobel Heathcote, Review Panel Member (c/o Review Panel secretariat)  
Normand Pellerin, CN, Assistant VP Environment & Sustainability (email)  
Curt Benson, Director of Planning Services and Chief Planning Official, Halton  
Region (email)  
Barbara Koopmans, Commissioner, Planning and Development, Town of Milton  
(email)  
Peter Pickfield, Counsel, CH, Garrod Pickfield LLP (email)  
Rodney Northey, Counsel, Halton Municipalities, Gowlings LLP (email)  
Jonathan Pounder, Coordinator, Environmental Planning, CH (email)

**ATTACHMENT: LIST OF DOCUMENTS SUBMITTED BY CONSERVATION HALTON**

<b>CEAA Document Number</b>	<b>Document Description</b>	<b>Date of Document</b>
894	Undertaking 19: From Conservation Halton - hydraulic modelling for Tributary A provided to the Canadian National Railway Company	June 28, 2019
855	From Conservation Halton re: Oral Presentation for the June 28 Public Hearing Session - Fish and Fish Habitat	June 17, 2019
854	From Conservation Halton re: Oral Presentation for the June 28 Public Hearing Session – Fish and Fish Habitat	June 17, 2019
853	From Conservation Halton re: Oral Presentation for the June 27 Public Hearing Session - Hydrology and Water Quality	June 17, 2019
852	From Conservation Halton re: Oral Presentation for the June 20 Public Hearing Session	June 17, 2019
790	From Conservation Halton to the Review Panel re: Written Submission for the Milton Logistics Hub Project Hearing	May 29, 2019
761	From the Review Panel to Conservation Halton re: Invitation to Public Hearing	April 25, 2019
744	From Conservation Halton to the Review Panel re: Comment on the Information Request Responses	April 9, 2019
674	From Conservation Halton to the Review Panel re: Comment on Information Request Responses	July 30, 2018
665	From Conservation Halton to the Review Panel re: Comment on Information Request Responses	July 16, 2018
619	From the Conservation Halton to the Review Panel Re: Public Comment on Draft Public Hearing Procedures	February 7, 2018

558	From Conservation Halton to the Review Panel re: Correspondence between Conservation Halton and the Canadian National Railway Company	April 12, 2017
554	From the Canadian National Railway Company to the Review Panel re: Correspondence between Conservation Halton and the Canadian National Railway Company	March 29, 2017
553	From Conservation Halton to the Review Panel re: Correspondence between Conservation Halton and the Canadian National Railway Company	March 24, 2017
551	From the Canadian National Railway Company to the Review Panel re: Correspondence between the Canadian National Railway Company and Conservation Halton regarding meeting to discuss the Milton Logistics Hub Project	March 17, 2017
544	From Conservation Halton to the Review Panel re: Public Comment on Environmental Impact Statement	March 13, 2017
482	From Conservation Halton to the Review Panel re: Review Panel Orientation Session Presentation	February 23, 2017
465	From the Canadian National Railway Company to the Review Panel re: Correspondence between the Canadian National Railway Company and Conservation Halton regarding meeting to discuss the Milton Logistics Hub Project	February 2, 2017
456	From Conservation Halton to the Review Panel re: Response to Request for Participation in the Milton Logistics Hub Project Review Panel Process	February 2, 2017
432	From the Review Panel to Conservation Halton re: Participation in the Milton Logistics Hub Project Review Panel Process	January 6, 2017
340	From Barbara Veale on behalf of the Halton Region Conservation Authority to the Canadian Environmental Assessment Agency re: Public Comment Invited on Draft Review Panel Agreement	July 11, 2016