Hamilton Conservation Authority
Healthy Streams...Healthy Communities!

September 17, 2015

File: UHOPA-14-001
ZAC-14-02
25T-2014-01

Alvin Chan
Development Planning – East Section
Planning & Economic Development Department
City of Hamilton
71 Main Street West, 5th Floor
Hamilton, Ontario
L8P 4Y5

Dear Mr. Chan:

**Re: Request for Comments – Updated Functional Servicing and Stormwater Management Reports for Application(s) by Losani Homes (1998) Ltd. for a Urban Hamilton Official Plan, Zoning By-Law Amendment, and for Approval of a Draft Plan of Subdivision for Lands Located at 1831 Rymal Road East (Stoney Creek)(Ward 9), City of Hamilton**

The Hamilton Conservation Authority (HCA) has provided comments on this proposal in letters dated March 21, 2014, July 4, 2014 and on May 11, 2015. Specifically, in our July 4, 2014 letter we note that we have no objection to the approval of the Zoning By-law Amendment. We note that conditions of draft plan of subdivision approval have been provided and remain as originally proposed by HCA staff.

It is noted that comments provided below must be reviewed in conjunction with engineering comments outlined in HCA's letter of May 11, 2015. We also note comments have been provided in the May 11, 2015 correspondence regarding ecology issues. A response to our previous ecology comments is requested. Additionally, while we realize a detailed plan of the proposed wetland on HCA will be provided, it is our understanding that a draft design has been completed. HCA staff would appreciate receiving a copy of this plan for our preliminary review.

*Comments on Amec Foster Wheeler's Memo dated August 7, 2015*

Amec's memo enclosed to S. Llewellyn and Associate's report discusses verification of a hydrology model prepared in support of the Davis Creek Subwatershed Study from flooding and erosion hazards standpoint as the City of Hamilton requested that it be demonstrated that the proposed changes in imperviousness do not result in flooding and erosion potential increase downstream of Losani Home's developments. In addition, the memo discusses options to maintaining water balance in a compensation wetland which is proposed within HCA lands located east of Upper Mount Albion Road.

In order to ensure that the report fully addresses the flooding and erosion hazard and water balance requirements, clarification of the comments below is required:

1. A recommended drainage concept (Scenario 3) is acceptable to the HCA from the water balance standpoint as it provides a conservative result for the replacement wetland design. However, potential spill from a hummocky area within the Hydro corridor may require investigation from the hydrology assessment standpoint as it may become overwhelmed and spill towards the Multi-Area property before the ponding elevation reaches Pritchard Road. If this is an issue, it is suggested that this issue be reviewed to determine what additional flow can be received by the Multi-Area Development property once a lowland area within the Hydro corridor is overwhelmed.
2. Amec concludes that the proposed SWM pond design is acceptable as peak flows associated with the proposed developments are lower than the baseline target flows due the timing of the flows. While HCA accepts this statement in relation to all storm events up to the 100-year storm (Tables 3.5.143.5.3), potential flooding issues related to the Regional Storm event downstream of the development require further investigation.
3. Water balance part of the report and relative information in the S. Llewellyn and Associates report should be reviewed by a qualified hydrogeological consultant and a stamped clearance provided clarifying whether or not the assessment method including the use of precipitation, runoff, groundwater recharge and evapotranspiration data is appropriate and consistent with previous studies.
4. An ecological consultant involved in the compensation wetland design may require assessing the floodplain extent and discuss whether or not potential changes in flood storage impact the area ecology.
5. An electronic copy of the hydrology model should be enclosed to the next submission.

*Comments on the Site Hydrologic Modeling*

1. Hydrology modeling outputs enclosed to S. Llewellyn and Associate's report illustrate that inflows to the SWM facility related to the 5-year 4 100-year storm events exceed the Regional Storm peak flow associated with the areas discharging to the SWM facility. As such, assuming that the 100-year storm event produces higher peak flows than the Regional storm, the consultant should clarify how the weir capacity equal to 4.430$m^3/s$ was estimated and why the weir flow was added to the eco-passage drainage immediately upstream of a proposed 3000mm x 1500mm culvert at the Upper Mount Albion Road crossing.
2. The consultant should discuss why a box culvert under Upper Mount Albion Road was sized to convey the Regional flow from Areas 401, 402, 404, 405, Multi-Area site (Area 403) and the weir flow when the 10-year to 100-year peak flows for these areas (excluding Area 403) exceed the Regional storm peak flow. Please justify whether or not the Regional storm event produces lower peak flow than flows associated with the 10-year to 100-year storm events.

3. It should be noted that the SWMHYMO model was employed by S. Llewellyn Associates and Stantec in support of the Losani site and Trinity Church Road extension projects respectively and A.J. Clarke and Associates performed their hydrology analysis in the PC-SWMM format. Given A.J. Clarke and S. Llewellyn selected different hydrology modeling formats, direct addition of flows from PC-SWIMM model to the Upper Mount Albion Road node may result in deviation in final results for the eco-passage stretch. Therefore, a revised model should incorporate flows leaving the Multi-Area Development site so both models are calibrated and consistency in the input parameters is justified. Otherwise, a model integrating the Multi-Area Development lands (existing and proposed) should be prepared to ensure that capacity of the eco-passage and culvert crossing are appropriately assessed. An electronic copy of the model supporting existing and proposed conditions should be enclosed to the next submission package.

4. A simple comparison of flows modeled by S. Llewellyn/A.J. Clarke and flows provided in Table 3.5.4, in Amec's memo illustrates that summary outputs of SWMHYMO and PC-SWMM flows towards the compensation wetland are much higher than flows computed by Amec in the HSP-F format for the 2-year 4100-year storm events and lower for the Regional storm event:

| | Peak Flow in $m^3/s$ | | | |
|---|---|---|---|---|
| Frequency | S. Llewellyn (Losani+Road Extension) | A.J. Clarke (Multi-Area) | S. Llewellyn + A.J. Clarke | Amec Foster Wheeler |
| 2-year | 1.118 | 0.028 | 1.146 | 0.32 |
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| 10-year | 2.409 | 0.055 | 2.464 | 0.71 |
| 20-year | 3.116 | 0.071 | 3.187 | 0.89 |
| 50-year | 3.669 | 0.083 | 3.752 | 1.15 |
| 100-year | 4.223 | 0.094 | 4.317 | 1.37 |
| Regional Storm | 2.251 | 1.462 | 3.713 | 8.4 |

Please explain why this deviation occurs and review accordingly.

*Comments on S. Llewellyn and Associates Stormwater Management Report revised August 2015 and Enclosed Drawings*

1. The report outlines that a SWM facility is designed to attenuate and treat discharge from the Central Park (Losani Homes) and Heritage Highlands (Effort Trust) developable lands. This statement requires clarification as, following meeting with City staff and developers September 11, 2015, HCA staff understood that the Heritage Highlands drainage will be treated within the Effort Trust owned lands prior to discharging the runoff to the facility. Please confirm.

Otherwise, the design should clearly demonstrate that the pond is also designed to accommodate the Heritage Highlands drainage from the quality control perspective.

2. If Effort Trust will provide its own quantity control of Area 302, the City of Hamilton may require that is be demonstrated that the reconstructed Highland Road (Area 303) runoff is also treated.
3. Appropriate forebay sizing and pond drawdown time calculations should be enclosed to the next submission package to ensure that the facility is designed according to the recommendations from the MoE Guideline, 2003.
4. A detail to scale illustrating a flow splitter diverting major flows to the main cell is required and additional profile drawings should illustrate how the reverse slope pipe and Outlet 2 are connected to Outlet 1 and the 525mm storm sewer.
5. Discussion regarding issues related to the pond drainage for the maintenance purposes is deferred to the City of Hamilton for their review and approval but full dewatering of the facility should be discussed in details in a final Stormwater Management Report to ensure that no sediment that is already settled in the facility is deposited into the municipal storm sewershed or natural environment during the pond dewatering.
6. The report outlines that the storm water from Areas 404 and 405 will be directed to a swale in an open space corridor for water polishing and filtration prior to discharging to the wetland. Expanded discussion about the swale location and its potential polishing the runoff is required because the City likely proposes urbanization of a municipal easement to the north from 61 Upper Mount Albion Road.
7. Culvert capacity calculations may require revision to ensure that flows approaching the crossing are in consistence with the revised hydrology model.
8. Additional analysis is recommended to demonstrate that the developable lands are free of flooding in case of the facility overwhelming and culvert blockage.
9. Block 109 is identified as a "Multi-purpose Open Space Corridor". HCA staff suggest Block 109 should be labelled "Eco-corridor and Multi-use trail".

While this does not relate to the Losani Homes lands, we note that the redevelopment of Highland Road east of Upper Mount Albion is proposed and HCA lands are proposed to be utilized as part of this project. While we have met with City staff and the proponent on site, no preliminary details or design have been provided. We are taking this opportunity, given the nature of development in this area and the holistic approach we have proposed, to request this information be provided.

We note that the studies supporting the development on the Losani Homes property must be reviewed concurrently with the studies supporting the development on the adjacent Multi-Area lands and other adjacent lands to ensure all issues are considered holistically. We are of the opinion that the above noted issues are technical in nature and can be addressed through the conditions of draft plan approval that we have

provided. We are available to meet with the City of Hamilton and the proponents if there are any questions.

Sincerely,

T. Scott Peck, MCIP, RPP
Director, Watershed Planning & Engineering.

TSP/tsp

Hamilton Conservation Authority
Healthy Streams...Healthy Communities!

May 11, 2015

File: UHOPA-14-001
ZAC-14-02
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Alvin Chan
Development Planning – East Section
Planning & Economic Development Department
City of Hamilton
71 Main Street West, 5th Floor
Hamilton, Ontario
L8P 4Y5

Dear Mr. Chan:

**Re: Request for Comments – REVISED Application(s) by Losani Homes (1998) Ltd. For a Urban Hamilton Official Plan, Zoning By-Law Amendment, and an Application for Approval of a Draft Plan of Subdivision by Losani Homes for Lands Located at 1831 Rymal Road East (Stoney Creek)(Ward 9)**

On March 21, 2014, the Hamilton Conservation Authority (HCA) provided comments on the originally submitted applications and studies but did not provide a recommendation regarding the approval of the Official Plan Amendment or the Zoning By-Law Amendment nor did we provide conditions of draft plan of subdivision.

On July 14, 2014, the HCA provided correspondence outlining that they had no objection to the proposed Official Plan Amendment and Zoning By-law Amendment. Conditions of Draft Plan approval were also provided at that time.

On January 16, 2015, the HCA was circulated with the above noted revised application and supporting technical studies (Functional Servicing Report, Stormwater Management Report, Water Balance Reports, EIS Addendum, Noise Study Addendum and the Updated Concept for the Multi-purpose Corridor).

There was concern regarding the submitted design of the Multi-purpose Corridor in that the submission did not reflect the requirements of the HCA relating to the corridor addressing wildlife movement and the function of the watercourse. City staff, HCA staff and the developer have met and discussed this issue and a revised concept drawing was submitted for review. HCA staff have reviewed the revised submission dated April 1, 2015 and, with the understanding that more details (trees and shrubs to be planted, plant and seed composition and location, habitat structure) will be confirmed with final design, HCA staff are satisfied with the concept plan provided. It is noted that the City is working with the developer regarding parkland dedication of these lands as a "park".

It is HCA staff understanding that with the dedication of these lands as parkland, the intended primary use of these lands remains as a wildlife corridor.

There remains the question of ownership of the multi-purpose corridor both through the Losani and Multi Area Developments property. This is a question that requires greater discussion regarding the extent of ownership, management requirements, landowner education and operating costs. The HCA is open to discuss these issue relating to ultimate ownership of these lands with the City.

On April 29, 2015, a meeting was held with representatives from Losani Homes, Multi-Area Developments, Efforts Trust, City and HCA staff and a number of consultants. At this meeting the issue of drainage from the Hydro corridor was raised as a problem as approximately .90 hectares cannot be drained to the east as per current drainage patterns. The HCA was asked if allowing these lands to drain to the west was acceptable. HCA staff are supportive of this diversion subject to a compensating area being directed to the multi-purpose corridor to ensure base flows are maintained in the watercourse and downstream. Additional work in this regard will be required to address this issue and to demonstrate how the .90 hectare parcel can be drained west of Pritchard Road.

**Engineering Comments**

A hydrogeological investigation report prepared by TDC indicates that the loss of drainage to the proposed compensation wetland is 64,375.6m$^3$/year which is equal to 52% of runoff volume to the existing wetland located in the northeast corner of the Losani property. Such reduction in discharge to the wetland is the result of insufficient runoff volumes from Areas 401,402 and 403 which are draining to the compensation wetland via the multi-purpose corridor under post-development uncontrolled conditions.

It should be noted that additional boreholes advanced by Soil-Mat Engineers within Losani lands demonstrate that the entire property mostly contains clay soils characterized by low permeability. As such runoff plays a significant role in the existing water balance maintenance within the compensation wetland. Therefore, a stormwater management concept of both properties (Losani Homes and Multi-Area) must demonstrate that the compensation wetland receives adequate volume of the runoff in order to ensure that the existing water and ecological balances are maintained.

Calculations supporting the SWM pond construction and hydrologic modeling input/output printouts should be enclosed to the next submission of the Functional Servicing Report.

Comments on Documentation Submitted February 12, 2014

No response to our formal comments of March 21, 2014 has been provided to date. Therefore, the recently submitted Functional Servicing, Geotechnical and Hydrogeological reports were reviewed in conjunction with our previous comments on reports submitted February 12, 2014 and comments on the January 16, 2015 submission are provided under our previous comments in italics.

1. Additional information including a detailed plan must demonstrate that that the wetland to the east not only receives the compensation drainage but also detains it for a certain period of time because groundwater does not play a significant role in the wetland function.

*It is our understanding that the final design is still ongoing and will be completed once issues related to the water balance maintenance are clarified. Therefore, this comment will remain open until a detailed design of wetland components is finalized and submitted for our review and approval. We understand a draft design has been completed and we would appreciate a copy of this draft.*

2. The water balance calculations by S. Llewellyn and TDC utilize the drainage areas of 43.86ha and 25.13ha in size respectively when Figure 2.0 (S. Llewellyn's report) and Figure 4 (A.J. Clarke's report) recommend that a combined catchment contributing drainage to the Losani SWM pond and wetland to the east is associated with an area of 42.48ha in size. This discrepancy and issues related to the use of different sources for the runoff volume determination require further clarification in order to ensure the outputs are based on the most recent data source and entire catchment assessment. Therefore, we recommend assessing the entire catchment area contributing drainage to the northeast property limit and utilizing water balance parameters from the Water Budget and Water Quantity Stresses Assessment, Halton-Hamilton Source Protection Region, 2010.

*It should be noted that revised calculations by TDC are based on water balance parameters from the Water Budget and Water Quantity Stresses Assessment, Halton-Hamilton Source Protection Region, 2010. We however note that Part 2.2.3 of the study discusses the 8-year precipitation data set that "was deemed sufficient to provide a meaningful estimate of average annual recharge..." which was required for calibration of the model used for the water budget and water stresses assessment in the Tier 1 report (refer to last paragraph in Part 3, TDC Report).*

*A hydrogeological report demonstrates that the existing wetland receives runoff volumes of 123,072m³/year from Losani Homes, City lands and Multi-Area Development. Based on the provided information, post-development drainage from the entire Losani property and City parkland will be diverted to a SWM facility which construction is planned to the west from Upper Mount Albion Road and stormwater control is proposed within a Multi-Area Stormwater Management pond immediately to the west from the Trinity Church Road extension. Therefore, it is not clear from the report why unattenuated runoff volumes of 58,696m³/year from Multi-Area, Trinity Church Road extension and multi-purpose corridor were estimated sufficient for the compensation wetland adequate function.*

3. The Functional Servicing Report must demonstrate that the existing base flow discharge is maintained within the realigned channel because both the creek and the compensation wetland must maintain the existing conditions as an integrated system on the current construction stage and after the area is entirely developed.

*Discussion about the existing base flow discharge maintenance is still required.*

*In addition, please be advised that the HCA previously noted and a recently submitted Environmental Impact Statement prepared by Renovo Watershed Sciences Inc. outlines that the realigned creek should incorporate natural channel design techniques considering a low flow channel and floodplain. Therefore, a design supported by appropriate calculations must illustrate that the appropriately aligned low flow channel traverses the multi-purpose corridor and the creek contained Regulatory Storm floodplain (Regional or 100-year – whichever is greater).*

In order to determine whether or not additional runoff management is required to maintain base flow in the future, recommendations regarding stormwater management within the areas that remain vacant on the interim stage must be discussed in the Functional Servicing Report. A City parkland stormwater management concept may also need to be considered now because the realigned creek and compensation wetland should receive adequate runoff volume after the park area is developed.

*Consideration of our comment regarding the runoff management within areas that remain vacant on the interim stage is still required in order to ensure that the compensation wetland receives adequate volume on the annual basis.*

4. To avoid storm sewer damage at Street "C" and maintain existing function of Sinkhole UK-1, the hydrogeological assessment recommends constructing a conduit under the proposed storm sewer. Staff has no objections transmitting the karst water under the sewer. We however would rely on City staff assessing construction of the utility lines and dwellings above the approximate karst route because the proposed infrastructure and houses can be affected by the karst drainage if the conduit is fractured/damaged as a result of the development.

*No further comments as our notes were provided to City's staff for their review and consideration.*

5. Locations of sinkholes SH-3 and SH-4 and spring SP-3 must be labeled on the grading plan in order to ensure the runoff associated with these geological features is appropriately managed and overall drainage pattern within the adjacent lands remains unchanged.

*Sinkholes SH-3 and SH-4 and spring SP-3 are not labeled on the grading plan drawings.*

6. A shallow groundwater aquifer likely exists in the vicinity of the SWM facility (Page 4, Soil-Mat's report of November 21, 2007 and Part 5.5, TDC's report of December 20, 2007). Therefore, a design supporting construction of the SWM facility must illustrate that the forebay has no impact on the existing groundwater quality characteristics.

*A revised geotechnical investigation report illustrates that additional boreholes were drilled within the proposed SWM pond and multi-purpose corridor. Borehole logs enclosed to the repot illustrate that no groundwater was found in the vicinity of the pond forebay. Therefore, our previous comment regarding the potential forebay impact on existing groundwater quality characteristics is not applicable anymore.*

**Ecology Comments**

***The following comments were not addressed in the EIS and are from a letter (ecology comments) from February 2013.***

How will the created wetland interact with any karst features identified on the Eramosa Karst Conservation Area?

Please provide a monitoring program for the replication of the function of the wetland to be removed as it relates to the stormwater management facility, the newly created wetland and the natural channel design for Upper Davis Creek. A monitoring plan has been provided for the multi-purpose corridor.

Based on the closure recommendations for sinkholes SH-3/SH-4, please provide clarification on how the remnant channel feature of Upper Davis Creek will be fed?

Where will the newly created wetland outlet too? How will current water temperatures in Upper Davis Creek be maintained and will the wetland facilitate fish passage? HCA recognizes that the consultant is trying to answer this question, but further design characteristics are needed.

***The following comments were not addressed from the Highland road, Environmental Impact Statement, Prepared for Losani Homes, by Renovo watershed Sciences Inc., January 2014.***

Figure 3: Ecological Land Classification does not describe the vegetation community in the south west corner of the site, is it open agriculture? It does not appear that way from a review of air photos. It appears to be a thicket or old field community. Please clarify the community type and update table 5.

**The following are new or revised comments based Highland Road Environmental Impact Statement comment Response and Addendum, December 2014.**

The directional fencing along the road will not be of sufficient height to redirect deer to the underpass. Renovo recommended the use of trees to form this barrier. This is acceptable with monitoring to ensure a barrier of trees is functioning as designed to keep White-tailed Deer off the road and using the underpass.

HCA would recommend a monitoring plan be developed with more rigor. What are the questions that will be answered through monitoring? Will the changes in populations and plant distributions be compared to before the development? Will monitoring stations be developed? How will the information be reported? More detail is requested.

What is the length of the monitoring program described in Section 6.3 Monitoring, Page 50?

HCA would recommend the use of wildlife camera's on either side of the culvert. These can be a cost effective way of monitoring use of multi-purpose corridor in addition to what has been suggested.

**Summary**

As noted, HCA staff outlined in our July 14, 2014 letter that we have no objection to the approval of the Official Plan Amendment and Zoning By-law Amendment. The conditions we provided for draft plan of subdivision approval remain. The above noted technical issues can be addressed through the provided draft plan of subdivisions conditions. We remain available to answer any questions relating to this development and to work with the City of Hamilton and Losani Homes.

Sincerely,

T. Scott Peck, MCIP, RPP
Director, Watershed Planning & Engineering.

TSP/tsp

Hamilton Conservation Authority
Healthy Streams...Healthy Communities!

July 4, 2014

File: UHOPA-14-001
ZAC-14-02
25T-2014-01

Alvin Chan
Development Planning – East Section
Planning & Economic Development Department
City of Hamilton
71 Main Street West, 5th Floor
Hamilton, Ontario
L8P 4Y5

Dear Mr. Chan:

**Re: Official Plan and Zoning By-Law Amendment Applications, And Application for Approval of a Draft Plan of Subdivision by Losani Homes for Lands Located at 1831 Rymal Road East (Stoney Creek)(Ward 9)**

On March 21, 2014, the Hamilton Conservation Authority (HCA) provided comments on the above noted applications and submitted studies but did not provide a recommendation regarding the approval of the Official Plan Amendment or the Zoning By-Law Amendment nor did we provide conditions of draft plan of subdivision. In the interim, HCA staff met with James Webb of Webb Planning Consultants Inc., and has also been provided with a 2014 Additional Fieldwork Update Summary prepared by Ken Glasbergen. Based on this information and notwithstanding the fact that additional field work is underway and that it is understood that additional design work is required, HCA staff provide the following comments. .

HCA staff has reviewed the draft UHOP Amendment and the draft Zoning By-Law Amendment proposed by James Webb Planning Consultants on behalf of the applicant and have no objection to their approval.

As it relates to the application for Draft Plan of Subdivision approval, HCA staff has no objection to the approval of the Draft Plan of Subdivision subject to the following conditions:

1. A Hydrogeology Study is required to the satisfaction of the Hamilton Conservation Authority. This study should include the identification of the hydrologic features and functions in the area, including wetland, creeks, karst and external drainage and how they will be incorporated with the development.

2. A Water Balance Study is required to the satisfaction of the Hamilton Conservation Authority. This is required for the site to maintain the water regime. Consideration of the karst features is also required as part of this assessment.

3. A Functional Servicing Study and a Storm Water Management Plan is required to the satisfaction of the Hamilton Conservation Authority. The purpose is to maintain the integrity of the features on site and continuation of their function as identified in the Hydrogeology Study.

4. A detailed design/restoration plan including a natural channel design for the multi-use corridor is to be completed to the satisfaction of the Hamilton Conservation Authority.

5. A detailed design/restoration plan outlining restoration techniques and a planting plan is required for the compensation wetland to the satisfaction of the Hamilton Conservation Authority. The design/restoration plan shall be based on the completed environmental impact study and the compensation wetland should be established and functioning before removal of the on-site wetland.

6. An external works agreement is required between the developer and the Hamilton Conservation Authority regarding the completion of the compensation wetland to be located on the Eramosa Karst Conservation Area. The external works agreement will provide direction regarding the costs associated with the design, construction and monitoring of the compensation wetland in addition to addressing liability issues. All costs are the responsibility of the developer.

7. A specific monitoring plan is required to the satisfaction of the Hamilton Conservation Authority. The monitoring plan will monitor the design of the multi-use corridor and its effectiveness in the movement of wildlife as well as monitor the compensation wetland.

8. A Grading Plan and Erosion and Sediment Control Plan is required for the subject lands and should be prepared to the satisfaction of the Hamilton Conservation Authority. The Grading Plan and the Erosion and Sediment Control Plan should include provisions and allowances for the phasing of the development over time.

9. A Karst Assessment Study is required and should be prepared to the satisfaction of the Hamilton Conservation Authority.

10. An environmental impact study is required to be completed to the satisfaction of the Hamilton Conservation Authority. The Environmental Impact Study should address potential for species at risk, fish habitat and the existing condition of the wetland located on the subject lands (features, functions and area of wetland). This information will be utilized in the design of the compensating wetland.

11. That the required permits for the development of the subjects shall be obtained as required from the Hamilton Conservation Authority pursuant to the HCA's *Development, Interference with Wetlands, and Alteration to Shorelines and Watercourses Regulation 161/06 under Ontario Regulation 97/04.*

HCA staff note that it cannot be understated that the above noted studies as outlined in the conditions are all inter-related and must be developed based on an inter-disciplinary and holistic framework (i.e. the function of the karst system and wetlands is directly related to natural drainage patterns and the hydrology and hydro-geological functions on and off site and the maintenance of these natural features must be addressed). Given the constraints of the site, an atypical approach will be required. We note our comments provided in our correspondence dated March 21, 2014 (see attached) and advise that the issues and comments noted in that correspondence should be addressed in future study submissions provided to address the above noted conditions.

Sincerely,

T. Scott Peck, MCIP, RPP
Director, Watershed Planning & Engineering.

TSP/tsp

Hamilton Conservation Authority
*Healthy Streams...Healthy Communities!*

March 21, 2014 **BY EMAIL**

Alvin Chan
Development Planning – East Section
Planning & Economic Development Department
City of Hamilton
71 Main St. West, 5th Floor
Hamilton, ON L8P 4Y5

Dear Mr. Chan:

**Re: Official Plan and Zoning Amendment Applications, and Application for Approval of a Draft Plan of Subdivision by Losani Homes for Lands Located at 1831 Rymal Road East (Stoney Creek) (Ward 9)**

Staff of the Hamilton Conservation Authority (HCA) has undertaken a review of the above noted applications and supporting documentation to permit the proposed plan of subdivision. Based on our review to date, and in accordance with HCA's responsibilities under the *Conservation Authorities Act*, the Memorandum of Understanding between the Ontario Ministry of Natural Resources (MNR), the Ontario Ministry of Municipal Affairs and Housing (MMAH) and Conservation Authorities (CA) relating to provincial interests for natural hazards, and the Memorandum of Agreement between the HCA and the City of Hamilton for planning and technical review services, we offer the following comments for consideration.

## Proposal

The applicant proposes an Official Plan Amendment, Zoning By-Law Amendment and a Draft Plan of Subdivision application to permit the development of a subdivision comprised of blocks for single detached residential, street townhouses, blocks for mixed use development, a park block, an open space corridor block, a SWM block, a block for a future walkway, a block for future road widening, and a proposed road network.

## Memorandum of Agreement Hamilton Conservation Authority and City of Hamilton

HCA staff provided comments on this proposal through the Formal Consultation process under file FC-13-053. HCA staff continue to be supportive of this application and the development proposed as part of the plan of subdivision. However, while we remain supportive of the proposal and the application, we are not in a position to provide conditions of draft plan approval or to support the approval of the Official Plan Amendment and the Zoning By-Law Amendment at this time.

HCA staff have undertaken a review of the submitted application and supporting studies and documentation and note that the following outstanding issues need to be addressed:

In order to ensure that the report fully addresses the flooding and erosion hazard and water balance requirements, clarification of the comments below is required:

1. A recommended drainage concept (Scenario 3) is acceptable to the HCA from the water balance standpoint as it provides a conservative result for the replacement wetland design. However, potential spill from a hummocky area within the Hydro corridor may require investigation from the hydrology assessment standpoint as it may become overwhelmed and spill towards the Multi-Area property before the ponding elevation reaches Pritchard Road. If this is an issue, it is suggested that this issue be reviewed to determine what additional flow can be received by the Multi-Area Development property once a lowland area within the Hydro corridor is overwhelmed.
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5. An electronic copy of the hydrology model should be enclosed to the next submission.

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| 10-year | 2.409 | 0.055 | 2.464 | 0.71 |
| 20-year | 3.116 | 0.071 | 3.187 | 0.89 |
| 50-year | 3.669 | 0.083 | 3.752 | 1.15 |
| 100-year | 4.223 | 0.094 | 4.317 | 1.37 |
| Regional Storm | 2.251 | 1.462 | 3.713 | 8.4 |

Please explain why this deviation occurs and review accordingly.

*Comments on S. Llewellyn and Associates Stormwater Management Report revised August 2015 and Enclosed Drawings*

1. The report outlines that a SWM facility is designed to attenuate and treat discharge from the Central Park (Losani Homes) and Heritage Highlands (Effort Trust) developable lands. This statement requires clarification as, following meeting with City staff and developers September 11, 2015, HCA staff understood that the Heritage Highlands drainage will be treated within the Effort Trust owned lands prior to discharging the runoff to the facility. Please confirm.

Otherwise, the design should clearly demonstrate that the pond is also designed to accommodate the Heritage Highlands drainage from the quality control perspective.

2. If Effort Trust will provide its own quantity control of Area 302, the City of Hamilton may require that is be demonstrated that the reconstructed Highland Road (Area 303) runoff is also treated.
3. Appropriate forebay sizing and pond drawdown time calculations should be enclosed to the next submission package to ensure that the facility is designed according to the recommendations from the MoE Guideline, 2003.
4. A detail to scale illustrating a flow splitter diverting major flows to the main cell is required and additional profile drawings should illustrate how the reverse slope pipe and Outlet 2 are connected to Outlet 1 and the 525mm storm sewer.
5. Discussion regarding issues related to the pond drainage for the maintenance purposes is deferred to the City of Hamilton for their review and approval but full dewatering of the facility should be discussed in details in a final Stormwater Management Report to ensure that no sediment that is already settled in the facility is deposited into the municipal storm sewershed or natural environment during the pond dewatering.
6. The report outlines that the storm water from Areas 404 and 405 will be directed to a swale in an open space corridor for water polishing and filtration prior to discharging to the wetland. Expanded discussion about the swale location and its potential polishing the runoff is required because the City likely proposes urbanization of a municipal easement to the north from 61 Upper Mount Albion Road.
7. Culvert capacity calculations may require revision to ensure that flows approaching the crossing are in consistence with the revised hydrology model.
8. Additional analysis is recommended to demonstrate that the developable lands are free of flooding in case of the facility overwhelming and culvert blockage.
9. Block 109 is identified as a "Multi-purpose Open Space Corridor". HCA staff suggest Block 109 should be labelled "Eco-corridor and Multi-use trail".

While this does not relate to the Losani Homes lands, we note that the redevelopment of Highland Road east of Upper Mount Albion is proposed and HCA lands are proposed to be utilized as part of this project. While we have met with City staff and the proponent on site, no preliminary details or design have been provided. We are taking this opportunity, given the nature of development in this area and the holistic approach we have proposed, to request this information be provided.

We note that the studies supporting the development on the Losani Homes property must be reviewed concurrently with the studies supporting the development on the adjacent Multi-Area lands and other adjacent lands to ensure all issues are considered holistically. We are of the opinion that the above noted issues are technical in nature and can be addressed through the conditions of draft plan approval that we have

provided. We are available to meet with the City of Hamilton and the proponents if there are any questions.

Sincerely,

T. Scott Peck, MCIP, RPP
Director, Watershed Planning & Engineering.

TSP/tsp