

November 17, 2017

No.	Comment	How comment has been addressed.
<b>Adèle Labbé, Environmental Planner – January 12, 2017</b>		
1	<p>Natural Heritage &amp; Stormwater Management:            The proposed development proposes a stormwater management outlet to a Provincially Significant Wetland. As such, a scoped <b>EIS</b> to assess hydrological and ecological impacts to the wetland is required. The EIS should include an assessment of the wetland buffer in the area of the outlet, including potential for ecological or hydrological impacts, a natural feature water balance and recommendations for mitigation, restoration and enhancement.</p>	<p>15-59 Lowes Road            Scoped Environmental Impact Study (16-053B). Dated May 31, 2017. Submitted to the City of Guelph June 1, 2017.</p>
2	<p>Refer to the <b>Hanlon Creek Subwatershed Study for guidance on objectives of stormwater management</b> as it relates to the natural environment. Generally, the HCSWS promotes infiltration of clean water to support natural heritage features and functions. Staff recognize that portions of the site have a high groundwater table and as such careful consideration of locations for infiltration supported by adequate data should be provided (see Engineering comment #1 from November 10 2016 memo). Where infiltration cannot be achieved, other Low Impact Development techniques are to be considered and proposed for both quantity (i.e., storage) and water quality (filtration). This should be a key mitigation strategy in the EIS.</p>	<p>Infiltration measures have been provided by Stantec where possible to enhance post-development groundwater recharge. In addition, one OGS unit and a dry SWM facility have been included to provide quality and quantity treatment of runoff while also promoting passive infiltration prior to reaching the site outlets.</p>
3	<p>Urban Forest &amp; Tree Inventory and Preservation Plan:             The City's Official Plan policies indicate that development and site alteration may be permitted to impact hedgerows and individual trees provided that it has been demonstrated that these trees cannot be protected or integrated into the urban landscape.</p>	<p>Tree Preservation Plan (16-053A) dated June 2016. Issued for submission May 31, 2017.</p>
4	<p>It is not clear why the trees along the west side of the site, particularly the Eastern White Pines (T145-T162) are not being preserved. The majority of these native trees are in good or excellent condition and provide various benefits and services to the neighbourhood and City including reduction of air pollution, habitat for urban wildlife, mental health benefits, carbon sequestration and screening/aesthetic improvement. Given their condition and location, these trees are high priority for preservation.</p>	<p>Response provided in EIS Addendum report by Aboud dated November 17, 2017 in Section 2.6.</p>

5	<p>In addition to the Eastern White Pines, the following trees are notable (size, condition, species) on the site and should be considered for preservation during site redesign. Consider integrating any of these trees into the proposed urban landscape (i.e., amenity areas, stormwater area, front or rear yards): T142, T143, T90, T91, T41, T31-T37.</p>	<p>Response provided in EIS Addendum report by Aboud dated November 17, 2017 in Section 2.6.</p> <p>The swale behind units 12 and 13 conveys drainage from Lowes Road around the site and is therefore somewhat fixed in grade and location. At the time of detailed design we can investigate other options such as using a pipe or a combination of a pipe and shallower swale to convey the drainage around the trees. It is of note that impact on roots from the excavation for a pipe may have similar impacts as the swale. (Stantec)</p>
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**Michelle Thalen, Development and Environmental Engineering – November 10, 2016**

1	<p>Storm Water Management (SWM):</p> <p>The Functional Servicing Report (FSR) provided has included a Geotechnical Report prepared by <b>Englobe</b> Corporation. Upon review of both the geotechnical report and proposed stormwater management, it has become apparent that there is a lack of geotechnical and groundwater monitoring information in the westerly quadrant of the site where there is a large infiltration gallery proposed. The City has over the years, received complaints from residents on Dawn Avenue experiencing high groundwater (basement flooding &amp; constant sump pumping) and surface ponding in their rear yards, in close proximity to the subject lands. As such, the groundwater level and infiltration rate needs to be determined prior to development, to confirm the appropriateness of the location for the proposed SWM galleries. Please refer to the enclosed <b>Englobe's</b> drawing number 002 that has been highlighted where the area of concern is.</p> <p>Furthermore, the City will require infiltration rates be based on in situ test(s) (such as infiltrometer test) conducted at any locations where infiltration is proposed. As provided in the geotechnical report, the infiltration rate is based on the hydraulic conductivity calculated on the particle size distribution analysis rather than an in situ test.</p>	<p>In-situ infiltration testing was completed on site. Please refer to Englobe Report No. 160-P-0010233-0-07-304-HD-L-0001-03 dated November 13, 2017 for the results of this testing.</p> <p>Proposed infiltration galleries have been relocated internally (roughly 30 m from any property line) to mitigate any impacts adjacent existing residents due to ground water recharge.</p> <p>Per the conclusions of the May 2017 HydroG report, "<i>Under post-development conditions, an increase in infiltration rates was calculated; however due to the permeable nature of the soils we anticipate that this will not lead to significant ground water mounding under the infiltration gallery, swales and CWC systems</i>".</p>
2	<p>The MIDUSS output has conflicting information with the provided Figure 3.0 – Drainage Area Plan. Please ensure</p>	<p>The model and Figure 3.0 have been adjusted. Please</p>

	<p>that the areas used in the model are the same as what is shown on the plan and outlined in the report (Section 5.0 of the brief). The model also includes a catchment area 202 where one isn't illustrated on either the plan or included in the brief.</p>	<p>note that Catchments 201 and 205 have been broken into the roof areas (20X0) and the remaining catchment coverage (20X1). The sum of the roof area and remaining catchments area equals the total area for each catchment shown on Figure 3.0.</p>
3	<p>The Conceptual Servicing Plan (Fig. 4.0) shows a proposed infiltration trench located between the rear yards of the townhomes within Catchment 203. The MIDUSS model does not indicate any storage for this infiltration trench and yet the Conceptual Grading Plan (Fig. 5.0) shows surface ponding (not certain what storm event the ponding is illustrating?). Please clarify.</p>	<p>Infiltration trenches are located under the roadway as Clean Water Collectors (CWC) and along the SWM Pond (SSP-1). Model has been adjusted to account for the infiltration trench storage.</p> <p>Surface ponding is described in Section 5.0 of the report. This volume is insignificant and not included in the modelling. In addition, the ponding in the location of concern has been eliminated.</p>
4	<p>In the FSR, further information is required regarding the proposed SWM controls for Outlet #2 (roadside ditch on Lowes Road). Figure 4.0 (Servicing Plan) shows a shallow culvert located parallel to the roadside ditch within the site boundary. Figure 5.0 (Grading Plan) has notations indicating removal of the existing roadside spillways. Considering that a reduced front yard setback has been applied for as part of this rezoning, please offer some clarity surrounding the above proposed works.</p>	<p>The roadside ditch and shallow culvert along Lowes Road is no longer proposed. A curb spillway and rain garden are currently proposed (GP-1) in the central portion of the site along with short culverts under the sidewalk at the east and west sides of the site.</p> <p>Therefore, the reduction of front yard setback is no longer an issue.</p>
5	<p>Engineering staff do not support the peak flows exceeding the existing conditions that discharge to Outlet #2 as proposed. The concern is that surface ponding already occurs within the Lowes Road right-of-way during storm events so a reduction of the flows discharging to this outlet should be considered. Furthermore, we are uncertain that this outlet performs as suggested in the brief. Confirmation of the surface water flows within this outlet, specifically the ditch, should be documented (ie. topographic survey) with the next submission.</p>	<p>We have confirmed that driveways block the majority of water from flowing towards outlet 2. Pre and Post development models have been adjusted accordingly.</p> <p>An increased flow to outlet #2 is no longer proposed.</p>
6	<p>As discussed in the Development Review Committee meeting on December 16/15, please show in all Figures within the FSR, a municipal sidewalk on the north side of</p>	<p>A sidewalk has been identified on the plans and taken into account in the grading and</p>

	Lowes Road and demonstrate how this can be incorporated into the site design including what impacts there may be from a SWM perspective.	SWM design.
7	Grading: Please provide cross sections where indicated on the redlined Conceptual Grading Plan (Fig. 5.0) between the houses on Zess Court and the north property line.	Cross Section locations have been added to Preliminary Grading Plan (GP-1) and the Cross Sections have been added to Lot Grading Types and Details (GP-2). Fig.5.0 has been removed from the FSR Report.
8	Add existing contours and/or topographic elevations at least 10 metres beyond the subject lands on all adjacent properties. Also show building outlines for adjacent properties on the Conceptual Grading Plan (Fig. 5.0).	Contours and adjacent buildings have been added to the Grading Plan. Fig. 5.0 is now GP-1.
9	The proposed surface ponding that is shown on Figure 5.0 is concerning, especially considering the close proximity to the dwellings. Provide some clarity in terms of what storm event this ponding is to occur, and the expected draw down time.	Surface ponding is described in Section 5.0 of the report. The ponding in the location of concern has been eliminated.
10	The retaining wall height shall not exceed 1.0 metre in exposed height.	The retaining wall has been eliminated.
11	Environmental: The City's Environmental Engineer has reviewed the ESA reports provided with complete application and agrees with the findings that zinc (a naturally occurring metal), which was detected above the standard in soil and not deemed a contaminant of concern (COC), will not likely pose an environmental threat to the proposed development.  The City, however, requests a Qualified Person (QP) responsible for preparing the Phase One and Two Environmental Site Assessment reports, <b>submit a Reliance Letter</b> to indicate that despite any limitations or qualifications included in the reports, the City is authorized to rely on all information and opinion provided in the report submitted for the proposed development.	The reliance letter prepared by MTE dated January 26, 2017 is provided with this submission
<b>Michael Wittemund, Guelph Hydro – October 17, 2016</b>		
1	Hydro supply for this development will be from an existing overhead pole on the north side of Lowes Road West.	Acknowledged.
2	The hydro services for this development should be underground except for pad-mounted transformers.	Acknowledged.
3	A minimum distance of 3.0 m must be maintained between any dwelling units and pad-mounted transformers.	Acknowledged.
4	A minimum distance of 1.5 m must be maintained between any driveways/entrances and distribution poles, street light poles or pad-mounted transformers. Any	Acknowledged.

	relocations required would be done at the owner's expense.	
5	Areas of 4.2 m by 4.2 m are required at, or adjacent to, a number of units for transformers.	Acknowledged.
<b>Ian MacNeil, Canada Post – October 11, 2016</b>		
1	Canada Post will provide mail delivery service to the subdivision through centralized Community Mail Boxes (CBMs).	Acknowledged.
2	The developer will consult with Canada Post to determine suitable permanent locations for the Community Mail Boxes. The developer will then indicate these locations on the appropriate servicing plans.	Centralized location has been identified by Canada Post. To be included at detailed design.
3	The developer agrees, prior to offering any units for sale, to display a map on the wall of the sales office in a place readily accessible to potential homeowners that indicates the location of all Community Mail Boxes within the development, as approved by Canada Post.	Acknowledged.
4	The developer agrees to include in all offers of purchase and sale a statement which advises the purchaser that mail will be delivered via Community Mail Box. The developer also agrees to note the locations of all Community Mail Boxes within the development, and to notify affected homeowners of any established easements granted to Canada Post to permit access for a Community Mail Box.	Acknowledged.
5	The developer will provide a suitable and safe temporary site for a Community Mail Box until curbs, sidewalks and final grading are completed at the permanent Community Mail Box locations. Canada Post will provide mail delivery to new residents as soon as the homes are occupied.	Acknowledged.
6	The developer agrees to provide the following for each Community Mail Box site and to include these requirements on the appropriate servicing plans: <ul style="list-style-type: none"> <li>- any required walkway across the boulevard, per municipal standards.</li> <li>- Any required curb depressions for wheelchair access, with an opening of at least two metres (consult Canada Post for detailed specifications)</li> <li>- A Community Mailbox concrete base pad per Canada Post specifications.</li> </ul>	Acknowledged.
7	The developer please provide Canada Post with the excavation date for the first foundation/first phase as well as the date development work is scheduled to begin. Finally, please provide the expected installation date(s) for the CBM(s).	Acknowledged.
<b>Gwen Keep, Union Gas – November 1, 2016</b>		
1	No comments.	Acknowledged.

Tiffany Brûlé, Parks Planning and Open Space Development – November 3, 2016		
1	<p><b>Parkland Dedication:</b> The purpose of the proposed Zoning By-law Amendment is to permit the development of approximately 60 residential townhouse units on the subject lands (1.65 hectares) at a net density of 36 residential units per hectare. Park Planning would require a minimum Parkland Dedication at a rate of 5% in accordance with City of Guelph By-law (1989)-13410, as amended by By-law (1990)-13545 and By-law (2007)-18225 or any successor thereof prior to the issuance of building permits. For this development the owner shall be responsible for the payment of cash-in-lieu of parkland dedication.</p> <p>An appraisal of the subject property will be required to determine the cash in lieu amount pursuant to s.42 OR s.51.1 and s.53(13) of the Planning Act. The appraisal report shall be prepared by a qualified appraiser who is a member in good standing of the Appraisal Institute of Canada. The property owner is responsible for the cost and to arrange for the appraisal.</p>	Acknowledged.
2	<p><b>On-Road Trail Route:</b> Lowes Road is identified as an on-road trail route in the Guelph Trails Master Plan and on Schedule 8 of the Official Plan (OPA 48). As such, <b>Park Planning recommends that a sidewalk is designed and constructed in front of this development.</b></p>	Sidewalk has been added to the North side of Lowes Road.
Emily Bumbaco, Upper Grand District School Board – November 4, 2016		
1	The board is designating this area as a development area (DA), which means students from this development may be assigned to a school other than the neighbourhood school. For Das in plans of subdivisions we ask that a clause be included in the <b>purchase and sale agreement</b> to advise buyers of the DA status. As this is a zoning amendment, I'm wondering if/how this would actually make it to the APS?	A Vacant Land Condominium application has now also been submitted which will provide the opportunity for conditions of approval to be accommodated as part of this process.
2	Education Development Charges shall be collected prior to the issuance of a building permit	Acknowledged.
3	Adequate sidewalks, lighting and snow removal (on sidewalks and walkways) is provided to allow children to walk safely to school or to a designated bus pickup point	Acknowledged.
4	The developer and the Upper Grand District School Board reach an agreement regarding the supply and erection of a sign (at the developers expense and according to the Board's specifications) affixed to the permanent development sign advising prospective residents that students may be directed to schools outside the neighbourhood	Acknowledged.
5	The developer agrees to advise all purchasers of residential units and/or renters of same, by inserting the	Acknowledged.

	<p>following clause in all offers of Purchase and Sale/Lease, until such time as a permanent school is assigned:</p> <p><i>“Whereas the Upper Grand District School Board has designated this subdivision as a Development Area for the purposes of school accommodation, and despite the best efforts of the Upper Grand District School Board, sufficient accommodation may not be available for all anticipated students from the area, you are hereby notified that students may be accommodated in temporary facilities and/or bussed to a school outside the area, and further, that students may in future have to be transferred to another school.”</i></p>	
6	<p>The developer agrees to advise all purchasers of residential units and/or renters of same, by inserting the following clause in all offers of Purchase and Sale/Lease:</p> <p><i>“In order to limit liability, public school buses operated by the Service de transport de Wellington-Dufferin Student Transportation Services (STWDSTS), or its assigns or successors, will not travel on privately owned or maintained right-of-ways to pick up students, and potential busing students will be required to meet the bus at a congregated bus pick-up point.”</i></p>	Acknowledged.
<b>Michael Witmer, Planning, Urban Design and Building Services – March 16, 2017</b>		
1	<p>The City remains of the opinion that an EIS is required to demonstrate the proposed redevelopment will not have a negative impact on the Natural Heritage System (NHS). The City is willing to accept and review a scoped EIS, and I have attached a scope of work at the end of this letter in an effort to move the project forward. Provision of the scope of work precludes the need for you to propose a terms of reference (TOR) for the EIS and subsequently have that reviewed by the City’s Environmental Advisory Committee (EAC) prior to the EIS being submitted for review.</p>	15-59 Lowes Road Scoped Environmental Impact Study (16-053B). Dated May 31, 2017. Submitted to the City of Guelph June 1, 2017.
2	<p>Environmental Planning staff acknowledge and recognize that the outlet proposed to be used to convey stormwater from the subject property to the Provincially Significant Wetland (PSW) is existing and was approved under previous development applications. The previous EIS and Environmental Implementation Report (EIR) and stormwater management reports that were completed more than ten years ago for the Conservation Estates Subdivision considered the subject property on Lowes Road in its existing condition, not under the redevelopment scenario.</p> <p>In the opinion of Planning staff, the proposed redevelopment of the subject property has potential to impact natural heritage and/or water resources due to</p>	Mitigation recommendations are listed in Section 7.0 of 15-59 Lowes Road Scoped EIS

	changes to hydrology and hydrogeology. As such, a scoped <b>EIS</b> is required to demonstrate that there will be no negative impact to the natural heritage feature.	(16-053B) dated May 31, 2017.
3	<p>Policy 4.3.6(e) of the Official Plan requires impact studies where proposed development has the potential to affect groundwater resources. Further, Policy 6.A.7.1.1 of the Official Plan requires that where development may negatively impact the City's NHS, the proponent of the development is to prepare an EIS. Policies 4.3.6(e) and 6.A.7.1.1 read:</p> <p><b>4.3.6</b> The entire City area is considered to be a recharge area for public and private potable water supply. In order to protect this valuable water resource, the City will introduce conditions of development approval that:</p> <p>e) Require impact studies where proposed development has the potential to affect groundwater resources;</p> <p><b>6A.7.1.1</b> Where development or site alteration, is proposed within or adjacent to natural heritage features and areas, surface water features and groundwater features or may negatively impact their related ecological or hydrologic functions, the proponent shall prepare an EIS in accordance with the provisions of this plan.</p>	Section 3.0 (Existing conditions), Section 4.0 (Impact analysis) & Section 7.0 (Mitigation) of the 15-59 Lowes Road Scoped EIS.
4	At the statutory Public Meeting for the Zoning By-law Amendment on November 14, 2016, several members of the public and nearby residents expressed numerous concerns on water related issues (i.e. high water table, flooding in storm events, poor drainage). The Mayor and members of Council also expressed similar concerns, and asked staff to investigate them further and report back at a later date. Engineering staff have indicated they have historically received numerous drainage concerns from existing residents in the vicinity due to standing water or very high groundwater that results in excessive sump pumping. In an effort to provide a comprehensive response to the concerns expressed at the Public Meeting, an EIS would help to technically demonstrate the impact of the development on existing conditions as well as on the nearby PSW and quantitative changes to the existing outlet location. An EIR would further help recommend measures to ensure the development does not have any negative impacts on the natural heritage features.	Sections 3.8 & 3.9 as well as Section 4.0 of the 15-59 Lowes Road Scoped EIS address the hydrogeology, stormwater management and impact analysis.
5	<p><i>SCOPE OF WORK for Scoped EIS</i></p> <p>Introduction: description of subject property and development proposal (including servicing)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Planning Context: current and proposed land use and zoning, legislative and policy requirements</li> <li><input type="checkbox"/> Background review: include the Hanlon Creek Subwatershed Study, Conservation Estates EIS and EIR,</li> </ul>	Scope of work provided by the City was the basis for the 15-59 Lowes Road Scoped Environmental Impact Study (16-053B). Dated May 31, 2017. Submitted to the City of Guelph June 1, 2017.



	<p>etc.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Fieldwork: undertake one site visit during or immediately following a rain event – specifically visit the outlet location and characterize conditions</li> <li><input type="checkbox"/> Characterization of the natural environment (on site and of the nearby PSW with a focus on the wetland buffer in the area of the outlet location): <ul style="list-style-type: none"> <li>o Geology and soils</li> <li>o Hydrology and hydrogeology (undertake a pre to post monthly water balance, characterize the spring high groundwater table)</li> <li>o Existing Vegetation including Tree Inventory and Preservation Plan</li> <li>o SAR screening</li> </ul> </li> <li><input type="checkbox"/> Data Analysis: <ul style="list-style-type: none"> <li>o Evaluation of Significance</li> <li>o Impact Analysis (direct, indirect, induced and cumulative)</li> </ul> </li> <li><input type="checkbox"/> Evaluation of Alternative Options / Measures (related to meeting to SWM and water balance)</li> <li><input type="checkbox"/> Proposed Mitigation Measures, Compensation and Enhancement Opportunities</li> <li><input type="checkbox"/> Conclusion</li> </ul>	
<b>City Environmental Planner’s Report to EAC – August 9, 2016 (sic) (2017)</b>		
1	<p>In relation to Section 3.1.5 Hanlon Creek State of the Watershed Report and Section 3.1.6 Conservation Estates EIS and EIR (2006) staff note the following:</p> <p>a. It should be understood that the Conservation Estates Development to the north of this site occurred after the State of the Watershed Report (SWR) and so the findings of that study would not reflect or consider impacts. There is, at present, no cumulative monitoring information for this area beyond the 2006 SWR report for Hanlon Creek.</p> <p>b. The City has over the years received complaints from residents in the area regarding high ground water conditions, flooding, continual sump pump usage, and surface ponding in rear yards and in close proximity to the subject lands. High ground water conditions were also a noted constraint associated with the Conservation Estates Development.</p>	Acknowledged.
2	<p>Stormwater Management Approach</p> <p>a. The development needs to provide for both quality and quantity control on site and is proposing a dry SWM facility (dry pond), oil grit separator and infiltration “clean water collection system”</p> <p>b. Based on the submitted Geotechnical Report soils consist of sands and gravels with some inclusions of silt. That said, the City is still awaiting receipt of permeameter testing to assess and confirm infiltration capability.</p>	Results of the permeameter test completed by Englobe are included in this response. The results of the testing were provided by Englobe in a letter dated September 15, 2017 with revisions provided in October 2017. Given the high infiltration rates found on the

	<p>c. Infiltration based approaches are being proposed as part of a SWM design, however staff are still seeking clarification on the capability of the soils as well as clarification regarding whether the proposed facilities can achieve sufficient separation from the ground water table (1m).</p> <p>d. The dry pond would connect to the existing SW01 outlet to the PSW.</p>	<p>site, infiltration is feasible in areas with sufficient clearance to groundwater. Groundwater monitoring has continued to determine the high levels to be used in the infiltration design. The current design uses the highest levels observed to date.</p>
<p>3</p>	<p><b>Stormwater Outlets</b></p> <p>a. SW01 as shown on Figure 1 of the EIS is the outlet proposed to be used to convey storm water from the proposed storm water management pond.</p> <p>b. The area after the SW02 outlet has become channelized and altered the surface water regime towards the wetland through the creation of new point sources post development. This has also been further aggravated by additional private outlets being placed in adjacent locations that are understood to convey (continual) sump pump discharge from existing residences.</p> <p>c. In order to prevent similar channelization impacts from SW01 due to the increase in surface water conveyance from the proposed facility the EIS and SWM design should consider the need for dissipation control post outlet as part of the mitigation approach.</p> <p>d. Staff support the concept of restoring and enhancing the area beyond the outlet with additional plantings as part of a mitigation approach but would suggest consideration of dissipation control as part of this approach.</p>	<p>Potential for restoration and enhancement addressed in EIS Addendum dated November 17, 2017 by Aboud. Section 2.5.</p>
<p>4</p>	<p><b>A 1m separation between SWM facility and the high groundwater table</b> is required. There seems to be discrepancies between the technical reports in this regard. A similar separation is also required for <b>basements</b>.</p>	<p>Geotechnical report issued prior to release of Hydrogeology Study (160-P-0010233-0-02-300-HD-R-0001-01). Current high groundwater for the site is 330.64 mASL as reported in the Hydrogeology Study released May 2017.</p>
<p>5</p>	<p>The Geotechnical Report anticipates <b>dewatering</b> to be necessary for construction – how will this be mitigated?</p>	<p>Once infrastructure inverts (such as USF elevations, water mains, sewers etc) has been confirmed, a separate hydrogeology study will need to be completed in order to determine actual dewatering rates and apply for the appropriate permit (EASR (dewatering rates between 50,000L/day to under</p>

		400,000L/day) or a Category 3 PTTW (daily dewatering rates of 400,000 L/day or more). Should it be determined that dewatering will be below 50,000 L/day no permit is required from the MOECC. Permits to discharge to City owned infrastructure such as sanitary or storm may be required at dewatering rates below 50,000 L/day.
6	The Geotechnical report also notes concerns about <b>groundwater interfacing with the with the SWM facility</b> which would appear to contradict the other technical reports. Clarification is needed.	The Geotechnical Investigation indicated that the proposed grades for the stormwater management facility were not available at the time the report was issued in May 2016; therefore, we refer you to Englobe Report Nos. P-160-0010233-0-02-300-HD-R-0001-01 (Hydrogeology Study), 160-P-0010233-0-07-304-HD-L-0001-03 (Soil Infiltration Testing) and 160-P-0010233-0-08-305-HD-L-0001-02 (Groundwater Mounding Assessment) indicating sufficient separation was met based on the results of the long term monitoring program that set the high groundwater elevation (330.64 mASL at BH-13-16, May 2017) for the site, and implemented the proposed base of SWM Facilities and USF of 331.64 mASL.
7	The Hydrogeological Report was to provide a <b>water balance on a monthly basis</b> . The water balance that is included in the report is on an annual basis and needs to be revised to provide additional information in order to understand impacts to the wetland.	Stantec completed a water balance and have made a statement that the water balance should be read in conjunction with the hydrogeology study.
8	A map of the catchment/subcatchment areas being referred to/considered with respect to the wetland water balance analysis in either the EIS or the related technical reports would be an asset, as the current analysis appears to change scale/scope between the two reports.	Tributary E is referred to as the northeast tributary in the GAWSER model for the Hanlon Creek State of the Watershed Study (HCSWS). The watershed area for

	<p>More specifically the EIS notes an annual increase in runoff to the wetland of 3,384m<sup>3</sup> per year and that this represents the equivalent of 0.16mm event over the direct surface runoff of the entire (Hanlon?) watershed. Given that we are dealing with a sub catchment for an unnamed tributary that connects to Tributary E of the Hanlon Creek subwatershed – this would appear to be a substantial increase.</p>	<p>Tributary E is 253.1 ha according to the GAWSER model. The site's runoff surplus of 3,384 m<sup>3</sup>/yr over the 253.1 ha is approximately 0.13 mm/yr and is considered negligible given the size of the area to Tributary E. Additionally, there is a large amount of storage available in the wetland which feeds Tributary E and will attenuate all runoff from upstream areas.</p>
9	<p>Tree Preservation</p> <p>a. Opportunities to retain a greater portion of the white pines (T145-162) along the west side of the site should be explored.</p> <p>b. Consideration to incorporate other notable trees (size, condition, and species) on site into the development for preservation is also recommended. Staff continue to recommend integration of any of the following trees into the proposed urban landscape (T142, T143, T90, T91, T41, T31-37)</p>	<p>Addressed in EIS Addendum dated November 17, 2017 by Aboud in Section 2.6.</p> <p>The swale behind units 12 and 13 conveys drainage from Lowes Road around the site and is therefore somewhat fixed in grade and location. At the time of detailed design we can investigate other options such as using a pipe or a combination of a pipe and shallower swale to convey the drainage around the trees. It is of note that impact on roots from the excavation for a pipe may have similar impacts as the swale. (Stantec)</p>
<b>Approved EAC Motion from August 9, 2017 Meeting</b>		
	<p>The Environmental Advisory Committee conditionally support the EIS for the 15-59 Lowes Rd application prepared by Aboud and Associates subject to the following:  <b>THAT</b> a revised EIS and supporting technical reports are provided that:</p>	
1	<p>Provide permeameter testing information; a clarified analysis regarding groundwater table elevations and the achievement of required separation from the highwater table; and, a monthly wetland water balance and revised impact analysis and adaptive management plan;</p>	<p>Please refer to Soil Infiltration Testing (Englobe Report No. 160-P-0010233-0-07-304-HD-L-0001-03) and Groundwater Mounding Assessment (Englobe Report No. 160-10233-0-08-305-HD-L-0001-02).</p> <p>Summaries of studies and results provided in Addendum Letter dated November 17, 2017 by Aboud. Section 2.1.</p>

		Groundwater levels continue to be monitored to ensure the use of the high groundwater level in the SWM facility and infiltration designs; at this point, these designs use the highest level measured to date. The monthly water balance has been updated per the permeameter testing results provided by Englobe to Stantec in September 2017 with revisions in October 2017.
2	That the revised EIS include an assessment of chimney crayfish habitat within areas adjacent to the wetland boundary and the SWM outlet;	Summary and results of Terrestrial Crayfish survey provided in EIS Addendum dated November 17, 2017 by Aboud in Section 2.3.
3	That the revised EIS include an assessment of the site trees and building for bat habitat both maternal and hibernation.	Summary and results of Bat habitat assessment provided in EIS Addendum dated November 17, 2017 by Aboud in Section 2.4.
4	A revised stormwater management approach that provides for a treatment train approach including lot level controls, while also achieving a water balance and not aggravating existing drainage and groundwater constraints in the area	The proposed SWM plan has been designed as a treatment train approach and includes the following: a clean water collection system for distributed infiltration of roofwater; an oil and grit separator unit providing TSS removal for the site's non-rooftop impervious areas; a dry SWM facility providing stormwater polishing and attenuation prior to discharging to SW01; and passive infiltration of runoff through conveyance of stormwater over grassed/pervious areas. The current design has a surplus of groundwater recharge (greater than a balance); however, this can be adjusted depending on the City's preference at the time of detailed design.

5	That the restoration and enhancement of the area, below the SWM01 outlet and outside of the Hanlon Creek PSW, with additional plantings also incorporate dissipation control measures (including but not limited to consideration of habitat enhancement (e.g. wetland creation)).	Addressed in EIS Addendum dated November 17, 2017 by Aboud. Section 2.5.
6	Considers retention of notable trees on site which contribute to the City's urban forest.	Addressed in EIS Addendum dated November 17, 2017 by Aboud.
7	That the proposed infiltration based stormwater management features, including dry pond, be revisited considering high groundwater fluctuations that cover a representative winter and spring season.	Groundwater levels continue to be monitored to ensure the use of the high groundwater level in the SWM facility and infiltration designs; at this point, these designs use the highest level measured to date. These will be updated in the EIR based on the most recent results.
8	Include a comprehensive groundwater mounding assessment, considering the high groundwater table and proposed additional infiltration at stormwater management pond and infiltration trenches.	Please refer to Soil Infiltration Testing (Englobe Report No. 160-P-0010233-0-07-304-HD-L-0001-03) and Groundwater Mounding Assessment (Englobe Report No. 160-10233-0-08-305-HD-L-0001-02).
9	Recommendations for design alterations should be included as necessary (e.g. contingency for SWM pond storage and slow release).	The SWM facility design attenuates the peak flow rates resulting from all storm events up to and including the Regional storm (Hurricane Hazel). The minimum orifice size recommended by the MOECC and the City of Guelph (75 mm diameter) controls flow rates. Per City of Guelph guidelines, a smaller orifice size is not recommended due to potential clogging and maintenance issues.
10	Include additional continuous groundwater monitoring on site and compare to seasonal groundwater trends on a local and regional scale.	Groundwater levels continue to be monitored. These will be updated in the EIR based on the most recent results.
12	THAT an EIR be required as a condition of approval for the proposed development to ensure implementation of the recommendations of the EIS.	Acknowledged.