

CSU Development - 2nd Submission Comment Responses				
The Biglieri Group Ltd.	November 25 2022	County File: 15T-21007 - Town File: ZBA-09-21, OPA-03-21 Address:787&825 Fallis Line, Millbrook		TBG Project: 20697 TBG Client: CSU Developments
Ref	Item	Comment	Consultant	Formal Response
Cavan Monaghan - Staff Comments July 22, 2022				
Parks, Open Space & Trails	1.0.	What is the intended purpose and connection for Block 383? Where does it connect?	TBG	Now Block 408. Provides connection to buffer / trail block (146) / SWM block (147) in adjacent tower hill south development; which in turn provides connection to rail trail to the south. See TBG Cover Letter for Trails Plan.
	2.0.	Has the proposed trails plans been discussed with ORCA re: the natural heritage features and system? For reference, Section 6.7.1 e) of the OP prohibits development and site alteration within key natural heritage features and hydrogically sensitive features and their related vegetative protection zones, low intensity recreational uses are permitted.	TBG	The rail and surrounding area has not been identified as a KNHF in the EIS. ORCA comments on the latest submission are available and do not indicate that the rail and surrounding lands should be designated as a feature.
	3.0.	Township Staff are of the opinion that there should be more parkland centralized near the high density block(s).	TBG	A larger Park Block (407) has been provided adjacent to Fallis Line and in proximity to the higher density Townhouse Blocks and Mixed Use Block. Connections to the park would be from Street "C", Fallis Line, and Block 404/Street "A".
	4.0.	The revised plan does not address the need for parkland near the high density block. How will this be addressed?	TBG	See above.
	5.0.	Block 381 & 382 are shown as linear park blocks. The consultant should provide a concept drawing as to what is proposed through these blocks and what is the long term plan for these areas (e.g., grassed area, etc.).	TBG	Now Blocks 406 & 407. Details to be provided at detailed design.
	6.0.	The revised plan should show how there will be a connection to Station Trail (property next) show how and type of trail (linkage).	TBG	Connection through Park Blocks 406/7 to existing trail within Natural Heritage Block 405. Block 405 connection to Station Trail. See TBG Cover Letter for Trails Plan.
	7.0.	Trail Blocks 381, 382 should include a trail description. All parkland blocks should include landscape design (i.e., sidewalks, trees, black chain link fence).	TBG	Now Blocks 406 & 407. To be provided at detailed design.
	8.0.	Blocks 383 & 386 are shown as walkway blocks. We need to understand how these are connected to the trail system or if this is proposed.	TBG	Trail connection to be provided in buffer area of NHS Block. See TBG Cover Letter for Trails Plan.
Phasing Plan	1.0.	Apartment building is proposed in last phase – Township Staff would like to see this developed earlier.	TBG	No phasing is proposed at this time. Mixed Use building will require a subsequent Site Plan after draft approval.
	2.0.	As noted in the Township's December 2021 comments, what is the proposed timing and built form (i.e, phasing)?	TBG	No phasing is proposed at this time. Timing is dependant on the 'Fallis East' application and the Master Servicing Study.
	3.0.	A phasing plan is required.	TBG	No phasing is proposed at this time.
Roads/Layout	1.0.	Given the current location of Street D adjacent to Fallis Line, consider additional landscaping requirements between Fallis Line and Street D.	TBG	Street 'D' has been removed.
	2.0.	Fallis Line is to be constructed to urban standard fronting the Development. In this case, both Towerhill North and this draft plan have frontage. The consultant firm is Valdor Engineering and there will need to be co-ordination between both developers to advise who will constructing what part of the underground infrastructure and roadway.	VALDOR	Acknowledged. Coordination will take place to determine cost sharing for each development prior to constructiojn.
	3.0.	This will have to be discussed and agreed upon and in order to complete the subdivision agreement.	VALDOR	Noted.
	4.0.	The road pattern provides for Street G intersecting with Fallis Line. The second intersecting street will be provided through Block 376. The Township needs this intersection in place as part of the development of this plan.	TBG / Asurza	As discussed this connection has been removed as it cannot be aligned and is not necessary per the TIS.
	5.0.	The owner is encouraged to purchase this property in order to facilitate this configuration.	TBG / Asurza	See above.
	6.0.	The lotting should have wider frontages on the intersecting street to minimize future driveways.	TBG	Singles proposed on Street 'G' and on Fallis Line.
	7.0.	For the high rise block (Block 377), has the traffic report been updated to look at this block?	Asurza	Now Block 402. See Response to Peer Review letter from Asurza. Block was previously assumed at 200 units and now assumed at 90. Since the difference in the number of resulting trips are not substantial (no more than 30 trips or no less than 14 trips); the conclusions and recommended actions remain.
	8.0.	Lots 49 & 50 appear to be not buildable as they cut into road/green space. These lots should be reconfigured and the building envelope needs to be shown which may mean that the zoning would have to be modified.	TBG	The parkland block 407 has been re-aligned to address same.

	9.0.	With lots 153, there should be an effort to align the rear lot line to coincide with lots 153 through to lots 158. This would mean reducing Block 385 in order to enlarge these five (5) lots.	TBG	These are now lots 147-141. Current lotting has been maintained based on requirements of the SWM and Servicing Block (403). This revision may be made in the future if the size of Block 403 is reduced (as it currently accommodates wastewater infrastructure as well).
Stormwater Management/Servicing	1.0.	At the present time, there is no sanitary sewer or water capacity available and the results of the master servicing will not be available until later this year. Details of adequate servicing will be outlined through this servicing report. This report will also outline the timing of certain works to provide for this.	Valdor	Will be waiting for results of master servicing study.
	2.0.	As a result, it is premature to comment on the availability or lack of servicing capacity (S. 3.14.6 c) of OP)?	Valdor	Capacity requirements for the development have been provided in the FSR. We will await for the results of the study.
	3.0.	Draft revised Plan does not indicate any space for the potential WWTP. Can Block 385 accommodate both SWM and a WWTP, if required?	Valdor	The space for possible WWTP has been allocated and located at the south end of the south SWM Pond.
	4.0.	The Consultant has provided details supporting two storm ponds for the site. One of the ponds is beside Fallis Line West and will outlet to the new channel in Towerhill North Subdivision. A crossroad culvert on Fallis Line connects the drainage, this culvert needs to be replaced by the Developer.	Valdor	The engineering drawings for the Towerhill North Subdivision provide more details regarding the crossing to the future channel to the north.
	5.0.	The Consultant must verify that the existing flows to this channel will be maintained.	Valdor	The SWM Report provides details that post-development flows to the channel will match the pre-development flows.
	6.0.	The functional servicing report indicates a standalone plant for sanitary servicing, but the report also shows part of the sanitary drainage being directed to the existing sewers through to our present plant. This report will need to be updated after the master servicing report is finalized.	Valdor	Acknowledged. Once capacity restrictions are understood adjustments will be made as to where the flows should be distributed.
	7.0.	Servicing (connection to WW plant or private) if private where is the location?	Valdor	WWTP will be public facility located at south end of south SWMP
Planning	1.0.	What is the status of the archaeological report?	TBG	Report expected in December 2022 and will be provided when available.
	2.0.	What is status of the record of site condition for the former rail lands?	GHD	<p>Per previous comments from Stantec, being the County's peer reviewer (dated September 29 2021) a RSC is not required.</p> <p>Further GHD's previous response on this matter (from the Feb 2 2022 response to comments memo) is copied below.</p> <p><i>"It is GHD's position that a Record of Site Condition (RSC) is not required for the former railway line. The historical rail line has been used as a parkland property use for about 100 years as a private trail for recreational activities. Once developed, the majority of the trail will remain parkland with a short section to be developed for residential purposes. Based upon this current property use and the future use after development, it is our opinion that a RSC is not required.</i></p> <p><i>Within Ontario Regulation 153/04: Records of Site Condition – Part XV.1 of the Act (under the Environmental Protection Act, Section 168), there are exemptions to the changes of use that require an RSC. As defined within Section 168.3.1 of the Act, a change in use from industrial or commercial to residential or parkland cannot occur without an RSC. However, based on the exemption under s.168.3.1 (1) (a) of the Act, the property can be changed from a railway line to a trail used for recreational activities without an RSC. Regardless of this exemption, it is our professional opinion that an RSC does not apply since the development is changing property use from agricultural and / or parkland to residential use. An RSC is not required for this property use change.</i></p>

				<p><i>Stantec Previous Comment:</i> After development, the majority of the private trail will continue to remain as parkland and trails. There are lots that will be developed within the former rail line (Lots 51 to 59 on Street B), however, there was no evidence observed of any former rail line materials (ballast, rail ties, rails etc.) in any of the areas reviewed on this Site. Within proposed Lots 51 to 59, this area has been previously excavated and is lower than the surrounding terrain. Further north along the historical rail alignment, a gravel driveway has replaced the rail line to access the residential home. It remains our opinion that the former rail line presents a very low level of concern from an environmental site assessment perspective and is suitable for development without an RSC. We are in agreement with the Stantec comment #22 that the historical rail line PCA is not likely to contribute to an APEC, negating the rationale for an RSC. "</p>
	3.0.	The Planning covering letter says that the 4 storey building is residential. MZO indicates this area is part of commercial mixed zone. How will this plan implement the MZO in this regard?	TBG	See attached plan revised to be consistent with the MZO. Now proposed as a mixed-use building.
	4.0.	The OPA needs to address the issue of 4 storeys.	TBG	Noted. Was included in previous list of OPAs. List of OPAs re-submitted as appendix to TBG cover Letter.
	5.0.	Architectural control will be applied and included as a draft plan condition.	TBG	Noted.
Canada Post - July 29 2021				
Service type and location		Canada Post will provide mail delivery service to this development through centralized mailroom (Lockbox Assemblies) and Community Mailboxes.	TBG	Noted.
		Apartment Building(s): If this project has plans for buildings with more than two adjoining units, sharing a common indoor entrance, the developer/owner must supply, install and maintain a centralized mail room facility to Canada Post's specifications. Buildings with more than 99 self-contained units require rear loading lockboxes. Assisted Living units (if any) will require further review to determine appropriate delivery mode.	TBG	Noted.
		Detached/Semi/Townhouses dwellings: Will be serviced through Community Mailbox. The location of these sites are determined between my department (Canada Post Delivery Planning) and the Developers appointed Architect and/or Engineering firm.	TBG	Noted.
		If this development includes plans for (a) multi-unit building(s) with a common indoor entrance, the developer must supply, install and maintain the mail delivery equipment within these buildings to Canada Post's specifications. Please see attached linked for delivery standards: http://www.canadapost.ca/cpo/mr/assets/pdf/business/standardsmanual_en.pdf	TBG	Noted.
Developer timeline, obligations and installation	1.0.	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.	CSU	Will provide.
	2.0.	If applicable please ensure that any street facing installs have a depressed curb or curb cut. Contact Canada Post Corporation – Delivery Planning for further details.	TBG	Noted.
	3.0.	If applicable please ensure that any condominiums apartments with more than 99 units, incorporates a mailroom with rear loading lock box assemblies (mailboxes).	TBG	Noted.
	4.0.	Finally, please provide the expected first occupancy date and ensure the future site is accessible to Canada Post 24 hours a day.	CSU	Will provide.
Enbridge Gas - March 1 2022				
	1.0.	Enbridge Gas Inc. has no changes to the previously identified conditions for this revisapplication(s).	TBG	Noted.
Kawartha Pine Ridge DSB - August 5, 2021				
		It is anticipated that this development will generate approximately 200 elementary students. The local elementary school, Millbrook/South Cavan is experiencing accommodation pressure. KPR has optioned a school site situated to the north of Fallis Drive in the proposed development known as Towerhill North (County File No. 15T-18002). This site will be critical in the accommodation of the students being generated by this proposal and the on-going residential development activity in the area. It should be noted that students generated from this development may need to be accommodated outside of the local school catchment area, until such time as a new elementary school is constructed.	TBG	Noted.
		KPR Planning staff have no objections to the proposed draft Plan of Subdivision.	TBG	Noted.
		KPR Planning staff would like to request the following conditions be included as part of draft plan approval: "Prior to the final approval of the draft plan, Kawartha Pine Ridge District School Board (KRP) shall be satisfied that appropriate clauses are contained within the Subdivision Agreement registered on title as follows:	TBG	Noted.

		i. All offers of purchase and sale shall contain a statement advising prospective purchaser(s) that accommodation within a public school in the community is not guaranteed. Attendance at schools yet to be constructed in the area is also not guaranteed. Students may be accommodated in temporary facilities; including but not limited to accommodation in a portable classroom, a “holding school”, or in an alternate school within or outside of the community.	TBG	Noted.
		ii. All offers of purchase and sale shall include a statement advising prospective purchasers that if school buses are required within the development in accordance with Kawartha Pine Ridge District School Board Transportation policies, as may be amended from time to time, school bus pick up points will generally be located on the through street at a location as determined by the Student Transportation Services of Central Ontario; and that additional pick-up points will not be located within the subdivision until major construction activity has been completed.	TBG	Noted.
		iii. That the Owner(s) shall agree to provide a pedestrian walkway or dedicated pedestrian use only area throughout the proposed subdivision to accommodate and promote safe walking routes. To clear this condition, KPR staff will require a copy of the proposed plan and details for the pedestrian route prior to entering into the Subdivision Agreement. Any Subdivision Agreement shall reflect these proposed plans and details.	TBG	Noted.
		iv. The Owner shall supply, erect and maintain signs at all major entrances into the new development advising prospective purchases that pupils may be directed to schools outside of the area. The Owner will make these signs to the specification of the Kawartha Pine Ridge District School Board and erect them prior to the issuance of building permits.	TBG	Noted.
		v. The developer agrees that, should the development be phased, a copy of the phasing plan must be submitted prior to final approval to the Kawartha Pine Ridge District School Board. The phasing plan will indicate the sequence of development, the land area, the number of lots and blocks and units for each phase.”	TBG	Not Applicable at this time.
MTO - February 18 2022				
		The lands subject to the proposed draft plan of subdivision are outside MTO’s permit control area. Therefore, the ministry does not have any comments on the proposal.	TBG	Noted.
ORCA - Ecology - March 11, 2022				
	1a)	GHD informed technical staff on December 8, 2021, that the wetland, characterized by ELC communities 10 & 11 (fronting Fallis Line) has already been removed. Neither GHD nor technical staff have been on site to confirm current conditions of this wetland. Therefore, more information is required prior to confirming a management option for this wetland.	GHD (EIS)	GHD verified the presence of wetland communities 10 and 11 when completing other field work in this area.
	1b)	Wetland avoidance or rehabilitation of disturbed wetlands are the preferred solutions to keep features in situ – this is consistent with the intent of provincial and regulatory policies	GHD (EIS)	Acknowledged.
	1c)	If ELC communities 10 & 11 no longer meet the definition of a wetland (Conservation Authorities Act), an ecological offsetting plan consistent with the “Ecological Offsetting Policy” (2019, Lake Simcoe Region Conservation Authority) and “Guideline for Determining Ecosystem Compensation” (2018, Toronto and Region Conservation) is required to offset functional loss in support of an Otonabee Conservation permit.	GHD (EIS)	As identified previously community 10 and 11 would still be considered wetland.
	1d)	Technical staff recommend the following information from GHD for review to determine whether wetland offsetting can be supported as a viable option for this site:	GHD (EIS)	Acknowledged
		i. Confirm current functional condition of wetland communities 10 & 11 – what happened to the wetland? Does this feature still meet the definition of a wetland according to the Conservation Authorities Act?	GHD (EIS)	Wetland 10 and 11 are still present on the site and still meet the definition of a wetland according to the Conservation Authorities Act. A site visit in Sept 2022 found that the wetland had changed with more upland species, and less evidence of water.
		ii. Please confirm soil characteristics in this wetland, i.e., presence/absence of unstable organic soils and seeps (previous technical reports indicate this wetland contributes to downstream flows through a culvert under Fallis Line).	GHD (EIS)	Wetland communities 10 and 11 in the north side of site had clay and silty clay soils with some ponding in spring. There was some drainage northwards to a culvert. A recent site visit in September 2022 found that with development to north of Fallis Line, drainage has been rerouted. The wetland itself was dry with changes to more upland vegetation including buckthorn noted since our original surveys. No organic soils or seeps were observed. It appeared to be only seasonal ponding in spring from snowmelt and surface water.

		iii. Triage management options for this wetland using the “Evaluation, Classification and Management of Headwater Drainage Features Guidelines” (2014, Toronto & Region and Credit Valley Conservation Authorities) in consideration of the mitigation hierarchy (avoid, minimize/mitigate, restore, offset). Can this wetland be rehabilitated? How is/will the hydrologic function be managed in this area if the feature is gone/removed? What are the appropriate setbacks for residential lots and SWM infrastructure in this area? What are the potential impacts/risk to the adjacent features in the proposed compensation area?	GHD (EIS)	Wetland 10 and 11 are not part of a headwater drainage feature nor are they connected to any surface water features or other wetlands, as an isolated feature. This Guideline is to be used to assess head water drainage features specifically, therefore the application does not directly apply to wetlands alone. GHD did look at preserving wetland and options in the hierarchy, as in our EIS , removing the feature and compensation to the south of the proposed subdivision footprint was recommended. The main reason being changes in the area with current development and grading plans that would significantly affect the hydrology. The compensation location receives surface water input and possible some seepage once it is excavated.
		iv. Otonabee Conservation recommends new development, including new residential lots and SWM infrastructure, be setback at least 30-metres from a wetland boundary to protect the integrity of wetland functions and mitigate risk to people and property. Please recommend the preferred wetland management option and demonstrate how this option is consistent with PPS policies 2.1.1, 2.1.2, and 2.2.1 c) and e) or satisfied Otonabee Conservation wetland policies 2.3.2, 7.1(1, 2, & 6) and 7.2(4, 10, & 16).	GHD (EIS)	The wetlands proposed for removal are not provincially significant wetlands, nor are they part of a natural heritage system therefore in compliance with the Provincial Policy Statement (2020). The compensation location is outside the 30 m wetland buffer. Detailed design of the compensation wetland, construction including hydrologically sources and monitoring can be prepared as a condition of approval.
	1e)	If offsetting is the preferred solution, additional technical work is required to confirm the appropriateness of the proposed compensation area to support long-term hydrologic functionality of the new wetland – this requires soil profiling as discussed in the December call.	GHD (EIS)	Acknowledged. Soil information will be collected and can be provided as part of detailed design.
	2a)	Is this the SWM outlet within Block 382 to support SWM pond in Block 385 (see January 2022 FSR Figure 5B)?	Valdor	Correct. As per previous ORCA engineering Comment 7 (September 30, 2021), it was requested that the South SWM Pond headwall and outlet pipe be relocated out of the 30 m wetland buffer. The only way to accommodate this request was to shift the headwall to outlet to the existing railway in order to achieve the necessary discharge elevations (the existing grade elsewhere outside of the buffer is too high).
	3a)	Without soil information, the accuracy of the ELC ecosites and presence/absence of hydric or unstable soils (organics) cannot be confirmed or validated by field technicians or technical staff – this includes validating the EIS Addendum maps recently submitted (see point #1 e)).	GHD (EIS)	Acknowledged. Soil information will be collected and can be provided as part of detailed design.
ORCA - Engineering - April 6, 2022				
	1.0.	As per the Response Matrix, page 15, ORCA Engineering Comment #2, drainage area 1-201 will be sized with an impervious value of 75%.	Valdor	We confirm that Catchment 1-201 is sized with an imperviousness of 75%
	1a)	On page 13 of the report, the North Pond permanent pool sizing applies 60% impervious to the MECP sizing table 3.2. Please modify the calculation and apply 75% impervious.	Valdor	The North SWM Pond will receive drainage from Catchment 1-201 (75% impervious) as well as external Catchment 1-301 (0% impervious). The area-weighted imperviousness is 59.2%, rounded up to 60%. The assumed imperviousness for the permanent pool calculation has not been changed.
	1b)	Using 75%, the calculation from MOE Table 3.2 generates 233m3/Ha for wet pond. Removing the 40m3/Ha for wet pond, the required volume is 193m3/Ha. Please correct report.	Valdor	See response above.
	1c)	The permanent pool storage volume will be 193m3/Ha x 23.89 Ha = 4611 m2. Please correct report and associated calculations.	Valdor	See response above.
	2.0.	The placement of the north stormwater management pond and associated road and lot limits are on top of and within the wetland boundary and required buffer. All development should be located outside the wetland boundary and associated minimum 30m buffer. Please review the location of the pond, road and lots with ORCA Ecology comments of the EIS. Development layout changes may be required.	GHD (EIS)	GHD did look at preserving wetland and options in the hierarchy, as in our EIS, removing the feature (Wetland 10 and 11) and compensation to the south of the proposed subdivision footprint was recommended. The main reason being changes in the area with current development and grading plans that would significantly affect the hydrology. The compensation location receives surface water input and possible some seepage once it is excavated. All wetland on the south of the site are outside the 30m wetland buffer.
	3.0.	What requirements does MECP have regarding the outlet pipe location in regard to the discharge from the wastewater treatment plant?	Valdor	An application will be made to the MECP at detailed design for their review.
	3a)	Does the effluent from the plant need to discharge directly into a permanently flowing watercourse?	Valdor	See response above.
	3b)	Is effluent from the plant allowed to drain (as sheet flow) across and through a wetland before entering the watercourse?	Valdor	See response above.
Detail Design	1.0.	Proposed wastewater treatment plant	Valdor	

Stage:

1a)	The increase in impervious area representing the proposed wastewater treatment plant has not been included in the post development drainage areas. The impervious area should represent the full future built-out of the plant.	Valdor	The proposed wastewater treatment plant is included within the SWM pond block. To be conservative, an imperviousness of 75% was assumed for the SWM block, to account for the plant's impervious area, as indicated in Table E.5-B .
1b)	Based on the Preliminary Grading Plan, the surface runoff from the treatment plant does not drain into the south swm pond. Please adjust the post development drainage areas on Figure 4B SWM Drainage Plan Post-Development.	Valdor	We confirm the intent is to have the wastewater treatment plant drain to the SWM pond. The design will be refined at detailed design once the final design of the wastewater treatment plant is available.
1c)	Please adjust drainage area 2-202 to include the impervious area from the treatment plant.	Valdor	See response to Comment 1a.
1d)	Please adjust the VO model i. The reduction in drainage area 2-201, ii. The increased impervious and hydrologic parameters for area 2-202, iii. Revised comparison of post to pre-development flows.	Valdor	The VO model, report and calculations have been revised accordingly.
2.0.	Overland flow route from Street B to north stormwater management pond	Valdor	
2a)	How are the major overland flows conveyed from Street B to the stormwater management pond across Block 381?	Valdor	The draft plan has been revised to show a park block at this location. Flow will be conveyed through the park (possibly in a channel or other landscaped feature), to be designed at the detailed design stage.
2b)	Please provide grading information for the overland flow route.	Valdor	Grading details will be provided at detailed design.
2c)	Please delineate the extent of surface ponding at the intersection of Street B and Street C.	Valdor	Ponding extents will be calculated and provided at detailed design.
3.0.	The 3:1 slope indicator as delineated along the west and south side of the north stormwater management pond are in the wrong direction.	Valdor	Along the south and west sides of the pond, the proposed grade will be above the top of pond. Along the north and west sides, the top of pond will be above the existing grade. The slope indicators match this.
4.0.	Table E-6-A Stage-Storage-Discharge Table – North SWM Pond	Valdor	
4a)	The orifice # N-2 diameter is shown as 1.5m. The orifice area is shown as 0.60m. However, a 1500mm orifice would have an area of 1.76m2. i. Please replace the 1.5m diameter with the appropriate orifice size that generates 0.6m/s of area and passes 1.009m3/s with a head of 0.6m. ii. What is the invert of the orifice tube?	Valdor	As indicated in Table E.6-A and Figure 5A , Orifice #N-2 is a rectangular orifice with width 1.50 m and height 0.40 m. The area is therefore 1.50 m x 0.40 m = 0.60 m2.
4b)	Please provide a cross-section of the north swm pond including outlet structure and all relevant invert elevations and notes.	Valdor	Cross-sections will be provided at detailed design.
5.0.	Table E-6-B Stage-Storage-Discharge Table – South SWM Pond	Valdor	
5a)	The orifice # S-2 diameter/length is shown as 1.0m. The orifice area is shown as 0.40m However, a 1000mm orifice would have an area of 0.7850m2 i. Please replace the 1.0m diameter/length with the appropriate orifice size that generates 0.4m2 of area and passes 0.672m3/s with a head of 0.6m.2 ii. What is the invert of the orifice tube?	Valdor	As indicated in Table E.6-B and Figure 5B , Orifice #S-2 is a rectangular orifice with width 1.00 m and height 0.40 m. The area is therefore 1.00 m x 0.40 m = 0.40 m2.
5b)	Please provide a cross-section of the south swm pond including outlet structure and all relevant invert elevations and notes.	Valdor	Cross-sections will be provided at detailed design.
6.0.	South SWM Pond – Figure 5B	Valdor	
6a)	Figure 5B Preliminary South SWM Pond delineates a 10m emergency spillway. Table E-6-B sizes a 20m wide weir. Please determine what the emergency spillway width will be and modify the drawings and calculations.	Valdor	The drawings and calculations have been revised to indicate a 20 m wide emergency spillway.
7.0.	The culvert calculator report for the north swm pond outlet pipe sizes a 1050mm concrete pipe. Figure 5A displays an 825mm pipe.	Valdor	The design of the SWM pond outlet pipe has not yet been finalized. For consistency with the SWM Report, the preliminary plans have been revised to identify the pipe as 1050 mm dia.
7a)	What is the actual size of the outlet pipe?	Valdor	See response above.
7b)	Please adjust the drawings and calculations to match.	Valdor	See response above.
8.0.	The north and south stormwater management wet ponds will require a liner based on the borehole and groundwater information. Please delineate a liner (along with associated notes) along the entire length of the wet ponds, to a minimum elevation of the 100-year water elevation on the cross-sections to be located on the Grading Plan(s).	Valdor	Liner details to be provided at detailed design.
9.0.	Water Balance	Valdor	

	9a)	Downspout disconnection, top soil depth and reducing grades are standard design practices. However, based on the following design flaws, this method will not be used within the water balance calculations. i. The lawn area associated with the lot has already been accounted for in the calculations. Adding an additional 0.3m of topsoil and including this area is double-dipping the same area – doesn't mean it will absorb double the amount of water on the standard slopes. ii. The downspout disconnect does not spread water across the entire lot area. Is generally pointed to the side-yard swale and drains along a very narrow path.	Valdor	The water balance calculations and LID design will be revised at detailed design.
	9b)	All low impact development practices to meet water balance criteria will be directing surface water into infiltration features such as soakway pits and/or infiltration trenches.	Valdor	See response above.
	9c)	Confused with the statement provided within the #11 Matrix Valdor reply 'Given the relatively shallow groundwater depths within the subject development, the location where infiltration trenches or soakaway pits can be implemented in order to achieve the minimum required separation to groundwater will be highly dependent on the final grading design'. Which is generally not consistent with the observations from GHD based on their borehole and groundwater investigation	Valdor	See response above.
	9d)	A combination of soak-away pits and infiltration trenches should be designed to capture the required volumes of water needed for the water balance calculations.	Valdor	See response above.
	10.0.	The Erosion and Sediment Control Erosion and Sediment Control - Appropriate erosion and sediment control plans will consist of a multi-barrier approach that will prevent erosion during the construction process to deal with suspended sediment at the source and minimize sediment transport from leaving the construction site.	Valdor	Erosion and sediment control plans will be provided at detailed design.
	10a)	Sediment controls have been categorized into three sections. Each phase of construction will have an erosion and sediment control plan and will implement the following criteria: ▪ Perimeter Controls, ▪ Settling Controls; and, ▪ Filtration Controls	Valdor	See response above.
	10b)	ESC Plans are required for each phase of construction: ▪ Site stripping / rough grade ▪ Base roads / services construction ▪ House / building construction ▪ Protection of LID Feature(s) ▪ Sequencing of works and all appropriate notes.	Valdor	See response above.
ORCA - Planning - April 6 2021				
	1.0.	In the first submission hydrologic features with associated floodplain, and steep slopes were found on the subject site. The 2 submission has addressed this concern. Therefore, it is the opinion of Otonabee Conservation that the applications are consistent with PPS Section 3.1 regarding flooding and erosion (hazardous lands). Technical issues have been identified and are articulated in the accompanying memo (Engineering Review dated April 6, 2021).	TBG	Noted. See responses above.
	2.0.	As noted, there are natural heritage features of significance present on the subject property and the adjacent lands.	GHD (EIS)	Acknowledged.
		The current design indicates the placement of the northern SWM infrastructure, associated road and lot limits are within a non-evaluated wetland boundary. ORCA recommends that development and/or site alteration not be permitted within 30 metres of the boundary of a non-provincially significant wetland.	GHD (EIS)	GHD did look at preserving wetland and options in the hierarchy, as in our EIS, removing the feature (Wetland 10 and 11) and compensation to the south of the proposed subdivision footprint was recommended. The main reason being changes in the area with current development and grading plans that would significantly affect the hydrology. The compensation location receives surface water input and possible some seepage once it is excavated. All wetland on the south of the site are outside the 30m wetland buffer.
		Wetland avoidance or rehabilitation of disturbed wetlands are the preferred solutions to keep natural features in situ. However, with the approval of the MZO, the Conservation Authority and the applicant are required to enter into a Compensation Agreement, as per subsections 28.01 (24) and (25) of the Conservation Authorities Act. The Compensation Agreement shall set out requirements to address ecological, and any other impacts which may result from the development project.	GHD (EIS)	Acknowledged. See comments and responses above.
		The application has not yet demonstrated consistency with Section 2.1 and 2.2 of the PPS, due to a lack of information around the proposed removal and compensation of the northern wetland. However, as the property is subject to an MZO, these questions will be addressed at the detail design stage. Please review the accompanying technical memo (Ecological Review dated March 11, 2022).	GHD (EIS)	Acknowledged. See comments and responses above.

	3.0.	The proposed development is subject to Ontario Regulation 167/06, Otonabee Conservation's "development, interference with wetlands and alterations to shorelines and watercourses" regulation. As per Section 28.0.1 (3) of the Conservation Authorities Act, Otonabee Conservation, will continue to work with the developer in order to grant a permission for site alteration and construction in these areas.	TBG	Noted.
	4.0.	The application was also reviewed in consideration of the SPP. It was determined that the subject property is not located within an area that is subject to the policies contained in the SPP.	TBG	Noted.
Stantec - Engineering - April 1 2022				
	2a)	Valdor's above response is satisfactory and no further comments.	Valdor	Noted
	3a)	Valdor's above response is satisfactory and no further comments.	Valdor	Noted
	3b)	Valdor's above response is satisfactory and no further comments.	Valdor	Noted
	3c)	Valdor's above response is satisfactory and no further comments.	Valdor	Noted
	3d)	Valdor's above response is satisfactory and no further comments.	Valdor	Noted
	4a)	Valdor's above response is satisfactory and no further comments.	Valdor	Noted
	6a)	Valdor's above response is satisfactory and no further comments.	Valdor	Noted
Commentary on new information	3.0.	Stantec sees this approach as being reasonable and has no further comments on this Section.	Valdor	Noted
	4.0.	Stantec has no further comments on this Section.	Valdor	Noted
	5.0.	Stantec has no further comments on this Section.	Valdor	Noted
Stantec - TIS - April 5 2022				
	2.1.	In this TIS report, "Millbrook Development Phase 2 – Traffic Impact Study for the Tower Hill Development Ltd." prepared by JD Engineering was mentioned several times as a reference to provide information (e.g., development names, site generated trips, etc.) on some developments which are adjacent to this proposed residential site. In the previous peer review letter, it was recommended to include this full JD Engineering report as an appendix in this proposed residential TIS report or excerpts including referenced information to explain the details of trip generation based on these adjacent developments along with the trip generation volumes directly used in the volume tables in Appendix B. However, the updated TIS report still does not include this reference. Stantec recommended that the Consultant should insert this report as an appendix and additional review based on this report is needed.	Asurza	The full JD Engineering Traffic Report has been sent to the peer reviewer already; therefore, the complete source of information is provided.
	3.1.	In Appendix E, the name of this appendix is Synchro Reports Background Horizon Year 2030. However, the contents included in this appendix are not synchro outputs. This appendix needs to be updated.	Asurza	The Appendix E; was mistakenly duplicated from previous appendix. The proper one is included in memo dated November 16, 2022.
	4.1.	Under Section 4.3 Trip Distribution/Assignment in this TIS report, directional traffic patterns were estimated from the traffic data report obtained from the County and turning movement count reports included in the JD Engineering's TIS report. As mentioned in Section 2.1 of this letter, no details of trip distribution based on this information were included as an appendix in the updated TIS report. It is difficult to understand the methodology used to calculate all trip distribution percentages shown in Appendix F Trip Distribution without having access to the source information.	Asurza	The full JD Engineering Traffic Report has been sent to the peer reviewer already; therefore, the complete source of information is provided.
	5.1.	In Section 5.4 of the updated TIS report, some auxiliary lanes at the CR10 & Larmer Line and the CR10 & Fallis Line intersections were recommended for the total traffic scenarios. The left and right turn lane warrants for these lanes need to be provided. It is recommended to add more descriptions in the updated TIS report on turning lane warrant analysis details (e.g., an individual appendix with analysis details based on TAC guidelines) in Section 5.4, instead of only listing all recommended configurations in Section 6. It will also be beneficial to see if traffic operational performance will be acceptable (e.g., LOS D or better) with the traffic signal installation only for all background and total traffic scenarios without lane configuration improvements.	Asurza	The County of Peterborough Traffic Impact Assessment Guidelines indicates the use of the Geometric Design Standards for Ontario Highway (GDSOH) to evaluate the need for left turn lanes; however, the methodology is applicable to unsignalized intersections and not for traffic-controlled intersections. The GDSOH, which is currently part of the TAC Manual, has very limited information on traffic-controlled intersections. The same for the need of right turn lane/taper, which the county suggest the use of the Virginia Department of Transportation warrant criteria. The consulted guidelines for signal-controlled intersections is the Ontario traffic Manual (OTM). Based on this guideline, it was identified extreme congested conditions without auxiliary lanes (v/c greater than 4.0). Due to the relative high volumes on Fallis line turning left, there is an imperative need of auxiliary lanes and traffic signals to properly control the intersection. It is suggested the County of Peterborough Traffic Impact Assessment Guidelines be updated with current guidelines and standards.

	6.0.	<p>For the whole TIS report, it is recommended to add Appendix References in the related sections for reviewer's convenience.</p> <p>Based on the above, this updated TIS report prepared in support of the proposed residential development (West of CR10) was found to require supporting document along with the turning lane warrant analysis details, as listed in the previous sections of this letter. It is recommended for the Peterborough County to request the information to be provided in an updated TIS report or as an addendum to address the issues brought to light in this Peer Review letter.</p>	Asurza	<p>With the complete source of information and further concepts provided here, I trust the additional information provides better overview of our findings.</p>
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