

# WHITE ROSE DUNDALK PHASE III | COMMENTS & RESPONSE MATRIX V.1

(TOWNSHIP OF SOUTHGATE) FILE NO. 42T-2018-08

WHITE ROSE PARK

COMMENTS RECEIVED FROM THE FOLLOWING DEPARTMENTS/ AGENCIES:

NO. (TOWNSHIP OF SOUTHGATES) DEPARTMENTS

NO. EXTERNAL AGENCIES

1.0 PLANNING DEPARTMENT | APRIL 6, 2020

2.0 GRAND RIVER CONSERVATION AUTHORITY | APRIL 28, 2020

NO.	COMMENTS	RESPONSE	ADDRESSED	CNSLT. RESPONSIBLE
1.0	PLANNING DEPARTMENT			
	APRIL 6, 2020   CLINTON STREDWICK (519) 923-2110 ext. 235			
	<i>Snow Storage Plan</i>			
1.1	The Township provided an example of a snow storage plan. The Township will require a snow storage plan for the proposed development.	A snow storage plan will be provided similar to example as part of detailed design.		Triton

NO.	COMMENTS		RESPONSE	ADDRESSED	CNSLT. RESPONSIBLE
					
2.0 GRAND RIVER CONSERVATION AUTHORITY					
APRIL 28, 2020   LAURA WARNER (519) 621-2763 ext. 2231					
<i>Draft Hydrogeological Assessment:</i>					
2.1	1.	<p>The area used to calculate the total water budget for the existing conditions and proposed development has not been clearly provided in the assessment. The wetland area should be excluded from the total water budget calculations in order to assess the hydrologic changes to the wetland resulting from the proposed development. If the wetland area has been included in these calculations, a new water budget calculation will be required just for the area proposed to be developed.</p>	<p>The water budget will be recalculated without the wetland.</p>		Peto MacCallum
2.2	2.	<p>The impervious area used to calculate the water balance for the proposed development is 40%. This percent impervious does not provide a practical or conservative measure of the impervious cover typically found in similar subdivision developments. It is recommended to use 50-55% imperviousness in water budget calculations for this density of development. As such, the water balance calculations should be updated to reflect an increased impervious area.</p>	<p>Triton has recalculated the percent imperviousness of the developed area (i.e. same area used for water balance calculation), and estimates it at 47%. Based on previous comment the new WB calc area won't include the wetland, will include the buffer and the SWM block. This will allow Peto to update their calculation.</p> <p>Impervious area is an estimate. WB to be required as a condition of the draft plan of subdivision and confirmed</p>		Peto MacCallum & Triton

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			from detailed engineering design with the final plan layout.		
2.3	3.	<p>The water balance analysis appears to follow accepted principles of the Thornthwaite Method, however the conclusion that discharge of roof leaders to pervious surfaces is sufficient for mitigation of the excess runoff is not acceptable. Because home owners in modern subdivisions have no desire to tolerate standing water within their lots, grading is designed to efficiently convey roof water directed to lawn surfaces, either along narrow swales between houses to streets, or along rear yard swales to catchbasins. Given that compaction does occur during area grading. As we are unable to support a water balance relying on the discharge of roof runoff over pervious surfaces alone, we request that it be revised to include proper infiltration BMPs to clearly demonstrate the potential to capture the excess runoff generated as a result of the proposed development and enhance infiltration within the proposed development area. All proposed infiltration LID structures should be clearly demonstrated on the proposed Draft Plan of Subdivision.</p>	<p>Action item: further clarification is required from GRCA on:</p> <ul style="list-style-type: none"> <li>i) Which objective GRCA is looking to address re LIDs (soak away pits) – overall water balance or wetland recharge.</li> </ul> <p>At this stage, we are able to provide a general strategy including potential siting and provide typical installation detail for GRCA’s review. As detailed grading and servicing may impact the locations of soak away pits, we are not able to provide details on location of proposed pits until detailed engineering design is complete. Accordingly, this level of detail can be provided as a condition of draft plan of subdivision approval and will be reviewed by GRCA prior to clearing such condition. If a predominantly sandy soil (&gt;40% sand) is specified for the fill and it is of sufficient thickness, we could apply a larger infiltration factor in the water balance</p> <p>As a preliminary water balance, mitigation is no longer shown.</p>		Peto MacCallum & Triton
2.4	4.	<p>We recommend continuing to monitor groundwater elevations to confirm the seasonally high groundwater elevation in order to design infiltration structures and the stormwater management facility. We note that safety factors are to be applied to the infiltration rates in the sizing of infiltration structures. Please refer to Appendix C, Section C2.4 of the TRCA and CVC publication: <i>Low Impact Development Stormwater Management Planning and Design Guide, 2010</i>, available from the Sustainable Technologies website.</p>	<p>Peto should review the current data base of monitoring, since if there GW levels are basically at/near the surface is there any point in continuing the monitoring.</p> <p>Given the seasonal high GW levels which currently exist, we are concerned that infiltration trench clearances cannot be accommodated above the high GW year</p>		Peto MacCallum & Triton

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			<p>around. But we contend that having recharge when the GW is at high levels is not a priority and providing the recharge during low GW period is what is important. Given this, we design the LIDs on this basis and achieve design clearances and safety factors as feasible/practical. Also, it should be noted that the site is intended to be raised significantly, so there will be opportunity to achieve clearance from the high groundwater level to accommodate subsurface LID structures.</p> <p>PML agrees that an additional round of monitoring will help solidify the findings, and aid in design for low GW seasons. Ground water level monitoring is ongoing.</p>		
	<i>Stormwater Management Facility</i>				
2.5	5.	The developed modelling files should be provided digitally.	This can be provided via e-mail directly to the GRCA.		Triton
2.6	6.	Please provide a summary table for developed modelling parameters for each sub catchment, including percentage of imperviousness, flow length, depression storage values and sub catchment manning coefficients.	This has been provided		Triton
2.7	7.	Please provide modelling schematics for the existing and proposed conditions hydrologic model.	This has been provided		Triton
2.8	8.	As no discussion has been provided on the SWM pond outlet, a preliminary pond design will be required.	Triton has included preliminary design details for the SWM facility and outlet		Triton
2.9	9.	The 1:2 year flow should be modelled for existing and proposed conditions, and the outflow from the stormwater management facility should be controlled to pre-development flows. This is return period flow is generally indicative of the most impactful stream erosion/bankfull flow events and post to pre-development flows should be maintained for this return period flow.	Triton has included the 2 Year event in the current FSR.		Triton

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2.10	10.	The impervious area used in the hydrologic model for the proposed development is 35%, which in general is too low based on typical development densities. To ensure that the SWM block is adequately sized, it is recommended that a 50-55% impervious area be utilized. Please update the hydrologic model to reflect the increased impervious area.	Triton has further detailed the SWM design and adjusted imperviousness to reflect the current DP configuration.		Triton
2.11	11.	Please provide surface water flow direction on a post development drainage plan. We note the SWM facility appears to outlet directly to the watercourse and not to the larger wetland feature. Therefore, there is a concern that that surface water contributions to the wetland may be significantly altered in terms of input locations and quantity.	<p>Surface water flow direction has been provided on the post development drainage plan.</p> <p>We have reviewed the feasibility of directing the SWM outfall to the wetland, however, existing topography will not allow this. However, the rear yards and roofs of Blocks 10/11 will be directed to the wetland. Also, rear yards and roofs on lots 13-17 will be graded to discharge to recharge structures within the wetland buffer to the extend feasible.</p>		Triton
<i>Natural Heritage Comments:</i>					
The Wetland Hydrological Analysis uses the Draft Plan dated January 16, 2020 for the analysis, not the current Draft Plan dated April 21, 2020. Therefore, it is unclear how the current Draft Plan would change the findings and recommendations of this report. A single, complete EIS should be provided in the subsequent submission to support the most up-to-date Draft Plan.					
2.12	12.	The <i>Wetland Hydrological Analysis</i> poses the following questions: "Will construction result in a significant change to the ground water contribution to the wetland? Either the amount, temperature and/or water quality? Are the current infiltration rates of water entering the site vastly different than the infiltration estimated after construction?" However, the analysis does not fully address these questions besides largely relying on the proposed 30m wetland buffer to mitigate the hydrogeological impacts. Since the Draft Plan has been revised with a substantially smaller setback, these questions will need to be re-evaluated and addressed for the current proposed wetland buffer.	Wetland Hydrological Analysis added detail was obtained from PML. Both GW and SW analysis is incorporated into final that responds to current draft plan with senior block vs. road adjacent to wetland.		SAAR

NO.	COMMENTS		RESPONSE	ADDRESSED	CNSLT. RESPONSIBLE
2.13	13.	<p>The <i>Draft Hydrogeological Site Assessment</i> prepared by Petro MacCallum Ltd., estimates the 'Dewatering Zone of Influence' to be 32m. As such, dewatering closer than 32m from the wetland would have hydrologic impacts on the wetland and should be avoided. The revised EIS will need to address dewatering impacts to the wetland feature, as no dewatering within 30m of the wetland is recommended.</p>	<p>"Dewatering Zone of Influence to be 32 m" – how does it interact with the road? Variable during different seasons.</p> <p>The Zone of influence is preliminary, and should be reassessed based on the final location and inverts of buried services. Also, if construction dewatering is restricted to the lowest GW periods, the Zone will be shorter.</p> <p>Dewatering Zone of Influence of 32 m data reflective of prior road adjacent to wetland is not required with the senior block proposed. Mitigative windows for excavation on site in general have already been included in the report to avoid periods of peak GW.</p>		SAAR & Peto MacCallum
2.14	14.	<p>No discussion has been provided regarding the extent of grading required for the proposed road 12.2m away from the wetland. As a result, a preliminary grading plan will be required to demonstrate the existing and proposed grades for the road adjacent to the wetland with an analysis of the potential impacts and any required mitigation measures based on the proposed design.</p>	<p>No longer applicable as the revised Draft Plan configuration has moved the road westerly away from the wetland and the 30 m buffer has been provided.</p> <p>Action item: further clarification is required from GRCA (confirming below)</p> <p>Will be addressed in conjunction with mitigation plan for the buffer lands and will be reflected on the preliminary grading plan. Based on discussions with GRCA, it is our understanding that soak away pits will be permitted in the first 10 m of buffer lands (not closer than 20 m to wetland limit).</p> <p>Concern regarding road grading within the 32 m zone of influence N/A with current draft plan that switched out to senior block.</p>		Triton / SAAR

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2.15	15.	The <i>Wetland Hydrological Analysis</i> provides minimal mitigation measures, beyond the recommendation of a 30m wetland buffer and general native plantings. The impacts associated with a road adjacent to the wetland have not been addressed, including the grading and dewatering activities that would be required for the road and infrastructure construction. Based on the characteristics of the wetland feature and the information provided by the accompanying reports, it is our opinion that even with mitigation measures, the proposed 12.2m buffer will not be sufficient to protect the wetland without an appropriate buffer also being applied.	Mitigation specific to road excavation within the 32 m zone of influence is N/A with current plan that provides 30 m wetland setback.		SAAR
2.16	16.	We note that the shapefiles of the GRCA field reviewed wetland boundaries still have yet to be shared. The wetland shapefiles will need to be provided so we can update our mapping accordingly.	GPS coordinates were emailed. Coordinates will be appended to current consolidated submission.		SAAR
<i>Natural Heritage Advisory Comments:</i>					
2.17	17.	Significant Wildlife Habitat (SWH) should be mapped as the corresponding ELC communities, not as point features. We note that the EIS dated January 22, 2018 that was to be read in conjunction with the Wetland Hydrological Analysis dated February 29, 2020, recommended a 50m setback from the candidate SWH. As such, the recommended 50m setback should be applied from the edge of the associated ELC communities.	GRCA staff (ecologist) confirmed (verbally) that soak away pits are allowed to be located within the first 10 metres of the buffer area.  Attended the site and obtained the additional vegetation data requested to map ELC (Ecological Land Classification) for support area of Spotted Salamander. Report provides clarification and map confirming consistent setback from this habitat.		SAAR