



April 28, 2020

Randy Scherzer, BES, MCIP, RPP
Director of Planning & Development
County of Grey
595 9th Avenue East
Owen Sound ON N4K 3E3

Dear Mr. Scherzer,

**Re: White Rose Park
Proposed Draft Plan of Subdivision (42T-2018-08) and Zoning Bylaw Amendment
Part Lot 227, Concession 2 SWTSR
Township of Southgate**

Grand River Conservation Authority (GRCA) staff have now had the opportunity to review the following information submitted in association with the proposed development:

- Draft Hydrogeological Site Assessment, prepared by Petro MacCallum Ltd., dated: February 4, 2020.
- Functional Servicing and Stormwater Management Report, prepared by Triton Engineering Services Ltd., dated: March 2020
- Planning Justification Report, prepared by MHBC, dated: March 2020
- SAAR Wetland Hydrological Analysis for New Site Plan, prepared by: SAAR Environmental Limited, dated February 29, 2020
- Draft Plan of Subdivision, prepared by: MHBC, dated: April 1, 2020, and April 21, 2020

Based on our review of the above noted documents, we are currently not in a position to support the approval of the proposed Plan of Subdivision and Zoning By-law Amendment applications. We are unable to support the current Draft Plan dated April 21, 2020, as all of the technical reports and studies provided to date do not address this Draft Plan.

In September 2018, the County of Grey circulated the first complete submission for the above noted applications to GRCA staff for review and comment. The accompanying material were in support of a Draft Plan dated July 20, 2018. In January of 2019, it was determined there was an additional EIS dated January 2018, that GRCA staff had not received as part of the first submission. This was provided to GRCA from SAAR Environmental Limited as a technical submission on January 18, 2019. However, this EIS was in reference to a separate Draft Plan dated August 29, 2017. On December 20, 2019, GRCA staff received a revised Draft Plan dated November 28, 2019 from MHBC for review. As this submission did not include any accompanying technical reports or studies, GRCA staff provided preliminary comments for consideration on January 13, 2020. On April 3, 2020, the County of Grey circulated the re-submission application to GRCA for comment which was in support of another Draft Plan dated

January 16, 2020. However, since the re-submission application was circulated, the Draft Plan has been changed two additional times, dating April 01, 2020 and then April 21, 2020.

The subsequent submission will need to include revised technical reports or studies which speak to and support the most up-to-date Draft Plan. Additionally, all the comments provided below should be addressed to our satisfaction prior to further consideration being given to both the proposed Plan of Subdivision and Zone Change applications.

Engineering Comments:

Draft Hydrogeological Assessment:

1. 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.
2. 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.
3. 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
4. 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: *Low Impact Development Stormwater Management Planning and Design Guide, 2010*, available from the Sustainable Technologies website.

Stormwater Management Facility

5. The developed modelling files should be provided digitally.

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.
7. Please provide modelling schematics for the existing and proposed conditions hydrologic model.
8. As no discussion has been provided on the SWM pond outlet, a preliminary pond design will be required.
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.
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.
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.

Natural Heritage Comments:

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.

12. The *Wetland Hydrological Analysis* 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.
13. The *Draft Hydrogeological Site Assessment* 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.
14. 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.

15. The *Wetland Hydrological Analysis* 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.
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.

Natural Heritage Advisory Comments:

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.

When providing a response in the subsequent submission, we request that summary table be provided which clearly demonstrates how each of the above comments have been addressed.

Should you have any questions or comments, please contact me at 519-621-2763, extension 2231 or lwerner@grandriver.ca

Sincerely,



Laura Warner
Resource Planner
Grand River Conservation Authority
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cc: Stephanie Lacey-Avon, County of Grey (email)
Clinton Stredwick, Township of Southgate (email)
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