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| Appendix | E |
| SRPRS | . 19 . 056 |
| File(s) | D02-18028 and D03-18014 |

**Toronto and Region
Conservation
Authority**

February 22, 2019

CFN: 60913

BY EMAIL ONLY

Ms. Amanda Dunn
Town of Richmond Hill
225 East Beaver Creek Road
Richmond Hill, ON L4B 3P4

Dear Ms. Dunn:

**Re: D02-18028 (Zoning By-law Amendment)
D03-18014 (Draft Plan of Subdivision)
D06-18054 (Site Plan)
20, 24, 26, 28 & 30 Weldrick Road West, Richmond Hill
Part of Lots 63 & 64, Lots 1 to 5 and 62, Plan 1923
Weldrick West Developments 20-26 Inc.**

This letter will acknowledge receipt of the above-noted applications. The application was received December 10, 2018. Toronto and Region Conservation Authority (TRCA) staff have reviewed the submission and offer the following comments. For a list of materials reviewed, please see Appendix A.

PURPOSE OF THE APPLICATION

It is our understanding that the purpose of these applications is to facilitate the development of 47 townhouse units and 2 semi-detached dwellings on the subject properties.

BACKGROUND

TRCA staff conducted a site staking of the property on June 9, 2016 with the previous applicant, their environmental consultant (GEMS Inc.) and Town of Richmond Hill staff. We note the previous staking did not include staking the limit of the woodlot on 30 Weldrick Road West as that property was not a part of the previous development.

We note that both of these woodlots (one primarily located on 24 Weldrick Rd. W., the second primarily located on 30 Weldrick Rd. W.) are considered contiguous with the nearby watercourse.

Development Limits

TRCA's policies identify that a minimum 10 metre buffer (which is considered to be part of the natural feature, to be conveyed into public ownership through the associated development applications) must be provided between the greater of the following potential constraints:

- Regional Storm Flood Plain;
- Long-term-stable top-of-slope;
- Limit of contiguous vegetation with a natural heritage feature.

APPLICABLE TRCA REGULATIONS AND POLICIES

TRCA provides our technical review comments through a number of roles. This includes TRCA's commenting role under the Planning Act; the Conservation Authority's delegated responsibility of representing the provincial interest of natural hazards encompassed by Section 3.1 of the Provincial

Policy Statement, 2005 and 2014; TRCA's Regulatory Authority under Ontario Regulation 166/06 (as amended), Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses; and our Memorandum of Understanding (MOU) with the Region of York where we advise our municipal partners on matters related to Provincial Policies relevant to TRCA's jurisdiction.

Ontario Regulation 166/06

The subject properties are in close proximity to a tributary of the East Don River and the woodlots located on the subject lands are considered contiguous with this watercourse. As such, a significant portion of the subject properties are located within an area regulated by the TRCA under Ontario Regulation 166/06 (Development, Interference with Wetlands and Alteration to Shorelines and Watercourses), as amended.

In accordance with Ontario Regulation 166/06 (Development, Interference with Wetlands and Alteration to Shorelines and Watercourses), as amended, a permit is required from the TRCA prior to any of the following works taking place:

- a) straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland;
- b) development, if in the opinion of the Authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development.

Development is defined as:

- i. The construction, reconstruction, erection or placing of a building or structure of any kind;
- ii. Any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure;
- iii. Site grading, or;
- iv. The temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere.

As a portion of the proposed development is located within the TRCA Regulation Limit, a permit under Ontario Regulation 166/06 is required for the proposed development.

Living City Policies for Planning and Development in the Watersheds of the TRCA (LCP)

The Living City Policies for Planning and Development in the Watersheds of the Toronto and Region Conservation Authority (LCP) describes a "Natural System" made up of water resources, natural features and areas, natural hazards, potential natural cover and/or buffers. The LCP recommends that development, infrastructure and site alteration not be permitted within the Natural System and that it be conveyed into public ownership for its long term protection and enhancement.

York Region Official Plan

Under a Memorandum of Understanding between TRCA and The Regional Municipality of York, TRCA provides plan review, technical expertise and advice for development applications relating to the definition of natural features / functions in accordance with the PPS and natural heritage matters for the Region and area municipalities. The subject property contains what appears to qualify as a Significant Woodland protected under Section 2.2.45 the Regional Official Plan

Source Protection Plan: CTC Source Protection Region

The Source Protection Plan (SPP) under the Clean Water Act, 2006, developed for the Credit Valley, Toronto and Region and Central Lake Ontario (CTC) Source Protection Region took effect on December 31, 2015. The CTC SPP contains policies to ensure that existing activities occurring when the Plan takes effect cease to be significant drinking water threats, and to prevent future activities from becoming significant threats to drinking water.

Vulnerable Areas referred to as Wellhead Protection Area-Q2 (WHPA-Q2) have been delineated by the CTC SPP in accordance with Technical Rules developed by the Ministry of the Environment under O.

Reg. 287/07. This WHPA-Q2 area was identified to help manage activities that may reduce recharge to an aquifer (Prescribed Threat No. 20 under the Clean Water Act, 2006). Certain types of applications within the WHPA-Q2 area are subject to CTC SPP Policy REC-1 parts 2 a) and b) and require the submission of a site-specific water balance assessment to mitigate development related impacts to recharge reduction.

As a technical service provider to the municipality for the REC-1 2 a) and b) policies of the CTC SPP, TRCA's role is to review water balance assessments to ensure they comply with standard practices outlined in guidance to proponents and make recommendations to the Planning Approval Authority as to whether pre-development recharge will be maintained. However, as municipalities are the Planning Approval Authority responsible for implementing the REC-1 Policy, the Town of Richmond Hill is required to ensure this application conforms to the CTC SPP.

Weldrick Road West Tertiary Plan

The proposed development is located within the Weldrick Road West Tertiary Plan area. Although the plan has identified the subject lands as Medium Density Residential, the woodlots in the area have also been flagged for further assessment. The tertiary plan requires an Environmental Impact Study that assesses the function, composition and quality of this feature and identify relevant policies and regulations which may affect development on affected properties. This study is required in order to determine the need for the feature's retention and protection.

It should be noted that an extension of Sorrento Drive appears in the Tertiary Plan and there is a desire from the municipality to construct this extension. TRCA notes that the alignment of this proposed roadway is not fixed and may require alignment adjustments to minimize ecological impacts. As such, the road alignment may be subject to an Environmental Assessment Review process to determine the appropriate alignment.

APPLICATION SPECIFIC COMMENTS

At this time, TRCA staff cannot support the proposed development as the limits of the Regulatory Flood Plain have not yet been delineated to our satisfaction and the proposed development concept has not taken into account the flood hazard and requisite buffer on the subject property.

Furthermore, the woodlots on the subject lands have been proposed to be fully removed with no compensation to ensure the ecological function of the woodlots (and what role they may play in enhancing the watercourse) is retained or enhanced.

Development Limits – Flood Plain

1. Please ensure the model utilized TRCA's standard Manning's values with $n=0.08$ for the natural / channel areas and $n=0.035$ for the watercourse.
2. Please include the 2 to 100 year storm events (in addition to the Regional Storm event) as part of the hydrology and hydraulics assessment.
3. Please ensure that the HEC-RAS cross-sections are modelled to contain the flow for all storm events.
4. Please provide a digital copy of the hydrologic / hydraulic modelling / calculations for TRCA's review.

TRCA staff withhold further comments about the hydrology and hydraulics until the revised and supplementary materials have been received and reviewed.

5. We note that WSP has been preparing a Flood Plain Mapping Study in the vicinity of the subject site for a different development application (Town of Richmond Hill, Committee of Adjustment Application B001/18). This study assesses the peak flows for the watercourse between

Yongehurst Road and Weldrick Road West and the hydraulics immediately upstream of Weldrick Road West.

Water's Edge can continue to refine their assessment for TRCA's review and approval or can contact WSP and the applicant for B001/18 to obtain WSP's model to establish peak flows and downstream boundary condition information to help inform Water's Edge's hydraulic analysis in the vicinity of 20-30 Weldrick Road West.

6. Under the LCP, a 10 metre buffer is required from the limits of the flood plain. Once the limits have been established to our satisfaction and the requisite 10 metre has been applied, all works (new lots, buildings, access routes) will be required to be located outside of this hazard area and buffer.

Development Limits – Woodland (York Region Official Plan & Richmond Hill Official Plan)

Under a Memorandum of Understanding between TRCA and The Regional Municipality of York, TRCA provides plan review, technical expertise and advice for development applications relating to the definition of natural features / functions in accordance with the PPS and natural heritage matters for the Region and area municipalities.

The subject property contains two woodlots which extend beyond the property boundaries. When measured through a desktop exercise, the total woodlot size and the fact they are adjacent to a watercourse) may have qualified them as a Significant Woodland protected under Section 2.2.45 the Regional Official Plan.

However, based upon the materials submitted by GEMS, TRCA staff are satisfied that these wooded features do not qualify as being Significant Woodlands or even as Woodlands as per the Official Plans.

We would like to clearly note that even though these woodlots were determined to not be a Significant Woodlands under the Town of Richmond Hill and York Region Official Plans, our policies would still require the retention and protection of this natural feature (which is contiguous with the watercourse) under LCP. However, TRCA staff are not opposed to further assessment of the woodlots to determine if there are opportunities to create a net ecological gain while providing better development opportunities on the property.

7. The ecological function of the woodlot(s) must be assessed and a Compensation Plan which enhances and or replicates the function and provides a net ecological gain must be developed in order for TRCA staff to consider any removal of the woodlot vegetation. Further details are provided under Comment 22 in Appendix B.

FEES

By copy of this letter, the applicant is advised that the TRCA has implemented a fee schedule for our planning application review services. In accordance with our 2018 TRCA Planning Services Fee Schedule, this application is subject to a **\$21,000** combined Draft Plan of Subdivision (Standard), Zoning By-law Amendment (Standard) and Site Plan (Standard) review fee payable to the TRCA (which at this time remains outstanding). We request that the applicant submit this fee to our office at their earliest convenience.

Please note that TRCA reserves the right to request additional / an increased fee rate should the review require a substantially greater level of effort than anticipated for a Standard application in accordance with our fee schedule.

RECOMMENDATION

In light of the above, TRCA staff cannot support Zoning By-law Amendment Application D02-18028, Draft Plan of Subdivision Application D03-18014, and Site Plan Application D06-18054 at this time.

TRCA staff request that the development limits be established to the satisfaction of the Town and TRCA. TRCA staff request that the applicant address comments 1 to 7 above prior to addressing all of our detailed comments found in Appendix B. If requested, TRCA staff would be happy to meet with the applicant, the applicant's consultants and Town Staff to help determine a mutually acceptable development limit.

As part of the resubmission, a detailed response letter should be prepared by the applicant outlining how each of our comments have been addressed. Please note that upon receipt and review of revised materials, additional comments may be provided.

We trust this is of assistance. Should you have any further questions or comments, do not hesitate to contact the undersigned.

Yours truly,



Anthony Sun, B.E.S.
Planner
Development Planning and Permits
Tel: (416) 661-6600, Ext. 5724

cc: Region of York (e-mail: developmentservices@york.ca)

APPENDIX A: MATERIALS REVIEWED

- Concept Plan / Site Plan, drawing SP-01, prepared by John G. Williams Limited, revised October 16, 2018;
- Servicing Plan, drawing S-1, prepared by SCS Consulting Group Ltd., revised October 24, 2018;
- Grading Plan, drawing GR-1, prepared by SCS Consulting Group Ltd., revised October 24, 2018;
- Erosion and Sediment Control Plans, drawings ESC-1 to ESC-3, SCS Consulting Group Ltd., revised October 26, 2018;
- Landscape Concept Plan, drawing L1, prepared by Into the Woods, dated November 2018;
- Functional Servicing and Stormwater Management Report, prepared by SCS Consulting Group Ltd., dated October 2018;
- Hydrology & Hydraulic Assessment Report, prepared by Water's Edge, dated June 6, 2018;
- Hydrogeology Report, prepared by GEMS, dated August 7, 2018;
- Scoped Environmental Impact Study, prepared by GEMS, dated October 23, 2018;
- Tree Report, prepared by Into the Woods, dated September 14, 2018.

APPENDIX B: DETAILED TECHNICAL COMMENTS

Water Resources Engineering

1. Please explicitly state the existing and proposed impervious area for the subject site in the Functional Servicing and Stormwater Management Report. Please also note the "clean" (i.e. rooftop) impervious area in the existing and proposed conditions to inform the required quality control for the site.
2. Please provide an annual water balance analysis for the site which evaluates evapotranspiration, infiltration, and runoff, in the pre-development, post-development (without mitigation), and post-development (with mitigation) conditions, to demonstrate that water balance requirements for the site have been met. Please ensure that the site's post-development volume infiltrated matches that in pre-development conditions and that best efforts have been made to maintain the site's pre-development volume leaving the site via evapotranspiration. Please ensure the annual water balance analysis effectively separates catchments which are and are not being directed to the proposed LID measures to accurately determine the efficiency of the proposed LID. Please have a professional engineer sign and stamp the final version of the water balance analysis. Please revise Section 5.3 of the Functional Servicing and Stormwater Management Report (SCS, October 2018) to reflect the water balance criteria for the site.
3. As per the Stormwater Management Criteria (TRCA, 2012), the minimum erosion control requirement within TRCA's jurisdiction is retention of the first 5 mm of every rainfall event and the noted minimum 5 mm retention volume requirement should be above the initial abstraction. Please revise the analysis within the Functional Servicing and Stormwater Management Report (SCS, October 2018) to exclude initial abstraction and demonstrate that criteria have been met.
4. Please confirm that there is a minimum 1 m of vertical separation between the bottom of the proposed infiltrative measures and the top of bedrock and the top of the seasonally high groundwater table.
5. Please provide sizing calculations for the infiltration trenches as per equations 4.2 (Maximum Allowable Soakaway Pit Depth) and 4.3 (Infiltration Trench Bottom Area) provided within the SWM Planning and Design Manual (MOECC, 2003) including a site-specific percolation rate to ensure an acceptable drawdown time.

6. Please note that calculations in Appendix E suggest that the 100 year capture point "A" requires two double catchbasins with a 12 cm depth of water above the grates. However, drawings provided in Appendix G appear to show only one double catchbasin at the 100 year capture point "A". Please review and revise as required.
7. TRCA staff note that the crossfall of the proposed road at the southern property boundary is flat to allow for the 100 year peak flow capture at the nearby, proposed double catchbasins. It is recommended that a note be included on the drawings indicating that this proposed road grading is intentional and necessary as part of the proposed stormwater management design.

Water Balance

8. As noted above, the subject property is located in a Source Water Protection vulnerable area referred to as Wellhead Protection Area-Q2 (WHPA-Q2). As such, a site-specific Water Balance Assessment is required for our review. The proposal will be required to implement migration measures related to loss of infiltration and achieve post to pre-development Water Balance. Please provide measures for mitigation and provide locations on the plans, details and supporting calculations. Please see Water Resources Engineering comment 2 above.

Erosion & Sediment Control

9. Please add TRCA's Standard Notes #1, 2, 4, 5, 6, 7, 8, 9, 13, 14 and 15; available at: https://dev.trca.ca/wp-content/uploads/2016/02/Guidelines_for_Standard_Notes_on_Infrastructure_Project_OR_166_06_Submissions.pdf
10. Please note that the use of Annual Rye Grass (*Lolium multiflorum*) is not recommended due to its allelopathic properties as well as its hybridization and confusion with the invasive Perennial Rye (*Lolium perenne*). Please consider utilizing other nursery cover crops, such as Oats (*Avena sativa*), Barley (*Hordeum vulgare*), Canada Wild Rye (*Elymus canadensis*), Winter Wheat (*Triticum aestivum*) or Buckwheat (*Fagopyrum esculentum*). Please specify seed broadcasting method to be utilized.
11. Please add note specifying that flows should only be directed to swales once they are deemed stabilized.
12. The drainage of the entire site is being directed to swales and sediment trap, and flowing through a Filtrex Soxx Check. The entire excavation area will be dewatered by this setup, and the flow is expected to be have great quantity of sediments; it is paramount that the settling controls have enough room to allow for appropriate settlement of particles, and that the filtering devices are sized to allow appropriate filtering even during high flows. Please provide calculations demonstrating that the setup is adequate. The water reaching the drainage feature (labelled "ditch" on the drawing) must be free of sediments. Please consider including filtrex check dams or rock check dams at regular intervals along the swales, in order to provide additional sediment control layer. Please provide typical details.
13. Dwg # ESC-1 shows a distance of 9m between the sediment trap and the Filtrex Soxx Check, while the Temporary Sediment Trap detail on Dwg # ESC-3 shows the Filtrex Soxx Check by the sediment trap. Please clarify. Additionally, if allowing for space between the sediment trap and the Soxx Check, please how the soil on that area will be stabilized, and if there will be any vegetation (e.g. cover crop, sod, etc).
14. Please clarify how the sediment trap will be stabilized prior to flows be directed to it.
15. Please add specification to typical detail that silt fence is required to be non-woven geotextile.

16. It is unclear how the ESC Plan changes from stages 1 to stages 2, 3 and 4; DWG# ESC-2 should highlight the proposed ESCs, and show the proposed development in light gray/background. Please adjust Dwg # ESC-2 accordingly.
17. Please clarify the following notes from Dwg # ESC-2:
- i. B. This note mentions pumping water out of sediment trap and the use of sediment bag. Please note that the purpose of the sediment trap is to detain sediment-laden runoff for a long enough period of time to allow for a majority of the coarser suspended soil particles in the run off to settle out. Pumping would prevent that to be achieved. Please clarify why and when pumping is being proposed.

Additionally, the proposed setup is not being shown on the drawings. Please include them on drawings and provide typical details. Consider setting up the sediment bag overlain on geotextile, and wrapped by silt soxx for additional sediment control and easier clean-up.
 - ii. B. Please define "as far away from the watercourse as possible". How many meters from the watercourse will this setup be placed?
 - iii. C. Please specify how discharge will be monitored, and what will be the procedure in case the discharge has sediments on it.
 - iv. D (second D). "Area to be stabilized". Please clarify which area and which stabilization method is being proposed.
18. Dwg# ESC-1 and ESC-2 show a Filtrexx Soxx Check built of 450mm sock. Dwg# ESC-3 show 300mm compost sock. Please clarify. Please ensure that the setup is robust enough to handle all flows.
19. Please clarify where the sediment collected by the sediment trap will be disposed of.
20. Please show all proposed staging areas and associated ESCs in the drawings.
21. Please clarify where lot riser drain is being proposed, and show the mentioned Filter Sock on drawing.

Ecology

22. The wooded area on the subject lands (approx. 0.6ha) is part of a larger woodlot that is contiguous with an existing drainage feature (north of the property) within TRCA's jurisdiction. This feature is considered to be a Stream Corridor, as per LCP (2014) definitions, and is considered a Regulated feature. The wooded area is contiguous with the stream hydrological functions while providing ecological functions.

The EIS provided focus on the cultural, highly-disturbed condition of the natural features on site, without considering the ecological functions they provide. These functions, while not as ideal as the ones provided by native undisturbed woodlands, can still be considerable, particularly within an urbanized area. For example, they provide carbon sequestration, air quality, water infiltration, erosion control, flood control, wildlife habitat, etc. Additionally, the majority of the GTA has a considerable amount of non-native and invasive species, and in more disturbed locations, they can be more prevalent than native species. A disturbed natural feature should still be considered as valuable.

Compensation should be calculated according to TRCA's Guideline for Determining Ecosystem Compensation, available at:

<https://laserfiche.trca.ca/WebLink/0/edoc/1499894/Guideline%20for%20Determining%20Ecosystem%20Compensation,%20June%202018.pdf>

Compensation outcomes should strive to fully replace the same level of lost ecosystem structure and function in proximity to where the loss occurs, and where possible, achieve an overall gain. In this case, compensation for land base AND ecosystems structures/functions (including maintenance/monitoring plan) would be applicable. Please provide Compensation Plan and all associated drawings, typical details and documents, including Maintenance and Monitoring Plan. The monitoring reports should be sent to TRCA after completion. Year 1 of monitoring starts on the year following the year the material was planted: e.g. materials are planted on Fall 2019, year 1 of monitoring would be end of Summer 2020. Maintenance should start right after planting is complete.

23. Please note that in order to avoid interference with the eggs, nests or young of birds protected under the Federal "Migratory Birds Convention Act" (MBCA), vegetation impacts should not occur from April 1 to August 31 of any given year. If impacts to vegetation are proposed within this timing window, a nest survey should be conducted by qualified professional prior to vegetation impacts. Please add this note to all relevant drawings.
24. Please clarify when tree protection fencing will be installed and provide typical detail showing the proposed tree protection and sediment control fencing. Please show tree protection fencing on the ESC Plans.
25. Landscape Plans (L1 and L2).
 - a. Please show proposed quantities of each species on table.

- b. Given the proximity of the development to a natural site, invasive species are to be avoided at all times. Please replace *Euonymus alatus* (Dwarf Burning Bush) with native species (preferably) or non-invasive exotic species.

Please refer to CVC's priority invasive species list for species that should be avoided at all times: <https://cvc.ca/wp-content/uploads/2011/07/11-150-priorityinvasives-11-list-web.pdf>

- c. Given that the proposed development is adjacent to a natural feature; native species should be incorporated to the Planting Plan as much as possible. Please refer to the TRCA Flora Species and choose species that are designated L1 to L5 (native); designations L+ and L+? are non-native in our jurisdiction and should be avoided. Available at: https://trca.ca/app/uploads/2017/05/2017_Flora_Ranks_Scores.pdf

For example, please consider replacing non-invasive exotic species and hybrids/cultivars with native species:

- *Acer fremanii* (Autumn Fantasy Maple) could be replaced with *Acer rubrum* or *A. saccharinum* (Red or Silver Maples);
- *Ulmus 'Morton'* (Accolade Elm) could be replaced with *Ulmus americana* (American Elm);
- *Taxus x media* (Dense Yew) with *Taxus canadenses* (Canada Yew)

For your reference, there are several resources that provide guidance on native alternatives to exotic species, such as:

<https://trca.ca/get-involved/yards/>

<https://cvc.ca/wp-content/uploads/2011/09/11-185-invasivesalternatives-2011-list.pdf>

<http://grownative.org/native-plant-info/alternative-species/>

- d. Please consider that *Ostrya virginiana* (Ironwood) is slow-growing and natural to forest understories, therefore, might not be the best alternative for backyards.