TOWN OF CALEDON

March 29, 2019 ***Sent Via Email***

Mark Jacobs
The Biglieri Group Ltd.
20 Leslie Street, Suite 121
Toronto, ON
M4M 3L4

Dear Mr. Jacobs:

**Re Proposed Draft Plan of Subdivision and Zoning By-law Amendment**
**Tropical Land Developments Ltd (c/o David Goodman)**
**0 Mount Pleasant Road, Part Lot 27, Concession 8 (ALB)**
**File Numbers: 21T-18002C; RZ 18-06**

Further to our letter dated November 20, 2018, please find enclosed supplementary comments. These two letters form the complete consolidated Town and agency comments for the first submission. Please refer to both letters when responding to comments.

Planning staff deemed the above noted applications complete on August 15, 2018 and circulated the submission to commenting departments and agencies for review. Comments have been provided on the following submission materials:

- Cover Letter, prepared by The Biglieri Group, dated July 18, 2018;
- Application forms for Zoning By-law Amendment & Draft Plan of Subdivision, received July 31, 2018;
- Pre-Consultation (DART) Meeting Form, received July 31, 2018;
- DP-01, Proposed Draft Plan of Subdivision, prepared by The Biglieri Group Ltd., dated May 4, 2018;
- Draft Zoning By-law Amendment, prepared by The Biglieri Group Ltd., received July 31, 2018;
- Stage 1-2 Archaeological Assessment, prepared by Archeoworks Inc., dated May 16, 2018;
- Hydrogeological Impact Study, prepared by Sirati & Partners Consultants Ltd., dated May 17, 2018;
- Environmental and Engineering Summary Report, prepared by The Biglieri Group, dated July 2018;
- Scoped Environmental Impact Study, prepared by Natural Resources Solutions Inc., dated July 2018;
- Map 1, Aerial Photo, prepared by The Biglieri Group Ltd., dated May 4, 2018;
- Map 2, Topography, prepared by The Biglieri Group Ltd., dated May 4, 2018;
- Map 3, Slope Map, prepared by The Biglieri Group Ltd., dated May 10, 2018;
- Map 4a, Soil and Soil Drainage Classification Map, prepared by Sirati & Partners Consultants Ltd., dated May 10, 2018;
- Map 4b, Soil and Soil Drainage Classification Map – Detail Map, prepared by Sirati & Partners Consultants Ltd., dated May 10, 2018;
- Map 4c, SPCL BH/MW Soil Lithology, prepared by Sirati & Partners Consultants Ltd., dated May 10, 2018;

- Map 5a, Surface Hydrology Map - Local Study Area, prepared by Valdor Engineering Inc., dated June 19, 2018;
- Map 5b, Surface Hydrology Map – Project Site, prepared by Valdor Engineering Inc., dated June 19, 2018;
- Map 6, Environmental Summary Map, prepared by The Biglieri Group Ltd., dated July 11, 2018;
- Map 7, Wildlife and Vegetation, prepared by The Biglieri Group Ltd., dated July 11, 2018;
- Map 8, Stormwater Management/Grading Plan, prepared by Valdor Engineering Inc., dated June 19, 2018;
- Map 9, Forest Management Plan, prepared by The Biglieri Group Ltd., dated July 11, 2018;
- Topographic Survey, prepared by Van Harten Surveying Inc., dated April 20, 2018;
- Plan of Survey, prepared by Van Harten Surveying Inc., dated April 20, 2018;
- Site Plan, prepared by MMH Architects Inc., revised June 14, 2018;
- Environmental Noise Feasibility Study, prepared by Valcoustics Canada Ltd., dated June 26, 2018;
- Phase II Environmental Impact Assessment, prepared by Sirati & Partners Consultants Ltd., dated October 12, 2017;
- Phase I Environmental Impact Assessment, prepared by Sirati & Partners Consultants Ltd., dated September 8, 2017;
- Preliminary Geotechnical Investigation, prepared by Sirati & Partners Consultants Ltd., dated July 21, 2017;
- Urban Design Brief & Visual Impact Assessment, prepared by The Biglieri Group Ltd., dated June 2018;
- Traffic Brief, prepared by J.D. Engineering Inc., dated May 29, 2018;
- Minimum Distance Separation Analysis, prepared by The Biglieri Group, dated May 2018;
- Planning Rationale Report, prepared by The Biglieri Group Ltd., dated July 2018;
- Tree Preservation Plan, prepared by Natural Resource Solutions Inc., dated July 2018;
- Functional Servicing Report, prepared by Valdor Engineering Inc., dated May 2018;
- ESC-1, Erosion and Sediment Control Plan, prepared by Valdor Engineering Inc., dated May 17, 2018;
- PGR-1, Grading Plan, prepared by Valdor Engineering Inc., dated May 17, 2018;
- PS-1, Servicing Plan, prepared by Valdor Engineering Inc., dated May 17, 2018;
- STM-1, Storm Drainage Plan, prepared by Valdor Engineering Inc., dated May 17, 2018.

At the time of preparing staff's first consolidated comment letter, dated November 20, 2018, comments from the Nottawasaga Valley Conservation Authority (NVCA) were outstanding. Given the environmental constraints affecting the proposed development, some comments from Town staff could not be finalized until such time that the NVCA comments were provided to the Town for consideration. Supplementary comments related to Planning and Development, Open Space and Engineering (i.e. Stormwater Management, Drainage and Grading) are provided herein.

**Proposal**

The Town of Caledon is in receipt of the above noted Draft Plan of Subdivision and Zoning By-law Amendment applications. The applicant, The Biglieri Group Ltd. on behalf of Tropical Land Development Ltd., is proposing to

subdivide the land to create eight estate residential lots in the Palgrave Estate Residential Community. The subject property is approximately 12.28 hectares, and the proposed estate residential lots will range in size from 0.62 hectares to 1.73 hectares. Two open space blocks and an environmental protection block have also been proposed on the subject property, totaling 4.06 hectares.
The Zoning By-law Amendment application proposes to rezone the subject lands from Rural - Oak Ridges Moraine (A2-ORM) and Environmental Policy Area 2 - Oak Ridges Moraine (EPA2-ORM) to Estate Residential with exceptions (RE-X), Environmental Policy Area 1 exception 404 (EPA1-404) and Environmental Policy Area 2 - Oak Ridges Moraine (EPA2-ORM) to permit the proposed development.

**Planning Documents**

The property is designated Palgrave Estate Residential Community on Schedule “A-1” (Town of Caledon Town Structure) and subject to the following: Policy Area 3 and Policy Area 4 on Schedule “G” (Palgrave Estate Residential Community), Regional Water Service Area on Schedule “H” (Palgrave Estate Residential Community Water Service Area), Environmental Zones 1 and 2 on Schedule “I” (Palgrave Estate Residential Community Environmental Zoning Summary), Wellhead Protection Areas in Oak Ridges Moraine on Schedule “O” (Wellhead Protection Areas), Palgrave Estate Residential Community on Schedule “P” (Oak Ridges Moraine Conservation Plan Land Use Designations), High Aquifer Vulnerability on Schedule “P-1” (Oak Ridges Moraine Conservation Plan Aquifer Vulnerability Areas), and Landform Conservation Area Category 2 on Schedule “P-2” (Oak Ridges Moraine Conservation Plan Landform Conservation Areas).

The subject lands are currently zoned Rural – Oak Ridges Moraine (A2-ORM) and Environmental Policy Area 2 – Oak Ridges Moraine (EPA2-ORM) in Zoning By-law 2006-50, as amended.

**Executive Summary of Comments**

A resubmission is required to address detailed comments related to:

- Environmental constraints mapping that clearly shows the extent of all environmental features and buffers;
- Structure Envelopes for each lot that meet the policies of the Town’s Official Plan;
- Reforestation Plan that provides contiguous vegetated blocks of 2 ha (5 ac) or greater;
- Clarification of the density bonusing and reforestation calculations;
- Urban Design comments on the architectural guidelines;
- A Stage 3 Archaeological Assessment is required;
- Street lighting and road design;
- Water servicing and sewage disposal;
- Stormwater management requirements;
- Hydrogeology impact assessment and water balance assessment;
- Slopes and drainage;
- Tree preservation;

- Visual Impacts; and
- Erosion and sediment controls.

**Detailed Comments**

***Prior to Draft Plan of Subdivision Approval, the following comments must be addressed:***

1. Prior to Draft Plan Approval, the following **Planning** comments must be addressed:

    a. Town staff will not accept Blocks 9, 10 and 12 into Town ownership. Staff also understands that NVCA will not accept these blocks into NVCA ownership. Therefore, these blocks must form part of adjacent lots 1, 4, 5 and 8. Regarding Block 12, which contains a woodlot feature, it is Town staff's expectation that the revised lot boundaries take into consideration minimal fragmentation of the feature. For example, one lot may need to be adjusted to include the entire feature. Furthermore, restrictive zoning and conservation easements will be required over the Key Natural Heritage Features (KNHFs) and Key Hydrologic Features (KHFs), and their associated Minimum Vegetation Protection Zones (MVPZs), to protect them from development in perpetuity.

    b. The NVCA is satisfied with the floodplain analysis for the tributary that traverses Blocks 9 and 10. NVCA has noted they typically require a 30 m buffer from a tributary. As noted in our previous comment letter, dated Nov. 20, 2018, a consolidated Environmental Summary Map is required, that shows the KNHFs, KHFs and MVPZs. This includes the 30 m MVPZ from the meander belt of the stream, as per the *Oak Ridges Moraine Conservation Plan, 2017*, which is consistent with NVCA's buffer requirement.

    c. A Structure Envelope for each lot is required, which meets the policies of the Town's Official Plan. In particular, please show for each lot, the Structure Envelope size and dimensions on the draft plan. Structure Envelopes will generally be sized in the range of 0.3 ha (0.74 ac) to 0.5 ha (1.24 ac) and shall identify the optimal area of the lot for structures and shall provide ample space for estate residential and accessory uses including all associated necessary lot grading. The proposed house and driveway locations and soil absorption area for sewage disposal shall be shown within the Structure Envelope. No part of the Structure Envelope will be permitted in EZ1 or Policy Area 4, or within the Reforestation Area. No part of the Structure Envelope will be permitted in EZ2, except in accordance with the Town's Official Plan.

    d. Furthermore, Structure Envelopes will generally be restricted to areas with slopes of 10% or less, and houses shall be sited on middle to lower slopes where possible and designed in harmony with the natural topography so as to minimize visual impacts. It appears that the proposed dwellings are located at topographic high points within the subject lands. Please provide alternative locations where the proposed dwellings are more on the middle to lower slopes.

e. While a Minimum Distance Separation (MDS) Analysis was completed for the proposed development, policy 7.1.9.8 of the Town's Official Plan, states that no Structure Envelope will be permitted within 150 m of an existing livestock barn or yard utilized for commercial farming purposes or as defined by the Agricultural Code of Practice. Please confirm that the proposed development conforms to this policy.

f. Please revise the draft Zoning By-law and Schedule to reflect any changes to the lot lines and Structure Envelopes. Detailed zoning comments will be provided on the second submission.

g. As a result of any revisions to the proposed development, please revise the Planning Justification Report accordingly to demonstrate how it conforms to Provincial plans and policies, the Region of Peel and Town of Caledon Official Plans, and other relevant policies (e.g. NVCA policies and regulation).

h. Please demonstrate how the location of "Street 2" provides an appropriate right-of-way connection to the lands to the north for future estate residential development. In doing so, please ensure the development conforms to policy 7.1.14.4 of the Official Plan, and the feasibility of developing the lands to the north are examined by undertaking appropriate environmental investigations (e.g. existence of environmental features and slopes). Please also refer to comment #2 e) below.

i. Please update the Planning Justification Report to demonstrate how the proposed development conforms to the Oak Ridges Moraine Conservation Plan (ORMCP) Secondary Plan policies 7.10.5.1.14, which relates to major development proposed within the Minimum Area of Influence associated with a Key Natural Heritage Feature or Hydrologically Sensitive Feature but is outside of the feature itself and the related Minimum Vegetation Protection Zone.

2. Prior to Draft Plan Approval, the following **Servicing (FSR)** comments must be addressed:

*Stormwater Management/Storm Drainage:*

a. The subject lands are situated within the Nottawasaga Watershed (Innisfill Creek Sub-watershed). Prior to draft plan approval, the Owner is required to complete a stormwater management report and all hydrologic modeling associated with the development must be reviewed and approved by the NVCA (*Engineering*).

b. The existing topography of the site is hummocky typical of Oak Ridges terrain with the natural high point at the center of the north end of the site. The site is bounded to the north by a large lot with a detached dwelling and to the east by Mount Pleasant Road. The subject site is bounded to the west and south by woodlots. The tributary of the Beeton Creek traverses the east part of the site.

A roadside infiltration system within the boulevards and a perforated storm pipe are proposed which will convey a majority of the site runoff as well as external drainage to Block 9.

Post drainage areas for the remainder of the site will generally reflect the pre-development drainage areas, though some modifications have occurred. The proposed drainage scheme of this development encourages on-site infiltration; there are three post-development tributary areas that drain uncontrolled. The necessary hydrologic modeling must be reviewed and approved by the NVCA (*Engineering*).

c. Further to our review of the FSR and related grading plans, staff have the following comments with respect to this application (*Engineering*):

   i. Provide preliminary headwall design and grading detail around headwall to ensure the proposed headwall location is adequate. The Town needs to review appropriate long-term erosion control measure design and construction details (e.g. rip-rap or stilling basin) in the detail engineering submissions.
   ii. Confirm the proposed spillway/overflow channel can accommodate the major storm event.
   iii. Provide cross-sectional drawings of the proposed twin 1200mm dia. CSP culverts within the proposed development.
   iv. Provide cross-sectional drawings of the proposed twin 1200mm dia. CSP culverts under Mount Pleasant Road. Ensure a sufficient vertical clearance is provided between the proposed culverts and any existing utilities and watermain. Provide grading detail drawings that show the limits of disturbance to support the proposed design.
   v. Please verify the size and type of the existing culvert on Mount Pleasant in the report. There are numerous discrepancies on the size of existing culvert (700mm vs 800mm) throughout the report and drawings.
   vi. The Town's standard for driveway grade is between 2% ~ 6%. Revise Section 7.2 of FSR accordingly.
   vii. In Section 6.1.2 of the FSR, the north-eastern catchment area under post-development condition is labeled incorrectly.
   viii. Section 6.3 of the FSR states that the Town has requested that bioswales are to be used as the LID measure to service the proposed development. This is incorrect as the Town has never made such a request; the Town provided preliminary plan and cross-sectional drawings of bioswale and spillway for reference purposes only. Revise the FSR accordingly.
   ix. As indicated in Figure 5 of the FSR, there is an additional watercourse, entering the site from the North, across Mount Pleasant Road. The Town acknowledges that this watercourse was included in the floodplain calculation; however, it was not identified in other Figures. Revise Figures to show this watercourse and if necessary, discuss any associated grading and erosion works.
   x. Figure 7 of the FSR shows a portion of the municipal ROW is inside of the floodplain. Revise accordingly.
   xi. Confirm the longitudinal slope in Section 6.3.1 of the FSR.

xii. MOE Stormwater Management Planning Design Manual, 2003, Section 4.5.8 outlines various criteria such as: Drainage Area, Water Table Depth Soil Percolation, Storage Configuration etc. in regard to infiltration trenches. These facilities are typically unsuitable for water quality during the winter/spring period due to the potential reduction in capacity due to freezing or saturation of soils. The MOE recommends that if infiltration galleries are used as an all season water treatment facility, then doubling the design storage volume to account for reduced infiltration rate is recommended. It is also recommended that more than one pre-treatment device be installed for all infiltration facilities receiving road runoff. Also, at detail design, the Town will require the Owner to provide the methodology required to install these filtration systems during servicing of the development.

xiii. Regarding infiltration, Figures 10 shall meet requirements of the MOE Guidelines and is to be reviewed and approved by NVCA. Please note maximum diameter of plastic storm sewers permitted in the Town is 600mm.

xiv. The Town understands that the orifices are required for bioswales to meet the storage requirement. However, investigate if the total number of orifices can be reduced as the Town will be ultimately responsible for maintaining the proposed orifices.

xv. Regarding Section 6.3, a further analysis on the construction timetable of the infiltration gallery installations shall be provided in the detail design phase. A step by step process is imperative in outlining how and when the infiltration galleries and ditches will be installed in conjunction with the erosion and sedimentation controls. Also, the interim drainage pattern and methodology during construction should be discussed.

xvi. Provide hydraulic calculations to confirm that the ROW is adequate to convey the major storm event.

xvii. The total annual rainfall depth used for the water balance calculation in Appendix G is for Richmond Hill. Based on the precipitation data collected at the Orangeville station, an average precipitation of 892 mm/yr should be used. Revise accordingly.

*Grading/Drainage:*

d. Confirm the proposed development is in conformity with 7.10.5.6.3 (b) of the ORMCP whereby a maximum 50 per cent of the total developable area of the site can be disturbed. A Landform Conservation Plan is required as well, showing the area of disturbance (*Engineering*).

e. In regard to the Slope Map, the Town has concerns that numerous structural envelopes will have locations where slopes exceed the maximum criteria permitted further to 7.1.9.11 of the OP. In addition, cuts exceeding the 1.0~2.0 m tolerance further to 7.1.9.41 of the OP is proposed on various lots; this would include filling too. The Slope Map should include more contours to the north of the subject lands and provided at a Scale of 1:1000 (also related to policy 7.1.14.4) (*Engineering*).

f. Accordingly, the Town will require a conceptual grading plan of all lots, Blocks 9 and 10 at a scale of 1:500 in order to understand the grading implications associated with road construction and site grading. Additional detail is required showing structural envelopes, finished floor elevations, existing and proposed grades, dwelling and amenity area, break points, driveway grades, corner grades of houses and septic fields etc. Town will require a series of cross-sections of the right-of-way and into future lots as well. In addition, we also require pre and post drainage drawings - scale to be 1:1000 (*Engineering*).

g. Prior to registration, the owner will be required to reinstate and stabilize the erosion occurring on Blocks 9 and 10 along the Lots 1 and 8 property lines (*Engineering*).

h. As per the Town's Development Guidelines, the maximum slopes should not exceed 4:1. Revise the grading plan accordingly (*Engineering*).

i. All grade changes for local roads in excess of 1.5% shall be designed with vertical curves. All intermediate grade points shall be calculated every 10.0 m and shown on the profile along with vertical curve data such as K-value, length and station of tangent intersection. Please refer to Table 3.3 of the Town of Caledon Design Standard for more detail on vertical curve requirements (*Engineering*).

j. According to the slope map, the external drainage area could be larger than the identified catchment area 202 as Lot 4 may be receiving external drainage from the north of the lot. Please confirm (*Engineering*).

*Preliminary Geotechnical Investigation*:

k. A Preliminary Geotechnical Investigation prepared by Sirati & Partners Consultants Limited dated July 21, 2017 was submitted for the development which included a drilling program that consisted of 8 boreholes across the subject lands which ranged from 8.2m to 11.2m in depth, totaling approximately 75m.

   The investigation revealed that fill material is generally found through most of the site consisting of sand, sand/silt with a depth ranging from 0.8m to 1.6m. Below that the site is generally underlain with sands and silts, with some deeper clay layers. Groundwater levels are generally in the range from 4.6 to 9.1m below ground.

   The Owner is proposing the use of Town Standard 209 that utilizes bioretention facilities within the road side ditches, for the purpose of stormwater management i.e. both quality and quantity controls. It is noteworthy to point out that Borehole 8 illustrates that a 1.20m thick clayey silt layer is 1.8m below the surface, which is within the centre of Block 9, but may extend towards the proposed bioretention facilities. Accordingly, it is the opinion of Development Engineering that further analysis is necessary within the road allowance, specifically where the bioretention will be,

to: 1) determine the soil types, 2) confirm the hydraulic capacity of these soils, and 3) discuss long term operation of the bioretention facilities draining into these soils.

Accordingly, the Town recommends that additional boreholes be drilled at various locations where the proposed infiltration gallery will be located to ensure acceptable infiltration rates. Both the Geotechnical and Hydrogeological Reports are to be updated to discuss the findings and make recommendations as needed.

3. Prior to Draft Plan Approval, the following **Open Space Design** comments must be addressed:

*General Comments:*

a. Cash-in-lieu of parkland will be required in accordance with the Town of Caledon By-law 2013-104. An appraisal will be required by an AAIC certified appraiser. The appraisal should reflect the value of the land the day prior to Draft Plan Approval.

b. Reforestation drawings by the owner's consultant may be required as part of the Conditions of Draft Approval pending confirmation by the NVCA.

c. Conveyance of the Existing Woodlot Block 12 is to be incorporated into both Lots 4 & 5. The Town will not take ownership of Block 12.

d. Minimal maintenance clauses for Blocks 9 & 10 shall be included in the Purchase and Sales Agreements of the residential homes.

e. Paige wire fencing to be proposed entirely on lots 1 & 8 adjacent the Open Space Blocks. In additional paige wire fencing is to be installed entirely within the Open Space Block 9 northern boundary and the Open Space Block 10 southern boundary.

*Reforestation:*

f. The NVCA is to confirm the design and implementation of the reforestation areas. Recommendations included:

   i. An agreement solely between the developer and the NVCA (NVCA implements the work).
   ii. An agreement solely between the developer and the NVCA (the developers landscape consultant and contractor implements the work).
   iii. An agreement solely between the developer and the NVCA & Toronto and Region Conservation Authority (TRCA) (If TRCA agrees to implement on behalf of the NVCA).

g. An agreement solely between the developer and the TRCA (TRCA implements the work).

h. The NVCA is to confirm the implementation timeline of reforestation planting (typically prior to execution of Grading Agreement).

i. Map 9: Forest management Plan: The NVCA is to review and approve densities, species, sizes and seed mixes within all reforestation zones.

*Urban Design Brief & Visual Impact Assessment (July 2018):*

j. Section 7.2: Modify the last sentence to “A variety of native species planting shall be encouraged by the individual lot owner on private property adjacent the Town’s Blvd”.

k. Drawings L1-01 & LD-02: Remove entirely from document and remove any references to them that may be included in the document.

*Tree Preservation Plan by Natural Resource Solutions Inc. dated July 2018:*

l. 6.0 Tree Compensation Plan:

iv. Add following sentence in first paragraph: “Tree compensation planting is in addition to any standard planting requirements”.
v. Remove the sentence on the last paragraph: “Detailed landscaping plans will be required for the property as a condition of draft plan of subdivision approval; however,”

m. 7.1 Prior to Construction:

vi. Modify the last sentence in the first paragraph to “Tree protection fencing as per Town Standard 707.
vii. Remove the following in the second paragraph “in form of 1200mm high heavy duty paige wire”.

n. 7.2 During Construction:

viii. Modify second last sentence to “Replacement species are to be reviewed by Town & NVCA staff.”
ix. Modify last sentence to “Watering, pruning and general maintenance of newly planted trees will be carried out by the owner’s contractor until Assumption is granted by the Town.”

o. 7.3 Post-Construction:

x. Remove “Environmental Inspector or qualified biologist.” and replace with “Town and NVCA staff.”

p. Mitigation:

xi. Remove the following from the second sentence in the first paragraph: “with the exception of street trees”.
xii. Modify second sentence to “… should be native to the NVCA jurisdiction and…”
xiii. Remove the entire last sentence in the first paragraph: “For street tree plantings……”
xiv. Remove the entire second paragraph and bullet points.

q. A removal note is to be added to the report and plan as follows: “Any trees proposed for removal that are located adjacent to the limit of the property shall be verified by survey prior to removal. Any trees located on the property line or on the adjacent property that are proposed to be removed or pruned, will require written consent from the adjacent property owner prior to any works being completed. All correspondence is to be forwarded to the Town prior to final approval.”

r. Add the following note within the report: “Tree removal and preservation information will be updated at the detail design stage. This document and any accompanying drawings shall be updated accordingly.”

s. Add the following note within the report: “During construction and prior to Assumption of the subdivision by the Town, the Consulting Arborist along with appropriate Town and NVCA staff shall inspect the entire site. Any hazardous trees must be identified and removed prior to Assumption.”

t. Add the following note within the report: “Removals should occur outside of the breeding bird season (April 1 - August 1). If this is not possible, clearance with an ecologist should occur prior to construction to ensure no loss of bird nest, egg or unfledged young.”

u. Tree 9, 10, 11, 12 & 13 appear to be beyond of the property boundary according to the Tree Preservation Plan. If grading is not to occur beyond the property line then the trees should be preserved.

4. In addition to standard **conditions of draft approval**, please be advised the following conditions will need to be included as part of any draft approval:

i. The Owner has submitted Phase I and Phase II EIA reports by Sirati & Partners Consultants Limited; the Phase II has confirmed that the property is suitable for the proposed development. It should be noted that regardless of any conclusions identified in

these assessments, the Town will require that a Record of Site Condition be filed with MOECC for all lands associated with the noted draft plan (*Engineering*).

ii. Prior to the initiation of grading or stripping of topsoil, the Owner shall submit an Erosion and Sedimentation Control Plan including a staging plan outlining the necessary steps including topsoil storage plan detailing the location, size, side slopes, stabilization methods and time period for approval by the NVCA and the Town. In addition, these plans need to describe how the infiltration gallery within the right of way will be installed and maintained. Also, during house construction individual sediment and erosion measures are to be installed on the lot and maintained until the lot has been stabilized (*Engineering)*.

**External Agency Comments**

Nottawasaga Valley Conservation Authority:

- Letter from Lee Bull, Manager, Planning Services, December 30, 2018 (Hydrogeology Comments) is attached.

Nottawasaga Valley Conservation Authority – Email from Lee Bull, Manager, Planning Services, dated Feb. 3/19:

Nottawasaga Valley Conservation Authority [NVCA] staff is pleased to provide the Town of Caledon with our comments on the engineering and ecology materials provided in support of the above noted applications.

NVCA staff has completed their review of the following submissions:

- Valdor Engineering, *Functional Servicing Report,* dated May 2018 and associated drawings dated May 17, 2018 reviewed: ESC-1, STM-1, PGR-1
- Sirati & Partners Consultants Ltd., *Hydrogeological Impact Study Proposed New Sub-division,* dated May 17, 2018
- Sirati & Partners Consultants Ltd., *Preliminary Geotechnical Investigation Proposed New Subdivision,* dated July 21, 2017
- Natural Resource Solutions Inc., *Scoped Environmental Impact Study*, Mount Pleasant, Caledon, dated July 2018.

Upon review of the above noted materials we offer the following comments:

**Functional Servicing Report prepared by Valdor Engineering:**

*Hydraulic/Hydrologic Models:*

5. The floodplain analysis (hydrologic, hydraulic, and Regulatory floodline) has been reviewed and deemed to be acceptable. Two new 1200mm diameter CSP culverts have been proposed on Mount Pleasant Road to alleviate flooding, during the Regional storm event, on Mount Pleasant Road and associated backwater on the subject site. The existing 800mm diameter culvert on Mount Pleasant will remain, as is.

*Erosion Control:*

6. It's understood, for erosion control, the runoff generated from the 25mm storm event, can't be released over 48 hours due to the small drainage area and selected bioswales. As outlined, in the *Stormwater Technical Guide*, Nottawasaga Valley Conservation Authority, December 2013, at a minimum, retain 5mm on site. Please provide supporting calculation this minimum erosion criteria is achieved.

*Oak Ridges Moraine:*

7. The proposed development is situated on the Oak Ridges Moraine (plus within the wellhead protection area), as such, there is a need to ensure infiltration volumes are maintained post to pre-development. NVCA understands a calculation was carried out demonstrating the pre-development water balance is achieved post-development using the 12-bioswales, however NVCA strongly suggests proposing soak-away pits/infiltration basins in all rear yards. The rear yard pits/basins will only collect 'clean water' from the contributing rooftops, thus ensuring additional water will be effectively infiltrated into the ground thus supporting the specified recharge area associated with the Oak Ridges Moraine.

*Phosphorous Loading Calculations:*

8. Please provide phosphorus loading calculations, at this planning stage, for existing and proposed conditions for the site, including "best efforts" to achieve pre-development loading rates. A reference guide is available on our website at http://www.nvca.on.ca/Shared%20Documents/NVCA%20Phosphorus%20Loading%20Tool%20Final%20Report%202014.pdf.

*Proposed Grassed Lined Channel:*

9. Please provide several cross sections of the proposed channel on the grading plan (PGR-1) as the elevations associated with the proposed channel are not evident.

*Sediment and Erosion Control Plan:*

10. Due to the nature of the soil, the development being on the Oak Ridges Moraine, etc. please replace the proposed sediment control fence with a double row of sediment control fence with straw bales in between. Please adjust drawing ESC-1 and provide a design detail.

11. Please provide erosion and sediment control notes speaking to the site being stabilized immediately following construction of the proposed channel and final grading. Ensure the proposed stabilization measure makes sense based on the season of the proposed construction.

12. Please ensure there are erosion and sediment control measures implemented downstream of the proposed culverts on Mount Pleasant Road.

13. To preserve the infiltration capabilities of the existing soils, please consider protecting the footprint area(s) of the 12-proposed bioswales with construction fencing. The fencing can be erected to discourage the construction equipment from entering these specific areas. Please revise the erosion and sediment control drawing accordingly.

14. Please specify if there is a need to incorporate interceptor swales with rock check dams located throughout for this development during the construction phase. If so, please adjust the appropriate drawing(s) and provide a design detail.

*Operation and Maintenance Manuals*

15. Please provide a separate cover manual outlining the Operation and Maintenance associated with the proposed bioswales.

**Ecology:**

16. NVCA staff have no concerns regarding the conclusions of the submitted EIS. The 30m buffer to the retained woodland features on the property is sufficient. Further, the re-forestation measures proposed for the property are satisfactory, and represent appropriate mitigation for removal of a small area of cultural meadow and some hedgerow trees.

*Natural heritage comments are limited to a few recommendations regarding the re-forestation memo (Appendix X):*

17. The reforestation memo recommends that herbaceous seed mixes be applied by hand to the various restoration areas on the property. Given the scale of the area (~4ha), NVCA staff recommend that site-specific seed mixes be applied mechanically, via mechanical broadcaster or ‘drill-seeding’. This would ensure even coverage and increase success of seed establishment, especially if competing vegetation exists on site at the time of application.

18. In regard to land preparation, it may be prudent to consider treating on-site vegetation with appropriate herbicide in order to effectively reduce competition prior to conducting native plantings/seed application.

19. The re-forestation strategy may also consider integrating measures for managing exotic species within the retained hardwood forest area in SW side of the property. Removal and herbicide treatment of Common Buckthorn would represent a quality enhancement measure for the woodland.

Comments are outstanding from the following agencies and will be forwarded to you upon receipt:

- Municipal Property Assessment Corporation (MPAC)

**Peer Reviews**

The "Hydrogeological Impact Study", prepared by Sirati & Partners Consultants Ltd., dated May 17, 2018, is currently being peer reviewed. Once finalized, a copy of the peer review letter will be provided to the applicant.

As noted in our November 20, 2018 letter, the "Environmental Noise Feasibility Study" prepared by Valcoustics Canada Ltd. dated June 26, 2018 shall be peer reviewed at the Owner's expense once the grading plans are generally acceptable by Town of Caledon Engineering staff.

**Conclusion**

The Draft Plan of Subdivision and Zoning By-law Amendment applications cannot be supported as presently proposed and a resubmission is required to address the comments contained in this letter and our letter dated November 20, 2018. A Resubmission Checklist that outlines the required number of copies/packages of documents required with your next submission will be sent under separate cover. Resubmissions must be organized according to commenting department/agency. With your next submission, please include:

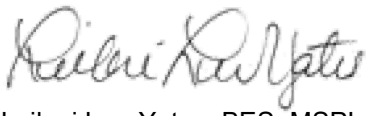
- A detailed covering letter outlining how each comment within both this letter and the November 20, 2018 letter, has been addressed is required to accompany the resubmission.
- A recirculation fee of $6,120 is also required, as per the Town's 2019 Fee By-law.

Staff will arrange a meeting with you and your team of consultants to discuss the comments and revisions required for the revised submission. Staff will require an agenda to assist in the discussion at least 3 days prior to the meeting.

I trust this information is of assistance to you. Please do not hesitate to contact me at leilani.lee-yates@caledon.ca, or extension 4228 should you have any questions.

TOWN OF CALEDON

Sincerely,



Leilani Lee-Yates, BES, MSPL.RPD, MCIP, RPP
Senior Planner
Planning and Development - West
Community Services Department
**TOWN OF CALEDON**

Enclosure: Correspondence:

- Lee Bull, Manager, Planning Services, Nottawasaga Valley Conservation Authority (NVCA), dated December 30, 2018 (Hydrogeology Comments).

c. Casey Blakely, Manager of Development – East, Town of Caledon
Daniel Oh, Senior Development Engineering Coordinator - East, Town of Caledon
Nick Pirzas, Senior Landscape Architect, Town of Caledon
Wayne Koethe, Region of Peel
Lee Bull, Nottawasaga Valley Conservation Authority

**Nottawasaga Valley**
Conservation Authority

30 December 2018

Ms. Leilani Lee-Yates, BES, MCIP, RPP
Senior Planner, Development – West
Town of Caledon
6311 Old Church Road
Caledon, ON L7C 1J6

Dear Ms. Yates

**Re: NVCA Hydrogeology Comments (The Biglieri Group Ltd., on behalf of Tropical Land)**
**0 Mount Pleasant Road**
**Part Lot 27, Concession 8, (Albion) Town of Caledon**
**Town File # Draft Plan of Subdivision 21T-18002 and Zoning By-law Amendment RZ 18-06**
**NVCA ID# 31842**

Nottawasaga Valley Conservation Authority [NVCA] staff is pleased to provide the Town of Caledon with our comments on the Hydrogeological Impact Study prepared in support of the above noted development applications.

The subject property is 12.28 ha in size and is located on the west side of Mount Pleasant Road, south of Highway 9 in the Town of Caledon. The proposal will facilitate the development of an eight (8) unit estate residential plan of subdivision. Two open space blocks and an environmental protection block have also been proposed on the subject property.

Nottawasaga Valley Conservation Authority (NVCA) staff has completed their review of the following submission:

- Sirati and Partners Consultants Ltd., ***Hydrogeological Impact Study***, Proposed new subdivision, 0 Mount Pleasant Road, Caledon, Ontario, dated May 17, 2018

The following outlines NVCA comments on the above noted submission.

**HYDROGEOLOGY**

The hydrogeological study was conducted to assess the subsurface soil conditions, soil stratigraphy, groundwater table conditions, and its flow directions. The report consisted of the following scope of work: review of available background information; detailed site inspection, measurement of groundwater levels, in-situ hydraulic conductivity tests; private well survey; and water balance (preliminary).

1. **Land Use:** The subject property falls fully within the jurisdiction of Nottawasaga Valley Conservation Authority. Further, the property is located within the Wellhead Protection Area (WHPA)-D (25 year time of travel) for the Palgrave municipal system and is located in a Highly Vulnerable Aquifer and a Significant Recharge Area. Consider revising the report accordingly.

2. **Environmental Features:** The document authors have cited the natural heritage system for the Lake Simcoe watershed prepared for the Lake Simcoe Region Conservation Authority [LSRCA] by Beacon Environmental (July 2007). This document does not apply to this area of Peel which is in the NVCA watershed. Typically, NVCA staff requires a 30 metre buffer to a headwater creek, this will be discussed in further detail once natural heritage comments have been prepared.

3. **Hydrogeology:** the hydrogeology section of the report could be complemented with a discussion on the depth to the regional aquifer and the screen depth of the proximal Palgrave municipal wells. Further this report should indicate the source of the potable drinking water supply for the proposed 8 custom homes in addition to waste water.

4. **Door to Door Well Survey:** NVCA staff agrees that it would be appropriate to contact the home owner immediately north of the site to get well information before any construction excavation begins at the subject property.

5. **Groundwater Level Monitoring:** Please merge table 9-1 and 9-2 together and add screen depth.

6. **Long Term Groundwater Monitoring:** please revise table 9-1 to merge the two tables together since the statics provided for January, February, and March 2018 do not correspond to any monitoring wells.

7. **Inferred Groundwater Flow:** Please resubmit figure 9-7: monthly water table elevation changes from October 2017 to March 2018 and include the appropriate label for the Y axis.

8. **Construction Dewatering:** NVCA staff agrees that there is no requirement for dewatering for the proposed construction of the 8 custom homes based on the provided statics.

9. **Assessment of Potential Impacts:** The subject property falls wholly within the Nottawasaga Valley Conservation Authority watershed. Further, the property is located within the Wellhead Protection Area (WHPA)-D (25 year time of travel) for the Palgrave municipal system. Further the property is located in a Highly Vulnerable Aquifer and a Significant Recharge Area. The report should be revised accordingly. There is also a water course, identified by the authors as ephemeral that bisects the property and is within a regulated area. The assessment of potential impacts did not indicate potential baseflow impacts to this feature based on the change of land use. An assessment of the potential impacts to this feature should be included in the revised report.

10. **Water Balance:**

    a. based on the groundwater divide bisecting the property, please re-examine the water balance and associated infiltration/runoff based on this catchment area subdivision; see the following link for additional information: https://www.lsrca.on.ca/Shared%20Documents/permits/hydrogeological%20_guidelines.pdf?pdf=Hydrogeological-Guidelines

    b. Why was the LID Treatment Train Tool [TTT] used for water balance calculations instead of relying on the thornwaite-mather calculation?

11. **LID Technique Design:** NVCA staff agree that site specific LID design can occur at the detailed stage following clarification of the water balance calculations.

12. **Water Quality:** Why were the groundwater samples compared to the Lake Simcoe Region Sanitary and Combined Sewer Use By-Laws when the subject property is located in the NVCA watershed? Further, please provide background water quality characterization of the unconfined/groundwater table.

## ENGINEERING & ECOLOGY

13. NVCA staff engineering and ecology comments on the remaining submission materials will be provided under separate cover.

## CONCLUSION

The hydrogeological impact study submitted in support of these development applications should be revised to address the comments noted above, including the inaccuracies noted throughout our comments.

We trust that the above comments are of assistance to the Town and the applicant. Please feel free to contact the undersigned should you have any questions related to this matter.

Sincerely,

Lee J. Bull, MCIP, RPP
Manager, Planning Services

Copies:
Mr. Braydon Libawski – The Biglieri Group