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March 31, 2022  
File: 160900954

**Attention: Sarah Dilamarter, Junior Planner**

Municipality of Trent Lakes  
760 Peterborough County Road 36  
Trent Lakes, ON K0M 1A0

Dear Ms. Dilamarter,

**Reference: Peer Review of Functional Servicing Report  
Pigeon Lake Commercial Cabins  
16 Fire Route 94A, Municipality of Trent Lakes, County of Peterborough, Ontario**

Stantec has completed a peer review of the Functional Servicing Review/Report (FSR) including the Concept Site Plan prepared by D.M. Wills Associates Limited, Peterborough, for Pigeon Lake Commercial Cabins (owner: Stephen Lennox), dated March 2021. It was prepared, along with a Planning Justification Report (PJR), also prepared by D. M. Wills Associates Limited, dated March 2021 and several other reports, including a Hydrogeological Study and Traffic Brief both also prepared by D.M. Wills, an Environmental Impact Study prepared by GHD and a Phase One Environmental Site Assessment prepared by Toronto Inspection Ltd., to support a Zoning Bylaw Amendment (ZBA) Application. The application is to permit the redevelopment of the property for tourist cabin rentals, an accessory dwelling and a dry-land boathouse. Concurrent with the preparation of this peer review letter, Stantec is also undertaking separate cursory reviews of the Hydrogeological Study, the Traffic Brief, the Environmental Impact Study and the Phase One Environmental Site Assessment which will be reported on under separate letters.

The FSR states that the existing site has 10 single story cabins that were previously used for commercial rentals. The PJR indicates that they have been vacant since the early 1980's. The FSR further states that the proposed concept site redevelopment calls for removing all existing structures and constructing five new two-bedroom commercial cabins, a new private four-bedroom cottage for the owner and a new dry slip boathouse (the PJR seems to indicate that five of the existing cabins will be salvaged and repositioned such that they will be setback at least 10 metres from the Pigeon Lake high water mark, which will permit the construction of a second storey on each of these cabins. It also states that the private cottage will be two storey). The FSR provides an assessment of the necessary infrastructure requirements necessary for the redevelopment of the site. Neither the FSR or the PJR indicated whether the cabins and/or cottage are to be operational / occupied (or be available to be occupied) all year long or just seasonally.

The site is a little peninsula surrounded by Pigeon Lake to the east, south and west with a neighbouring property and Fire Route 94A to the north. The site has approximately 300 metres of irregular shoreline frontage. The existing driveway into the site is really just a dead end extension of Fire Route 94A into the peninsula. The site is approximately 4 kilometres to the south of Peterborough County Road 36 via Nicholas Cove Road that Fire Route 94 connects to. In section 1.1 of the FSR, Site Location / Study Area, it states that the site is all within the Municipality of Trent Hills, but it is assumed that that is a misprint and it should have stated Trent Lakes. The report states that the site is 0.64 ha in area.

The FSR looked at the site grading, sanitary servicing, water servicing and stormwater management. The report is fairly brief with an Appendix for Figures and one for Stormwater Management.

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Following, are Stantec's review comments on the site servicing considerations, in the same order by Section as in the FSR.

**2.0 Site Servicing**

2.1 Site Grading

The FSR states that as part of the overall redevelopment of the site there will be as minimal changes as possible to the existing grading to maintain existing drainage patterns. The existing gravel driveway is to be widened to 3.5 metres but will match the 3.0 metre width of the roadway at the north property limit. There will be a new 6 parking space parking area for the rental cabins near the north end of the site that will be graded so that runoff will be directed to the low impact development (LID) feature for quality control. There will be a parking area and a turnaround area for the private cottage at the south end of the site. A new grading plan was developed and is included in the FSR as Figure 3 in Appendix A.

2.2 Sanitary Servicing

The FSR states that the redeveloped site will be serviced by a new on-site septic system, to be designed by others. The footprint for the septic system is shown on the concept site plan as being adjacent to the new rental cabins parking area.

2.3 Water Servicing

The FSR states that the site will continue to get its water supply from the surface water of Pigeon Lake. Based on MOE design guidelines (2008) for drinking water systems, the domestic water demand to be used is 450 litres per day per person. The FSR states that the proposed development has a maximum occupancy of 28 persons, therefore the domestic water demand is 12,600 litres per day.

A Permit to Take Water (PTTW) under Ontario Regulation 387/04 is not required as the proposed development requires less than 50,000 litres per day, which is the threshold limit for requiring a PTTW.

The FSR also states that the design details as to the sizing, number and location of pumps and intake line(s) and the specific water treatment system(s), will be undertaken by others at the Site Plan Approval stage or the Building Permit Application stage for the redevelopment of the site. Depending on if the cottage and/or cabins are planned to be occupied (or potentially occupied) all year round, the water intakes would have to be designed in consideration of ice conditions on Pigeon Lake in the late fall, winter and early spring.

The FSR doesn't address any water supply for fire protection. There may be protocol in place in regard to this issue for the full time and seasonal residences and businesses along the Fire Routes in the area of the Township. However, consideration could be given to include for one or more dry fire hydrants that could be installed, which would utilize the surface water of Pigeon Lake as the fire firefighting water supply.

**3.0 Stormwater Management**

On-site stormwater management facilities are typically required for new developments or redevelopments to provide both stormwater quantity and quality control in accordance with municipal and provincial guidelines. Quantity control is to ensure that the flooding potential of downstream properties is not increased due to any new development or redevelopment. Therefore, physical stormwater quantity controls are required to be implemented to prevent post development / redevelopment peak flows from exceeding existing flows. Similarly, to ensure that developments or redevelopments do not adversely affect runoff water quality, physical stormwater quality controls are required to remove or to minimize sediments and other contaminants

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in stormwater runoff.

### 3.1 Existing Drainage Characteristics

A high point north-south line in the middle of the peninsula site splits the drainage into westerly and easterly overland flow directions to the west and east shorelines respectively. The western portion contains 8 cabins and landscape area and the eastern portion contains two cabins, the gravel driveway and landscape area. An existing drainage pattern plan, Figure 4 is included in Appendix A to the FSR.

### 3.2 Stormwater Quality

The proposed redevelopment is low intensity with the slightly widened driveway and the new small gravel parking lot forming the extent of the land use changes that could potentially impact water quality. The only impervious areas within the redevelopment of the site consist of the cabin, cottage and boathouse roofs.

Low Impact Development (LID) practices strive to reduce post development storm runoff flows to those that existed before development or redevelopment. For this proposed development a stone filled infiltration trench is planned to be constructed at the north edge of the new gravel parking lot to accept runoff from the lot. The FSR states that the infiltration trench was designed and sized in accordance with the Low Impact Development Stormwater Management Planning and Design Guide (CVC/TRCA, 2010) to contain runoff from a 25 mm storm with a 25 hour drawdown after the rainfall event, which is well within the guidelines and taking into account the native soil types. The infiltration trench design calculations are included in Appendix B to the report.

The FSR states that stormwater quality controls were not considered for the slightly widened gravel driveway since the increased area was deemed to be insignificant with respect to the guidelines.

As stated previously in this peer review letter, Stantec is undertaking a separate review of the submitted Hydrogeological Study for this proposed redevelopment project and will be reporting on same under separate letter.

## **4.0 Conclusion and Summary**

In the Conclusion section of the FSR, it is stated that based on the findings as presented, there are no servicing, grading, storm water quantity or quality (other than the LID infiltration trench for the new gravel parking lot) constraints identified, that would preclude the proposed development of the site. Stantec is in general agreement with the aforesaid statement. Further, that the design (by others) of an on-site septic system would have to meet the local municipal, local health unit, building code and/or provincial standards and guidelines. This also holds for the design (by others) of the on-site potable water pumping and treatment system(s) utilizing Pigeon Lake surface water as the supply source.

Stantec notes as previously mentioned in this letter, that the FSR did not address any measures relating to firefighting requirements.

As well, the FSR did not address any electrical power supply considerations / measures for the proposed redevelopment, nor any discussion of communication and/or internet access connectivity for the redevelopment, which needs to be addressed.

The suitability of the driveway, parking lot and private turnaround area for emergency vehicles needs to be addressed at the time of Site Plan Approval for the redevelopment.

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Also as previously mentioned in this letter, Stantec is also undertaking separate cursory reviews of the Hydrogeological Study, the Traffic Brief, the Environmental Impact Study and the Phase One Environmental Site Assessment for this proposed redevelopment project and will be reporting on same under separate letters.

Regards,

**STANTEC CONSULTING LTD.**



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c. Roger Freymond, Stantec

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