



September 7, 2023

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Attention: Mr. Del Terrelonge and Mr. Andrew Lacobelli  
*Project Leaders*

**Re: Response to County Engineering Review: Application for Zoning By-Law Amendment File Number: Z117-2021 (Adolphus Reach Resort)**  
1315, 1329, 1357 County Road 7, Prince Edward County, ON  
Pinchin File: 267949.001

Pinchin Ltd. (Pinchin) is pleased to provide the following clarification and additional information in response to the Engineering Review from by Aynsley Osborne (Development Coordinator, The Corporation of the County of Prince Edward (The County)) dated October 28, 2022. The County expressed questions regarding aspects of the Preliminary Water and Wastewater Servicing investigation (Water Supply and Sewage Treatment, Aug 11, 2021) and the Site Evaluation Report dated October 12, 2021. These reports were completed in support of the proposed development of the Adolphus Reach resort located at 1315, 1329, 1357 County Road 7 and application for Zoning by-law amendment Z117-2021.

This letter lists the reviewers item of concerns and Pinchin responses below. The original comment numbering used by the reviewer has been used to facility ease of follow up.

### **Reviewers comments regarding Water Supply and Sewage Treatment Report**

*Reviewers Comment 6) The Farm House is missing from the development list. It is understood the Farm House will be an accommodation unit.*

Pinchin Response: Pinchin has confirmed with the Client that the 'Farm House' will be utilized as an accommodation unit for the development.

### **Reviewer Comments**

*7) Was the Farm House included in the water demand calculations?*

*8) Was the Farm House included in the sewage calculations?*

**Pinchin Response:** The objective of the August 11, 2021 report titled "Water Supply and Sewage Treatment" was to review, at a high level, the potential servicing options for the proposed development, provide guidance in identifying the most appropriate approach, and provide a preliminary design flow estimate. This work was intended to demonstrate that the site is serviceable and was not intended as design guidance. A preliminary estimate of water demand using standard approach as prescribed by the Ontario Building Code and incorporating a conservative level of contingency of 25%, and rounding up to



the nearest 5,000 L, results in approximately 135,000 litres/day. This value did not incorporate servicing requirements for the 'Farm House'.

If the assumption that 'Farm House' is considered as a 5-bedroom home, then the daily sewage demand based on the Ontario Building Code (OBC) Section 8 would be a design flow of 2,500 Liters per day (Lpd). This amount is half of the 'rounding up' conservatism included in the preliminary design flow calculation. The addition of 'Farm House' as a component of the development being serviced by the water and wastewater systems represents a 1.9% increase to the total preliminary estimated water demand and wastewater treatment flow (135,000 Lpd vs. 137,500 Lpd). Revisiting the conclusions of the August 11, 2021 report with consideration to this increased daily volume we conclude:

- Surface water (Lake Ontario) remains the preferred option for potable water supply as groundwater resources in the area are generally of low yield and poor quality. The increased in the preliminary estimation of daily demand is not limited by the supply;
- Concerns expressed in the August 11, 2021 report regarding the feasibility of a leaching bed for wastewater disposal due to the thin overburden at the Site and the large area that would be required for the leaching bed are still valid concerns. On-site testing would need to be conducted before a decision could be made regarding the feasibility of a leaching bed and sizing and design would include detailed flow calculations beyond the scope of this current work.
- The additional flow from the inclusion of the 'Farm House' in the flow design total does not alter the conclusion that a package treatment plant with advanced treatment and discharge to surface water is an alternative option for the Site. It is expected that the small increase in design flow would not materially affect the sizing, treatment chain, or cost of the treatment system.

In summary, the inclusion of the 'Farm House' does not change the approach, considerations, or conclusions of the August 11, 2021 report. It remains our opinion that a suitable water supply and sewage treatment systems are available to service the proposed development.

### **Reviewers comments regarding Site Evaluation Report**

*Reviewers Comment 14) Please refer to comments for the Preliminary Water Supply and Sewage Treatment Study.*

**Pinchin Response:** Please refer to the comments and responses above.



**Reviewers Comment 15) Please provide calculations.**

**Pinchin Response:** A preliminary estimate of water demand and wastewater flow was completed using standard approach as prescribed by the Ontario Building Code and incorporating a conservative level of contingency of 25%. The resulting daily flow was then rounded up to the nearest 5,000 Lpd as an additional conservatism. Calculations for the daily flow are shown below in Table 1.

*Table 1: Preliminary Daily Flow/Demand Using OBC Section 8 Guidance.*

Building type	#	Daily flow per	Daily Flow
		L	L
One bedroom unit (Pod Villa)	4	750	3,000
Two bedroom units (Pod Villa)	8	1,100	8,800
Three bedroom units (Pod Villa)	8	1,600	12,800
Main Villa (assume 4 bedroom)	1	2,000	2,000
Tent Villa (assume 3 bedroom)	2	1,600	3,200
Tree top houses (assume 3 bedroom)	36	1,600	57,600
Art Gallery (assume 4 toilets and sinks)	1	4,920	4,920
Winery Buildings Retail (assume 2 toilets and sinks per building)	5	2,460	12,300
		Total daily flow (L)	104,620
		Safety factor in percent	25%
		Total Daily Flow (L) including safety factor	130,775
		Round up to nearest 5,000 L	135,000

**TERMS AND LIMITATIONS**

This Response to County Engineering Review was performed for 2522082 Ontario Inc. (Client) to provide the clarification and additional information in response to the Engineering Review from The Corporation of the County of Prince Edward (The County)) dated October 28, 2022 regarding feasibility of water and wastewater servicing for proposed development located at 1315, 1329, 1357 County Road 7 (Site) and application for Zoning by-lay amendment Z117-2021.

This letter was prepared for the exclusive use of the Client subject to the terms, conditions and limitations contained within the duly authorized work plan for this project. Any use which a third party makes of this letter, or any reliance on or decisions to be made based on it, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted.



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This Response to the County Engineering Review was performed in general accordance with currently acceptable practices, as applicable to the Site. The information provided in this letter is based upon analysis of available documents, records and drawings and information provided but the Client. Pinchin has assumed that the information provided is factual and accurate. Pinchin accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this letter as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted.

Pinchin makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this letter, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and these interpretations may change over time.

## **CLOSING REMARKS**

We trust that the foregoing information is satisfactory for your present needs. Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

### **Pinchin Ltd.**

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