

Jewell Engineering Inc.  
1-71 Millenium Parkway  
Belleville, ON K8N 4Z5

June 30, 2021

Project #21R117

Attn: Mr. Bryon Keene, P.Eng., Senior Water Resources Engineer

Re: Geotechnical Peer Review Letter  
Cressy Bayside Estates Residential Development  
1041 County Road 7, County of Prince Edward, Ontario

Dear Mr. Keene:

## 1.0 Introduction

This letter provides comments resulting from a Geotechnical Engineering Peer Review (PR) performed by Redstone Engineering Inc. (Redstone) on a report prepared by Ainley Graham & Associates Limited (Ainley) for the Cressy Bayside Estates Residential Development (the Project) at the above-referenced address in the County of Prince Edward (the County). This PR was performed as requested and authorized by Mr. Bryon Keene of Jewell Engineering Inc. (Jewell).

The following Ainley report (the Report) was provided for Redstone's PR and comment:

- "Geotechnical Report – Cressy Bayside Estates Inc., 1041 County Road 7, Residential Development", dated November 2020, under Ainley's File No. 18538-1.

Ainley's Report states that its objective (purpose) was:

- To conduct a geotechnical site investigation, soil sampling and testing within the subject site.
- To prepare a geotechnical report and recommendations based on the information obtained during the geotechnical site investigation completed to advance the preliminary design and construction of the overall project.
- To complete a slope stability review of the site.

For reference, Jewell also provided Redstone with the following memo (the Memo) from the County:

- "Cressy Bayside Estates, Application for Subdivision ... Engineering Comments", dated May 17, 2021, authored by Mr. John Gooding (Projects and Development Coordinator for the County).

Based on the Memo, it is Redstone's understanding the Project will include 8 residential lots, and 1 block for a common element condominium. The Memo references other drawings and reports that were submitted to the County, however these other documents were not included in Redstone's PR scope.

## 2.0 Summary of Review Comments

### 2.1 General Comments

The Report is based on a preliminary concept development plan, and is itself preliminary in nature. With this in mind, the geotechnical data gathered from the fieldwork generally appears to be a good representation of the soil, groundwater, and bedrock conditions, and the data provided is prepared and presented well. Based on the preliminary / conceptual nature of the proposed site plan and corresponding preliminary nature of the Report, the geotechnical recommendations provided in the geotechnical report are reasonable and meet general design requirements.

## 2.2 Specific Review Comments

The following table summarizes Redstone's comments that correspond to specific elements within the Report.

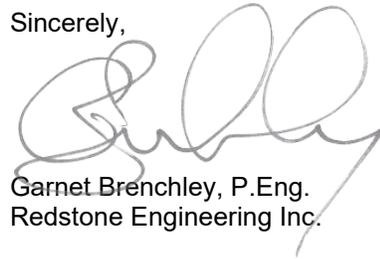
COMMENT #	REPORT SECTION #	REPORT PAGE # ANY SPECIFIC TEXT	COMMENT
1	1.0	Pg 1 <i>"Based on the preliminary grading plan it is understood that the development will consist of 8 lakefront lots with single-detached homes on each."</i>	Based on the Memo's reference to a "common element condominium" it appears that there will be some form of condominium structure(s) located within one or both of the common element areas shown on Figure 1 of the Report. Ainley should confirm this, and if necessary update their Report to include suitable references (and recommendations) throughout.
2	5.1	3 & 4	The foundation recommendations are suitable for the single-dwelling Lots 1-8, based on boreholes BH-5 to BH-9. Ainley should also provide foundation recommendations for any structures bearing on, or otherwise influenced by, bedrock (eg: common element condominium).
3	5.7	6 & 7	Slope stability is discussed appropriately within the context of Natural Hazards (as defined by the MNR) and related allowances (development setbacks) for lands fronting along Great Lakes and Large Inland Lakes.  Additionally, Ainley should also review and discuss long-term erosion control and stability of slopes related to proposed grades and/or structures throughout the remainder of the site including: <ul style="list-style-type: none"> <li>- roads and driveways;</li> <li>- any slope alterations (including slope leading north from the upper level embankment); and</li> <li>- any common element condominium(s).</li> </ul>
4	Figure No. 1	-	Topographic contours are shown on this plan that appear to be existing grades - no proposed grades are apparent. Due to the preliminary conceptual nature of this drawing, it is unclear whether proposed grades throughout the site are defined yet. Ainley should confirm the status of proposed design grades throughout the site, and once such data is available, update their Report (including recommendations) as appropriate.
5	Appendix A	Borehole Logs	Two logs note exposed bedrock at surface, six logs note boreholes terminated on inferred bedrock. If any development elements (roads, utilities, foundations) will intersect with, rely on, or otherwise be influenced by the presence and characteristics of bedrock (eg: foundations for common element condominium), then Ainley should consider further subsurface investigation to confirm relevant bedrock properties in support of the detailed design of such elements.
6	Appendix A	Borehole Log BH-4 <i>"Unable to access this area with track machine. Multiple probe holes completed in surrounding area. Refusal ranged between 0.15m-0.6m below existing grades."</i>	Subsurface geotechnical conditions in this area should be confirmed prior to finalizing detailed design.
7	n/a	n/a	Due to the preliminary conceptual nature of the design at the time of Ainley conducting its investigation and Report, the Report should similarly be considered preliminary conceptual. Ainley should review and update their geotechnical information and recommendations as further relevant project parameters become available including proposed grades and location/layout of structures.

### 3.0 Closure

The geotechnical comments and recommendations provided within Ainley's Geotechnical Report are considered suitable for the preliminary concept design stage of the proposed development, however are insufficient for final design purposes. Additional geotechnical work should be completed once further design parameters (including proposed final grades and building location/layouts) are available.

I trust that the information and commentary in this memorandum is complete and adequate for your consideration. Should questions arise regarding any aspect of this letter, please contact Redstone's office.

Sincerely,

A handwritten signature in black ink, appearing to read 'Garnet Brenchley', with a long horizontal stroke extending to the right.

Garnet Brenchley, P.Eng.  
Redstone Engineering Inc.