SOIL-MAT ENGINEERS & CONSULTANTS LTD.

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PROJECT NO.: SM 241154-G February 12, 2025

CACHET DEVELOPMENTS
361 CONNIE CRESCENT, SUITE 200
Concord, Ontario
L4K 5R2

Attention: Brendan Walton, P.Eng.
Engineering Manager, Land Development

GEOTECHNICAL CONSIDERATIONS – AGGREGATE RESOURCE POTENTIAL
PROPOSED RESIDENTIAL DEVELOPMENT
ELORA SAND LANDS – 7581 SIDEROAD 15
ELORA, ONTARIO

Dear Mr. Walton

Further to your recent information and request, SOIL-MAT ENGINEERS & CONSULTANTS LTD. have prepared the following geotechnical considerations letter to address the sand and gravel resources of primary and secondary significance designation over a portion of the Elora Sands development area.

INTRODUCTION

As per the drawing provided to this office [Mineral Aggregate Resource Overlay, Schedule D County of Wellington Official Plan] a portion of the proposed Elora Sands development area has been designated as an area of sand and gravel resources of primary and secondary significance. The region identified is of an irregular shape with specific boundaries and it is unclear as to the rationale behind the region of the designation. The purpose of this brief geotechnical letter is to evaluate the known site conditions and provide comment regarding the resource designation on the lands, from a geotechnical point of view.

SITE CONDITIONS

A review of publicly available published information [Quaternary Geology of Ontario, Southern Sheet Map 2556] indicate the subsurface soil in the immediate area to consist of a mixture of stone poor silty sand to sandy silt till, ice-contact stratified deposits of sand and gravel with minor silt and clay, and glaciofluvial deposits of gravely and sandy material.

SOIL-MAT ENGINEERS has conducted detailed geotechnical investigation works over the subject site [SM 301915-G, dated October 14, 2021], as well as hydrogeological assessment [SM 301951-G, dated July 20, 2022]. These site investigations included the advancement of sampled boreholes across the site, multiple grain size analyses on recovered soil samples, and have thoroughly characterised the onsite subsurface conditions.

The subsurface soils were investigated to depths of up to approximately 8.2 metres below the existing grade, and found to consist of variable layers of sandy silt till to clayey silt, silty sand and sand, with generally trace amounts of gravel. Grain size analyses conducted on ten [10] recovered soil samples at varying depths demonstrated the following:

- Clay contents in the range of 2 to 22%, average of 10%
- Silt in the range of 4 to 51%, average of 26%
- Sand in the range of 26 to 94%, average of 53%
- Gravel in the range of 0 to 43%, average of 9%

These conditions are consistent with the referenced geology mapping information indicating stone poor silty sand to sandy silt till, to glaciofluvial deposits of gravely and sandy material. There is limited to negligible indication of ice-contact stratified deposits of sand and gravel with minor silt and clay.

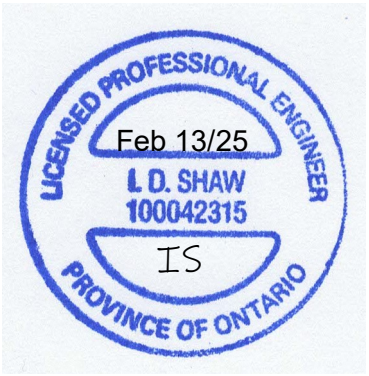
DISCUSSION

Overall, the subsurface soils are predominantly sand and silt, with evident more clayey seams. The gravel fraction tends to be minor, with the one noted sample with 43% gravel presenting as an outlier indicative of possible isolated or intermittent gravelly layers or veins. Such veins or zones of greater gravel fraction would be expected to be significantly variable across the site. On a geotechnical basis, these silty sand soils, with limited gravel, would not present as a quality sand and gravel resource. The sandy soils do not have sufficient gravel fraction to be suitable for use in generating aggregate materials for use in construction, such as OPSS Granular A or B. Where sufficiently free of silt and clay, the sand soils may be suitable sources for use as concrete sand or septic sand, subject to sorting and processing efforts. However, this would not be reasonably considered as a significant aggregate resource in this regard. Given the predominantly silty sand and sand soils, limited gravel content, and variable nature of the subsurface soils encountered in investigations of the site, it would not be considered a technical or economically viable source of sand and gravel of any significance. As such it is of our opinion that the subject site would not be considered a significant source of mineral aggregate and should not be designated as such.

We trust that this geotechnical letter is sufficient for your present requirements. Should you require any additional information or clarification as to the contents of this document, please do not hesitate to contact the undersigned.

Yours very truly,
SOIL-MAT ENGINEERS & CONSULTANTS LTD.

Kevin Reid, B.Eng., EIT.
Junior Engineer



Ian Shaw, P. Eng.
Senior Engineer

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