SOIL-MAT ENGINEERS & CONSULTANTS LTD.

401 Grays Road · Hamilton, ON · L8E 2Z3

www.soil-mat.ca info@soil-mat.ca 905.318.7440 / 800.243.1922 (*toll free*) 905.318.7455

PROJECT NO.: SM 240354-G August 21, 2021

SHADE SPRINGS INC.
4 Loyalist Road
Etobicoke, Ontario
M9A 3P3

Attention: Michael DeBiasio

GEOTECHNICAL CONSIDERATIONS – AGGREGATE RESOURCE POTENTIAL
PROPOSED INDUSTRIAL DEVELOPMENT
7335 WELLINGTON ROAD 34
PUSLINCH, ONTARIO

Dear Mr. DeBiasio,

Further to your recent information and request, SOIL-MAT ENGINEERS & CONSULTANTS LTD. have prepared the following geotechnical considerations letter to address the potential of the subject site as an aggregate resource property.

INTRODUCTION

It is understood that the subject site is within an area noted as potential sand and gravel resources of primary and secondary significance. 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 of primarily ice-contact stratified deposits of sand and gravel with minor silt and clay, as well as stone poor silty sand to sandy silt till, and glaciofluvial deposits of gravely and sandy material.

SOIL-MAT ENGINEERS has conducted detailed geotechnical investigation works over the subject site [SM 240354-G, dated June 24, 2024] to support the proposed industrial development of the property. These site investigations included the advancement of sampled boreholes across the site, and have reasonably characterised the onsite subsurface conditions.

The subsurface soils were investigated to depths of up to approximately 6.7 metres below the existing grade, and found to consist of predominantly silty sand/sandy silt deposits, generally fine grained with occasional coarser seams, trace to some gravel, and inclusions of cobbles. The northwest portion of the site was found to be predominantly silty clay/clayey silt deposit, suggesting the property is within a transition zone.

These conditions are reasonably consistent with the referenced geology mapping information indicating stone poor silty sand to sandy silt till, and deposits of sand and gravel with minor silt and clay. The site specific boreholes do indicate the property to be within the transition zone between geologic formations, with the overburden soils being perhaps more silty than may be expected from the geology mapping.

DISCUSSION

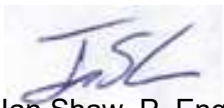
It is noted that there are a number of nearby aggregate pits, however review of geology mapping shows those to be located in zones that correspond more directly to glaciolacustrine sand and gravel deposits. Overall, the subsurface soils encountered in borehole on the site are predominantly sand and silt, with trace to some gravel, and occasional cobbles.

On a geotechnical basis, it is not clear that the silty sand soils have sufficient gravel fraction, or cobbles, to present as a quality sand and gravel resource. Site specific grain size analyses have not been conducted as part of our prior scope of investigation, though this would be helpful in more thoroughly assessing the potential of the overburden soils for use as aggregate.

Based on the presently available information, the site presents as having a borderline potential for quality aggregate resource, subject to further detailed testing.

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.



Ian Shaw, P. Eng., QP_{ESA}
Senior Engineer