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Xpresspost and Electronic Mail

Mr. Robert P. Stovel, RPP, P. Ag.
Consulting Planner
Township of East Garafraxa
374028 6th Line
Amaranth, Ontario L9W 0M6

**RE: TRI-COUNTY AGGREGATES LTD. GRAVEL PIT APPLICATIONS
RESPONSES TO STOVEL ASSOCIATES' SURFICIAL SOILS REVIEW**

Dear Mr. Stovel

We are responding to the comments set out in your December 9th letter to the Township, using the following excerpt from the Word version you provided. Our responses are shown in **red**.

4. SITE PLANS

The plans filed in support of the proposed application (collectively referred to as the "Site Plans") include the following:

1. Existing Features Plan,
2. Operational Plan and
3. Progressive and Final Rehabilitation Plan.

On December 2nd, 2015, the applicant circulated revised Site Plans to the Township. These revised Site Plans (and associated documents) remain under review by the Township Peer Review Team at the time of writing this report.

The Operational Plan indicates two setback over-rides next to the Greenwood Pit, along the south and west portions of Lot 2. Through the elimination of these setbacks, a relatively common elevation can be created that follows the pit floors for the Tri-County Pit and the existing Greenwood Pit. Subject to Township and MNRF approval, a third setback over-ride potentially could be granted that would follow the northerly limit of the Proposed East Pit (Greenwood).

The Progressive and Final Rehabilitation Plan sets out the methodology for returning the subject pit to an agricultural after-use. The Plan notes a staging sequence that shows five (5) stages of rehabilitation. The pit floor is to be sequentially rehabilitated according to these stages.

The Site Plans illustrate two features, a wetland pond area and an infiltration area, that were not addressed in the DBH report.

The Site Plans make note that clean, inert fill may be imported to facilitate the establishment of 3:1 slopes along the pit face.

The Site Plans record technical recommendations on Agricultural Rehabilitation, as per the DBH report. However, not all of the recommendations have been included on the Site Plan and some of the wording has been modified from the original recommendation.

5. PEER REVIEW ASSESSMENT

The subject property is comprised mainly of CLI Class 2-3 agricultural soils. The subject property is considered to be prime agricultural land in a prime agricultural area.

The DBH report provides a reasonable method of returning the proposed pit back to similar agricultural quality and similar area. However, the DBH report does not address the policy requirement as set out below:

2.5.4 Extraction In Prime Agricultural Areas

2.5.4.1 In prime agricultural areas, on prime agricultural land, extraction of mineral aggregate resources is permitted as an interim use provided that the site will be rehabilitated back to an agricultural condition. (Provincial Policy Statement, 2014).

DBH should provide a clear statement indicating how many hectares of the site will be restored to a similar capability and whether this rehabilitation complies with PPS policy 2.5.4.1.

DBH's report was not intended to address planning issues. Page 46 of our February 2015 Site Planning Report addresses the total hectares being rehabilitated back to agriculture. It is 55 ha, about 88% of the proposed excavation area, maximized consistent with S. 2.5.4.1 d).

The recommendations set out by DBH represent reasonable considerations, however, it is noted that the exact wording of the recommendations have not been copied onto the Site Plans. The Site Plans should be reviewed, and revised in accordance with the specific wording set out in the DBH report. DBH should provide a statement that the Site Plans have been prepared in accordance with the specific recommendations set out in the Surficial Soils Report.

The DBH report provides volume calculations for onsite reserves of topsoil and subsoil. DBH indicates that 0.25 m is the average depth of topsoil and 0.48 m is the average depth of subsoil but no calculations are provided to determine how the average depth of subsoil was determined. Of note, the Site Plan states that 0.2 m of topsoil and 0.3 m of subsoil is the minimum depth to be applied to the rehabilitated pit floor. Why are these reduced depths set out on the Site Plans, and will the agricultural condition be achieved by applying these reduced depths of topsoil and subsoil?

As DBH reported, the depths were determined at 40 sites on the property. In Section 3.8, on pages 18 and 19, Mr. Hodgson explained, in some detail, his methodology for estimating soil depths and volumes. DBH S. 3.8.2 indicates that the average "subsoil" depth, including the Ae and B horizons, is 0.48 m. He also advises that his estimates are the "maximum available" and the actual volumes may be "significantly less". The site plan was intended to set minimum depths to be applied during rehabilitation. We have revise Note 6 & A3, on drawing 3 to reflect the "average" depths reported by DBH.

The Site Plans indicate that clean, inert fill will be imported to the proposed pit. It is important to understand that generally the Township is not supportive of the use of fill for pit rehabilitation purposes, owing to environmental and municipal issues. Justification is required to document the following: a) the need for fill and consideration of alternatives, b) the location and volume of fill required given that the applicant has applied to remove setbacks between existing and proposed pits on abutting lands, c) the type of fill to be used, and d) the method of recording/regulating imported fill to the subject pit. DBH



makes no reference to the use of inert fill to restore the soil profile for rehabilitation purposes. Will the use of inert fill affect the agricultural condition of the site? Are additional specifications for inert fill required to satisfy Policy 2.5.4? DBH should address these matters related to the importation of fill.

We have reviewed the available and required fill volumes for the site. The deficit calculated would be substantially reduced if the Greenwood East Pit is approved and a common boundary established. This boundary is located in the latter sector of Stages 2 and 3. As discussed, during our December 10th meeting, some unmarketable material and silt collected from the future wash ponds will be used for slope rehabilitation. If required, the remaining slope fill may be imported, in accordance with the MNRF and MOECC protocols, with prior Township notification. Rehabilitation surface soils will be derived from onsite berms and stockpiles, to essentially recreate the original soils environment.

DBH should provide an estimate as to how much silt will be generated on an annual basis from the washing operation and how this silt will be stored or used. If the silt is to be used as part of the rehabilitation program, DBH should comment on grain size of the wash pond silt and if there are any constraints as to its application for rehabilitation purposes.

Estimating silt volumes is not feasible and it is beyond the scope of the DBH study. The Client does not propose to wash aggregate until 3 to 4 years after excavation begins. Specifications for road granular material allow for a percent of silt content. Market demand will establish future washed aggregate volumes. Any silt collected from future silt ponds will be stockpiled on the pit floor for use in slope rehabilitation.

It is noted that the Kamphuis agricultural parcel is an active, livestock farm and has a Nutrient Management Plan ("NMP"). Upon request, the applicant provided a copy of the NMP. The maximum disturbed area for the proposed pit is 40 ha and a significant portion of the Kamphuis farm will be disturbed for the duration of pit operations, due to the fact that the internal haul road will go through this farm. DBH makes no reference to the NMP or to the potential effect that the proposed pit operation will have on the active livestock farm, on an interim basis or as an agricultural end use.

DBH's report was not intended to address NMP issues or the reduction in available farm land resulting from the proposed aggregate operation. The haul road occupies approximately 2.1 ha or about 3% of the 61 ha. Kamphuis farm. The Stage 4 excavation area is 12.1 ha or 20% of the Kamphuis farm, located on Lots 3 and 4, west half of Concession 18. The Kamphuis family farms and manages other lands in the immediate area, including the 61 ha, in the adjacent east half of Concession 18, owned by Tri-County. The Kamphuis NMP is revised annually to adjust for the current years available agricultural land. There is no adverse impact on the farming operations or the NMP from the proposed pit.

There is no reference on the Site Plans or in the DBH report as to the maximum disturbed area that will be permitted at the subject pit. The sequence of rehabilitation stages should reflect the maximum disturbed area and ensure that progressive rehabilitation occurs at the pit. DBH should address the maximum disturbed area from the perspective of minimizing the amount of time that topsoil will be stockpiled. As part of the soil budget, DBH should determine how much soil is required to construct the perimeter berms and relate this to the timeline to initiate progressive rehabilitation.

The proposed 40 ha. maximum disturbed area was addressed on page 44 of the Site Planning Report and approved by the MNRF in its letter dated 21 October 2015. Berm volume estimates are set out on page 46. The rehabilitation stages cannot be defined over a specific time line, as aggregate production is based upon market demand. The rehabilitation staging has been logically laid out. Stage 5, the last stage of rehabilitation, occupies the area required for berming, wash ponds, haul road and processing. Stage 5 is about 24 ha. or 60% of the maximum disturbed area. The remaining 16 ha comprises the current stage of extraction and areas undergoing progressive rehabilitation.



DBH should assess whether the establishment of a wetland pond area on the floor of the rehabilitated farm field will affect the agricultural condition of the rehabilitated site and/or the normal operation of the farm, including the use of pesticides, commercial fertilizers and manure next to the wetland pond area.

We are not of the opinion that the proposed wetland pond could affect future agricultural conditions. It will not influence the local groundwater regime. Tri-Kamp Farms is a hormone free operation, minimizing the use of pesticides and commercial fertilizers. Manure will be managed under the Tri-Kamp NMP.

DBH should assess whether the establishment of an infiltration area on the site will affect the agricultural condition of the rehabilitated pit and/or the normal operation of the farm, including the use of pesticides, commercial fertilizers and manure next to the infiltration area.

The infiltration area will mimic the existing condition of the site. Currently, overland flow occurs only during extreme precipitation events and under frozen conditions during spring thaw.

DBH provides an intended cropping sequence (Table 3; p. 23) and suggested crop types (Table 4; p. 24). It is recommended that these tables be incorporated onto Page 3 – Progressive and Final Rehabilitation of the Site Plans.

We have add the suggested crop types to Site Plan drawing 3.16

The DBH report does not provide specific monitoring protocol to ensure that the site is progressively rehabilitated and to ensure that the agricultural condition is achieved. The need for monitoring and long-term view of the agricultural rehabilitation program should be considered by DBH.

The Kamphuis family will be directly involved in the agricultural rehabilitation, over the life of the pit. It will farm the undisturbed field areas and the progressively rehabilitated sectors. This will provide the most appropriate form of monitoring rehabilitation success. Progressive rehabilitation and agricultural rehabilitation are stipulated on the Site Plan and enforced by the MNR. Annual Compliance Assessment Reports provide the means of reporting. The Township and County are circulated.

Yours very truly,

LONG ENVIRONMENTAL CONSULTANTS INC.



R. J. Long, P. Eng, MCIP, RPP

e.c. Tri-County Aggregates Ltd.
DBH Soil Services Inc.

