

C&F LAND RESOURCE CONSULTANTS LTD.

*4383 Happy Valley Road, Victoria, B.C. V9C 3Z3
(250)474-5072; fax:(250)474-5073; Email: cflrc@shaw.ca*

March 1, 2017

TGCC Management LLP
c/o Talisman Homes Ltd.
#300 - 4088 Cambie Street
Vancouver, B.C. V5Z 2X8
Attention: Mr. Ross Clouston, P.Eng.

Dear Mr. Clouston:

Re: Agricultural Benefit Provided by Rehabilitation of Debilitated Site at Millennium Greenhouse, 3752 Arthur Drive, Delta, B.C.

You have requested a review of the works carried out by TGCC Management LLP and Talisman Homes Ltd. (TGCC/Talisman) to effect rehabilitation of the debilitated portion of the Millennium Greenhouse site at the east end of the property. This land had been subject to excavation of soil from the eastern end apparently to provide an elevated base for the construction of greenhouse buildings on the western portion of the property. This depressional area filled with water for extended periods of the year and was rendered non-arable. Significant volumes of end of season tomato vines with polypropylene support strings attached were deposited in the western portion of the excavated area and partially covered with imported random soil fill. A significant volume of greenhouse vine waste was deposited on the area lying east of the previously filled area and a large volume of debris, metal scrap, and polyethylene grow bags were scattered around the previously filled area.

The Corporation of Delta and the Agricultural Land Commission (ALC) expressed concerns with these activities and were interested in seeing the site remediated. The Corporation of Delta approached TGCC/Talisman to see if an arrangement could be made to raise the excavated grade with surplus soil resulting from the decommissioning of the old Tsawwassen Golf Course commensurate with the ongoing housing development at Tsawwassen Springs. In addition, it was necessary to remove the exposed vines and string to a legal dumpsite prior to any importation of soil. An agreement was reached between the parties involved and TGCC/Talisman undertook to carry out the cleanup and grade restoration works at its own expense.

Brian French, P.Ag. was retained by TGCC/Talisman to provide working conditions and oversee the work. The cleanup work was extensive and the waste materials were loaded onto trucks and hauled to a legal dumpsite for disposal. The vines which were buried by the owner were not exposed or removed. After cleanup, the filled area over the buried vines was graded level with available soil materials on the site. Some minor re-grading will be carried out on the north edge in the spring to deal with a low spot.

The soil from the former golf course had a significant stoniness component which would be incompatible with the type of annual crop farming typically carried on in Delta. Brian prepared a soil remediation plan which would resolve the stoniness issue and provide a minimum depth of

cultivable, stone free soil at least 0.9 metres thick. The imported soil was laid down in lifts no greater than 0.3m and then treated with a lifting shank cultivator to bring larger stones to the surface where they were removed with a bobcat loader equipped with a screened bucket. The rocks were piled and later removed from the site. After the cultivator treatment, the site was subjected to grinding with a two passes with a Seppi renovator which grinds any stones to a gravel size or less. When the grinding was completed on the first lift, two more lifts were successively brought in and subjected to the same treatment as the first lift. The site was finish graded level with a gentle slope from west to east. A cover crop was seeded by a local farmer to provide protection over winter. Some re-grading may be required in the spring to address minor settlement and ponding issues.

Two aerial photographs of the site area attached hereto showing the former and rehabilitated site. The depressional area and area with debris are shown on the former photograph. The depressional area covered 5.8 hectares and the debris area covered 4.2 hectares. The final condition photograph taken on December 7, 2016 shows the filled area of 6.15 hectares and the leveled former debris area of 3.85 hectares. In total, 10.0 hectares were rehabilitated. Photographs of the soil rehabilitation process are attached hereto.

I have been advised by TGCC/Talisman that in excess of \$1,000,000 was expended to complete this rehabilitation work. This is more than 6.6 times the \$150,000 security bonding applied by the ALC and it would have suffered a shortfall of about \$850,000 if any attempt had been made to enforce the approval and effect rehabilitation with this inadequate bonding amount. The cost of removal of the vines and debris alone was well over \$200,000. An even more serious impediment to effecting this rehabilitation; without the unique opportunity offer by TGCC/Talisman; is the scarcity of good topsoil available for large rehabilitation jobs like this. Some 80,000m³ of soil was required to resolve the depressional grade issue. Typical waste soil in the lower mainland is glacial till which is unsuitable for agricultural purposes due to stones and its highly compactible nature. Topsoil from construction sites is in high demand by landscape topsoil producers and it would be very difficult to secure this volume of topsoil or non-stony, permeable subsoil for this project.

The cooperative effort by TGCC/Talisman, the Corporation of Delta and the ALC enabled this problematic issue to be resolved at no cost to the land owner, the municipality or the ALC and resulted in the rehabilitation of 6.15 hectares to a high agricultural standard and cleanup of an unsightly area covered with debris. TGCC/Talisman was able to move excess soil from its site at Tsawwassen Springs in a way that was beneficial to agriculture. In the end, all the parties involved benefitted from this project and 6.15 hectares of formerly debilitated land has been added to the agricultural land base in Delta. I understand that the land owner will lease this land to a local crop farmer.

Yours very truly,
C&F LAND RESOURCE CONSULTANTS LTD.

per:



Brian M. French, P.Ag.

MILLENNIUM GREENHOUSE SOIL REHABILITATION - 2016



Seppi soil renovator in action



Soil condition after one pass of Seppi soil renovator, stones gone

MILLENNIUM GREENHOUSE ORIGINAL CONDITION SPRING, 2016
Scale: 1:2,500-metric



HWY 100
HWY 100
HWY 100

MILLENNIUM GREENHOUSE FINAL CONDITION DECEMBER 2016
Scale 1:2,500 metric



Cleanup Area
3.85 ha

Rehabilitated
depression area 6.15 ha