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AGRICULTURAL LAND ASSESSMENT REPORT

FOR

14671 WILLIAMS ROAD, RICHMOND, B.C.

NON-FARM USE APPLICATION

Prepared for: **Mr. Bruce Mathers**
Sanstor Farms Ltd.
11700 No. 5 Road
Richmond, B.C. V7A 4E7

Prepared by: **Brian M. French, P.Ag.**

Report date: **May 14, 2025**

Version: **Revised from April 20, 2016**

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1. The Canadian System of Soil Classification; Soil Classification Working Group, Research Branch, Agriculture and Agrifood Canada; Publication 1646, Third Edition, 1998.
2. Soil Inventory Methods for BC (1995); Resource Inventory Committee; Province of British Columbia.
3. Land Capability Classification for Agriculture in British Columbia; MOE Manual 1; Ministry of Environment, Surveys and Resource Mapping Branch and Ministry of Agriculture and Food, Soils Branch; Kelowna British Columbia, April 1983
4. Criteria for Agricultural Capability Assessments; ALC Policy P-10, February 2024.
5. Expert Opinions In Agricultural Land Commission Matters; ALC Policy P-11, February 2024.
6. RAB Bulletin 18, Soils of the Langley - Vancouver Map Area; Report No. 15, British Columbia Soil Survey; Volume 1, Soil Map and Legend, Lower Fraser Valley (Scale I:25,000); H.A. Luttmerding, Kelowna, 1980.
7. RAB Bulletin 18, Soils of the Langley - Vancouver Map Area; Report No. 15, British Columbia Soil Survey; Volume 3, Description of the Soils; H.A. Luttmerding, Kelowna, 1981.
8 Land Capability for Agriculture Langley - Vancouver Map Area; Surveys and Resource Mapping Branch, Ministry of Environment, Victoria, British Columbia, 1985

EXECUTIVE SUMMARY

E. Mathers Bulldozing has operated a dredged sand site on land owner by Ecowaste Industries at the east end of Williams Road for decades. As Ecowaste transitions this site to industrial warehouse use, it is unwilling to continue the lease with Mathers and the year to year lease will terminate in 2026. Dredging of the Fraser River east of Massey Tunnel is critical to maintaining a safe channel in the river for mariners. The Mathers site has been used for decades as a depository for the dredged sand and it is important to find an alternative site. The Vancouver Fraser Port Authority is concerned that it will lose this critical river maintenance infrastructure unless the Sanstor site is approved because there are no other sites available in the local area.

A detailed survey of all sites along the Fraser River in Richmond determined that there are no unoccupied sites in Richmond which could support the sand storage facility and, in particular, no sites within a reasonable dredge pumping distance from the critical shipping channel site currently serviced by the Mathers site at Ecowaste.

Mathers, under a subsidiary company, Sanstor Farms Ltd., purchased the adjacent property to the west, the subject of this application with the intent to seek permission to move its sand storage operation onto the eastern 5 hectares of this property. Sanstor is requesting approval to carry out the sand storage operation for a period of 25 years and then decommission the site and reclaim it to Class 2 agricultural capability.

A detailed soil survey and agricultural capability assessment was carried out in 2016 and it was determined that the property has severe soil and drainage based limitations at the Class 5 level which would be difficult to improve but could be improved to a Class 4 level with significant effort over several years. The eastern portion, proposed for the sand storage facility, has the most problematic soil conditions and has never been farmed in recent memory.

The proposed sand storage site is well buffered from any agricultural activity and is a low impact use which does not produce significant dust or noise in this heavy industrial area. The traffic would not change from the current operation and Williams - Triangle Road is a heavily used truck route.

Sanstor intends to offer inclusion of 12.2 hectares of high quality land in Deroche into the ALR to offset the non-farm use on the Williams Road property. The property in Deroche is part of a large dairy operation on Nicomen Island and is used for forage production and dry cow-heifer pasture. This is very high quality land with 8.3 hectares of Class 1 to 3 capability on Marble Hill soils, the best in the Fraser Valley and sought after by farmers growing high value crops like raspberries, Blueberries and vegetables. The land owners are prepared to include a total 25.8 hectares of land into the ALR.

Allowing the sand storage facility to move to the Sanstor site would not result in any loss of agricultural opportunity because the land has not been farmed in recent memory. At the end of the 25 year term, the land would be reclaimed to Class 2 improved capability and brought into agricultural production. The +/-3.0 hectare remainder of the property would be improved with more topsoil and drainage.

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Update of April 20, 2016 Assessment of Land Use, Soils and Agricultural Capability for 14671 Williams Road, Richmond, B.C. as at May 14, 2025

1. INTRODUCTION

1.1 Terms of Reference

In 2015, you asked C&F Land Resource Consultants Ltd. (C&F) to carry out a soil survey and agricultural capability assessment and prepare a technical report on the property owned by Sanstor Farms Ltd. (Sanstor) legally described as: SOUTH HALF OF THE SOUTH EAST QUARTER SECTION 28 BLOCK 4 NORTH RANGE 5 WEST EXCEPT: SOUTH 33 FEET, NEW WESTMINSTER DISTRICT; PID: 003-464-504; civic address: 14671 Williams Road; +/-8.35 hectares. The purpose of this report was to support an application to the Agricultural Land Commission (ALC) to use the eastern +/- 5.0 hectares portion of the property for storage and processing of sand dredged from the Fraser River south arm.

The property is wholly located within the Agricultural Land Reserve (ALR) and any non-farm use is prohibited unless an approval from the ALC is secured to allow that use. Storage and processing of sand is a non-farm use which would required an application under Section 25.1 of the ALC Act. An application made under Section 25.1 must be considered by the local government, City of Richmond (Richmond) and endorsed by a resolution of Council prior to it being considered by the ALC. The local government may refuse to endorse the application and this ends the application.

You intend to make a new application to Richmond and the ALC and this updated Report addresses any changes which have occurred in the intervening eight years since April 2016.

1.2 History of Application

An application for a non-farm use to accommodate the non-farm use was submitted to the ALC and Richmond in 2016. The application was considered by Richmond and forwarded to the ALC for its consideration. Upon consideration by the South Coast Panel of the ALC, the non-farm use was approved with conditions. Subsequently, the ALC Chair, citing Section 33.1(1), decided to require reconsideration of the approval by the Executive Committee of the ALC which decided to reverse the Panel decision and refuse the application. A request for reconsideration under Section 33(1) was refused by the ALC.

1.3 Current Situation

Sanstor wishes to make a new application in support of a non-farm use to accommodate the sand storage facility on the eastern 5.0 hectares of the property. Sanstor has asked that we review our April 20, 2016 report and describe any changes which may have occurred in the intervening eight years and note any changes which may be required to bring the report up to date. We have reviewed the 2016 report and found some minor changes which needed to be addressed but found that in the main, no significant technical changes needed to be made. However additional and new information has been developed in the interim period as follows:

a) in 2017, C&F prepared an extensive review of possible sites in Richmond outside the ALR that might be used as an alternative to the Williams Road site for sand storage. C&F has reviewed this report and found that it is still relevant; details are discussed in Section 7.2;

b) the western +/-3.0 hectares have been rented to a local farmer who is growing ethnic vegetables;

c) the eastern wooded area of invasive European Birch had been cleared and the trees windrowed; the land is lying fallow due to severe soil and drainage limitations;

d) a letter to Bruce Mathers from Tom Corse, Vice President, Real Estate, Vancouver Fraser Port Authority outlined the critical need for a dredge sand storage site near Williams Road upstream of the Massey Tunnel. This has been provided for decades by the Mathers site on Ecowaste land which will cease in 2026. Dredging the river is important to maintain safe passage for Mariners on the river.

e) an offer to include 12.2 hectares of land into the ALR in Deroche, B.C. to offset any loss of agricultural opportunity resulting from the temporary non-farm uses has been added to the application and is described in Section 8.

1.4 Qualifications and Field Protocols

A soils on site inspection of the subject lands and a review of surrounding lands was carried out on July 9, 2015 and this report summarizes the findings. The fieldwork and reporting was carried out by Brian M. French, P.Ag. an agricultural soil specialist with 46 years of professional experience and fully qualified to carry out soil survey and land capability classification. A resume of experience is included as Appendix A. The technical aspects of the July 9, 2015 on site inspection and the April 20, 2016 Report have been reviewed and apart from the clearing of the trees on the eastern +/-5 hectares and the cultivation of the western +/-3 hectares, the findings are consistent as at the current date.

This report has been prepared under procedures and guidelines of the dollowing

documents: Canadian System for Soil Classification, Publication 1646 (1998)[1]; Soil Inventory Methods for British Columbia1995[2]; the Land Capability Classification for Agriculture in British Columbia, M.O.E. Manual 1 (April 1983)[3]; Criteria for Agricultural Capability Assessments, ALC Policy P-10[4]; and Expert Opinion in Agricultural land Commission Matters[5].

Soil conditions were determined by exposing a series of test pits using an mini-excavator equipped with a clean-out bucket. The pits were exposed to a depth which penetrated the unweathered parent material. A total of six test pits were exposed on the subject property.

This report has ten sections: Introduction, Location and Land Use, Soils, Agricultural Capability, Agricultural Suitability, Proposed Non-farm Use, Alternative Sites in Richmond Not in ALR, Inclusion of Land Into ALR, Impact Analysis and Summary of Findings.

2. LOCATION AND LAND USE

2.1 Subject Property (See Figure 2.1, 1:10,000 scale Air Photo)

The subject property located at 14671 Williams Road is +/-8.35 hectares in area.

2.2 Zoning

The Richmond zoning is AG1, Agriculture. The OCP designation is Agricultural. The land is completely within the ALR as shown on Figure 2.2.

2.3 Surrounding Land Use (See Figure 2.3: 1:5,000 scale air photo

North: Radio towers and grounding field, in the ALR;
East: Ecowaste Industries inert industrial landfill, YVR fuel storage depot and E. Mathers Bulldozing sand storage; all out of the ALR and slated for industrial development;
South: Plastic greenhouses to the southwest, in the ALR and industrial land out of the ALR to the southeast;
West: Market garden and blueberries, in the ALR.

2.4 Subject Property Proposed Land Use (see Figure 2.4: 1:2,000 scale air photo)

The western portion of the property occupying some 3 hectares; which was lying fallow in 2016; has been rented by Sanstor to a vegetable farmer who is growing specialty ethnic vegetables for the local market. Sanstor has carried out some drainage and grading improvements on this area to accommodate this farm use. However the farmer still faces serious management issues with the land including poor drainage and poor soil strength

City of Richmond Interactive Map

Figure 2.1: 1: 10,000 scale Air Photo

Figure 2.2: ALR Map

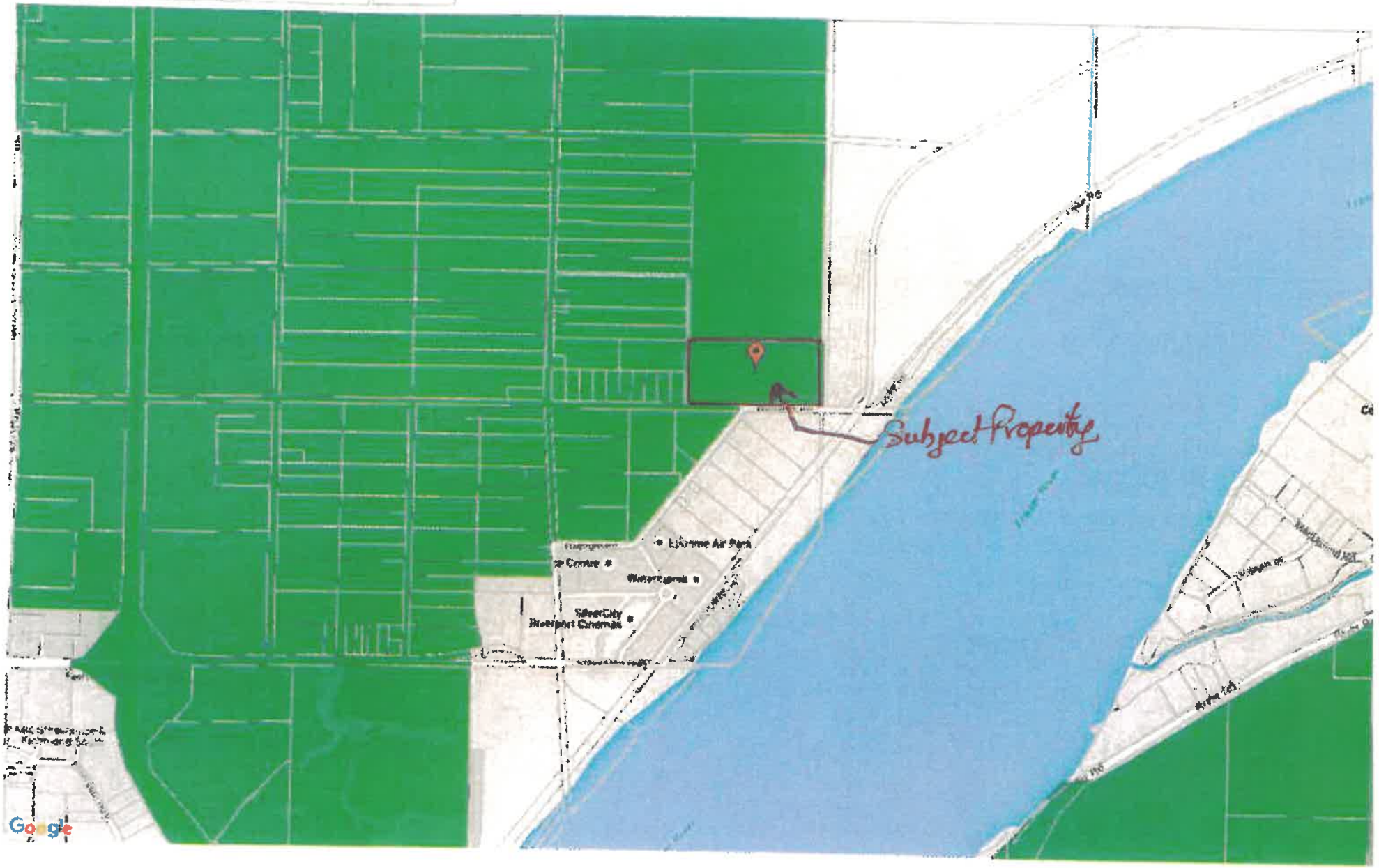
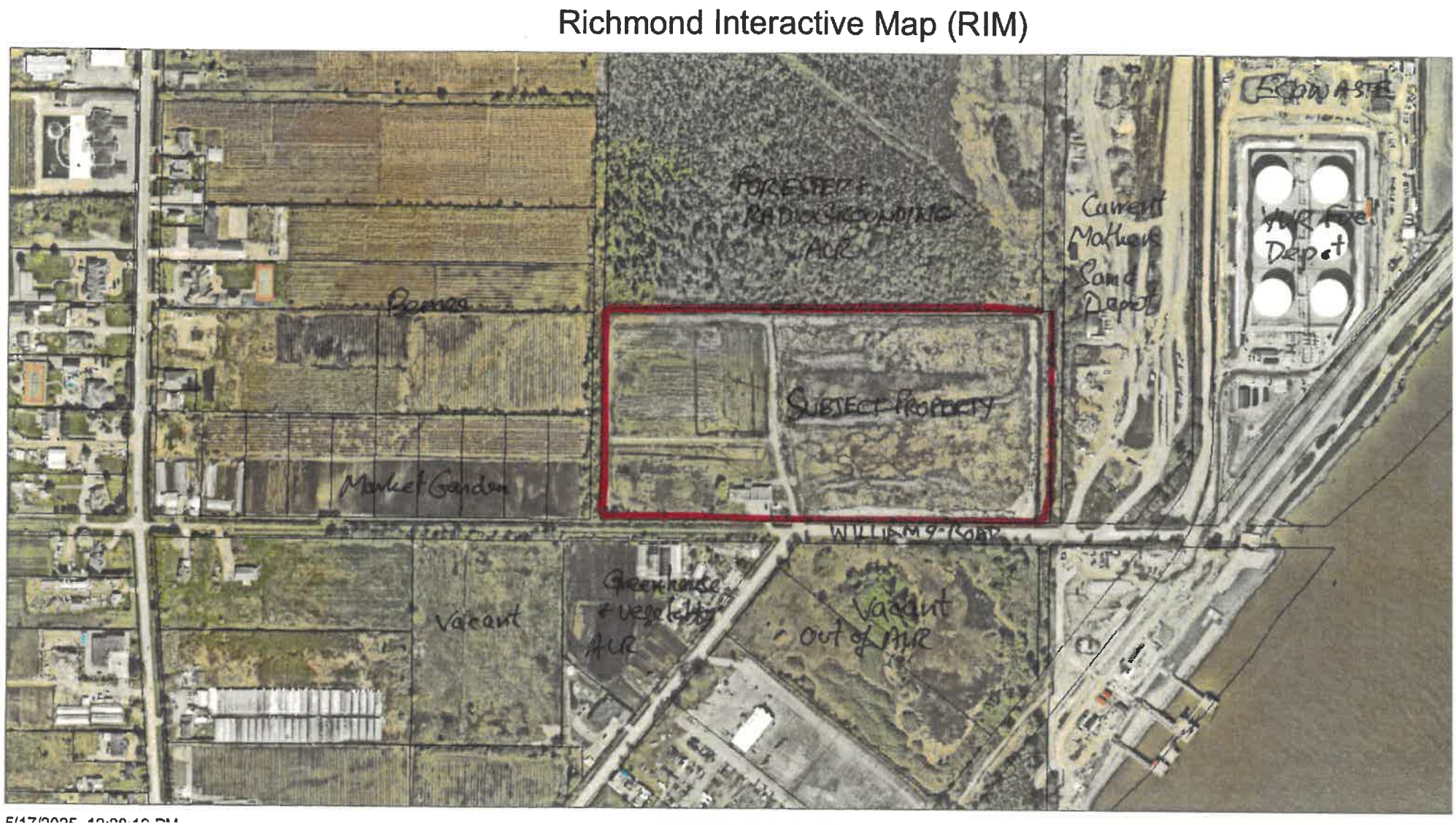


Figure 2.3: 1:5,000 scale Surrounding Land Use



Richmond Interactive Map (RIM)

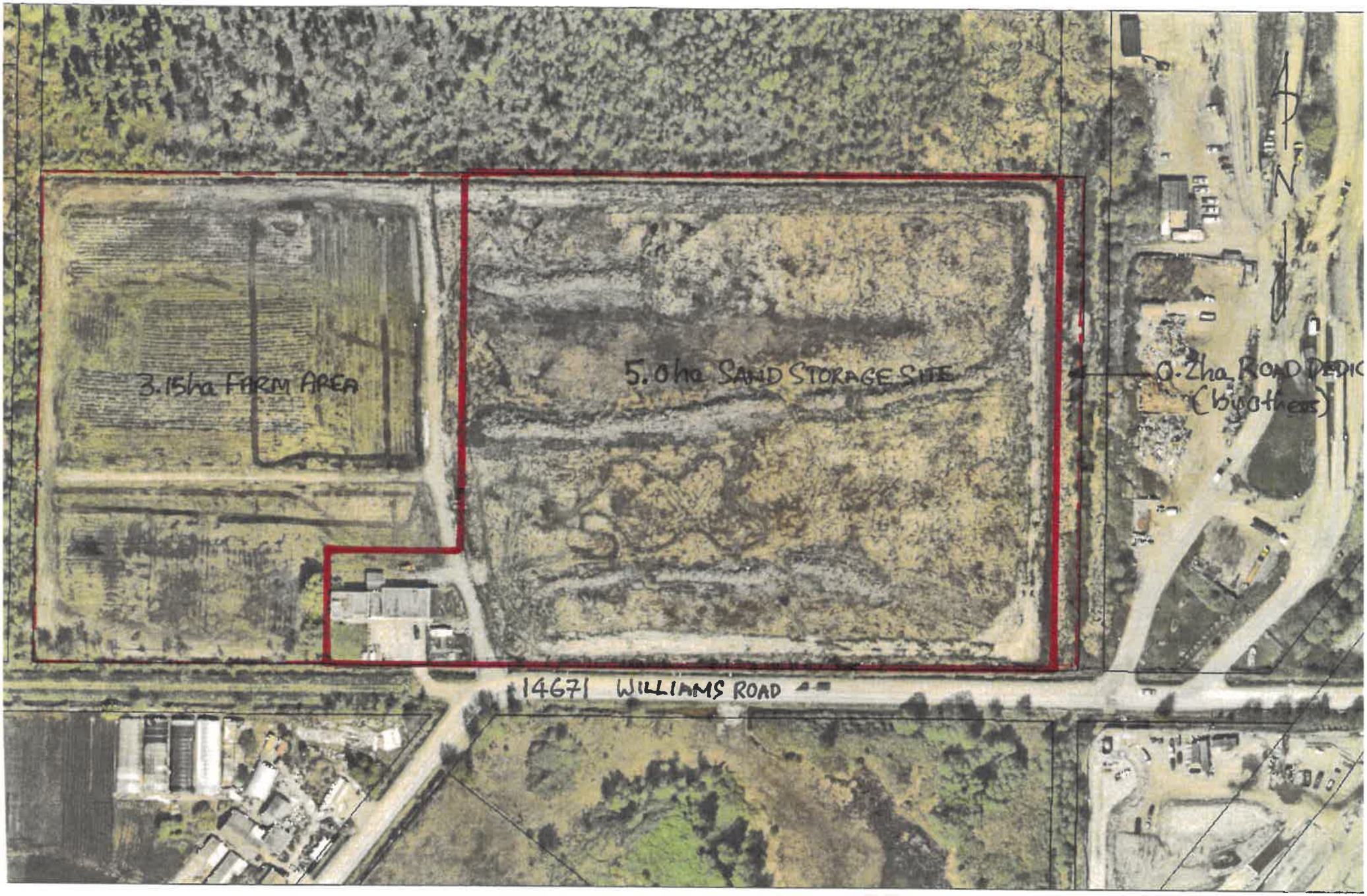


Figure 2.4: 1:2,000 scale Proposed Non-Farm Land Use

leading to tractors getting stuck on a regular basis. The farmer must hill all the growing rows to try to get better drainage for his crops and reduce root rot.

The eastern remainder of the property has been cleared of the diseased, invasive European Birch trees and these have been windrowed on the site. An Arborist Report by Arbortech Consulting (Appendix B) was commissioned to assess the condition of the Birch trees and they were determined to be seriously impacted by disease, dying and at risk of falling. This area remains fallow. A 5.0 hectare area is proposed for relocation of the sand storage facility. Figure 2.4 is an air photo from Richmond map site.

3. SOILS

3.1 Ministry of Environment 1:25,000 Mapping (see Figure 3.1)

The Ministry of Environment Soils of the Langley-Vancouver Map Area, RAB Bulletin 18[6] at 1:25,000 scale maps the property as a complex of Richmond and Annis Series. Volume 3 of RAB Bulletin 18[7] describes Richmond soils as being developed from 40 to 160cm of mainly well decomposed organic material overlying moderately fine and medium textured deltaic deposits. Richmond soils are very poorly drained. Agriculturally Richmond soils are limited by mainly high water tables and very acid soil conditions. The underlying subsoils are saline. Liming and subsoil drainage can be employed to reduce acidity and improve drainage.

Annis soils are described in Volume 3 of the RAB Bulletin 18[7] as being developed from shallow organic accumulations between 15 and 40cm thick overlying moderately fine to fine textured Fraser River floodplain deposits. Annis soils are poorly to very poorly drained. Poor drainage and heavy subsoil textures limit the usefulness of Annis soils for agriculture. Artificial drainage will widen the range of suitable crops.

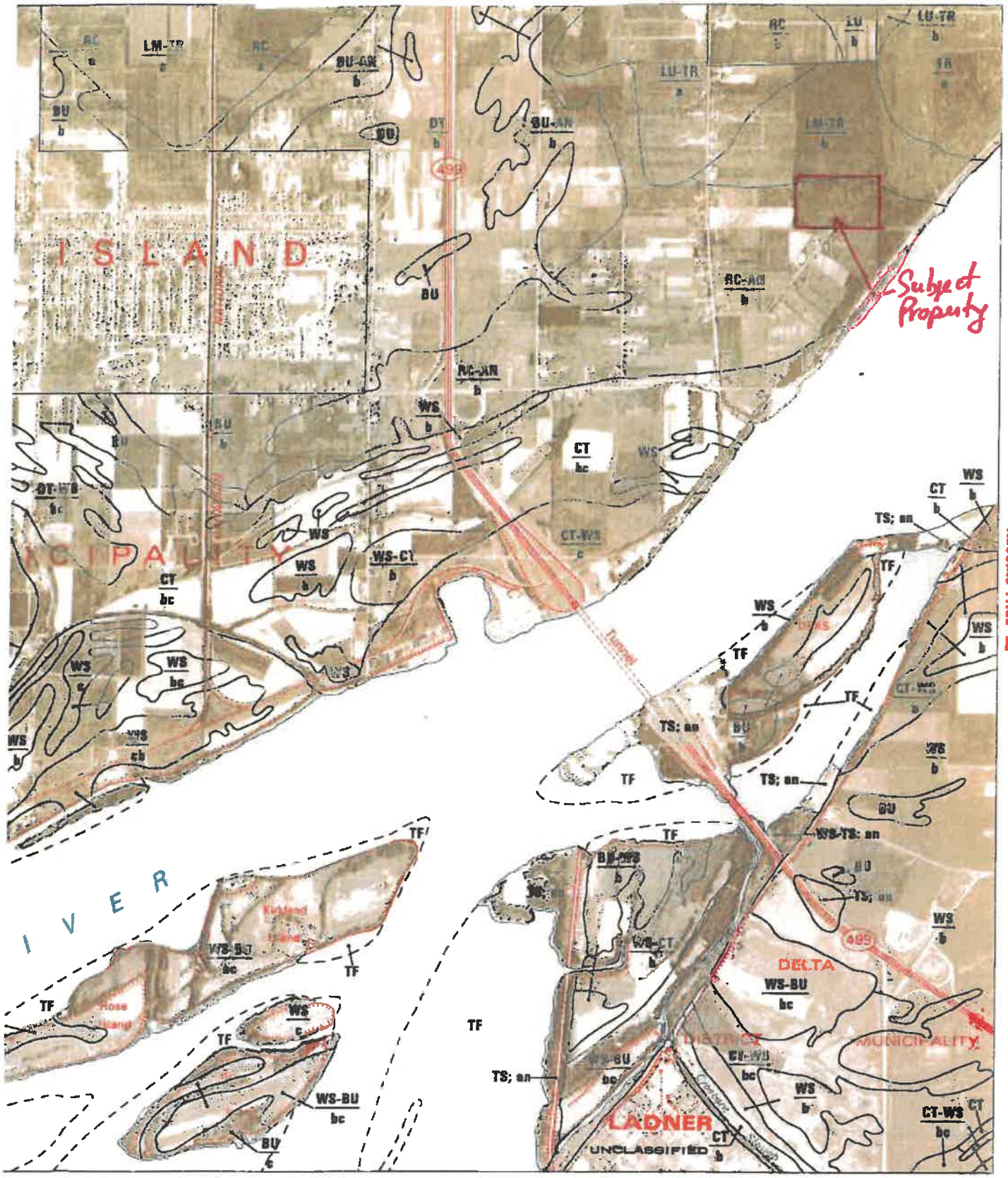
3.2 Current On Site Inspection (Figure 3.2)

Six soil pits were excavated with a mini-excavator. Detailed on site inspection and survey at 1:2,000 scale identified two soil units and one anthropic unit on the property. Field notes are included in Appendix C. Laboratory soil test results from Exova are included in Appendix D. Photographs of the soil pits and associated landscapes are included in Appendix E.

3.2.1 Soil Unit I

Unit I occupied +/-5.8ha or 70% of the subject area and was the dominant soil unit identified on the subject property and was located on the eastern portion of the property. Unit I was developed from shallow poorly to moderately well decomposed organic peat overlying silty clay and silty clay loam subsoil. The depth of organic surface layer varied

Figure 3.1: MOE 1:25,000 scale Soils Map



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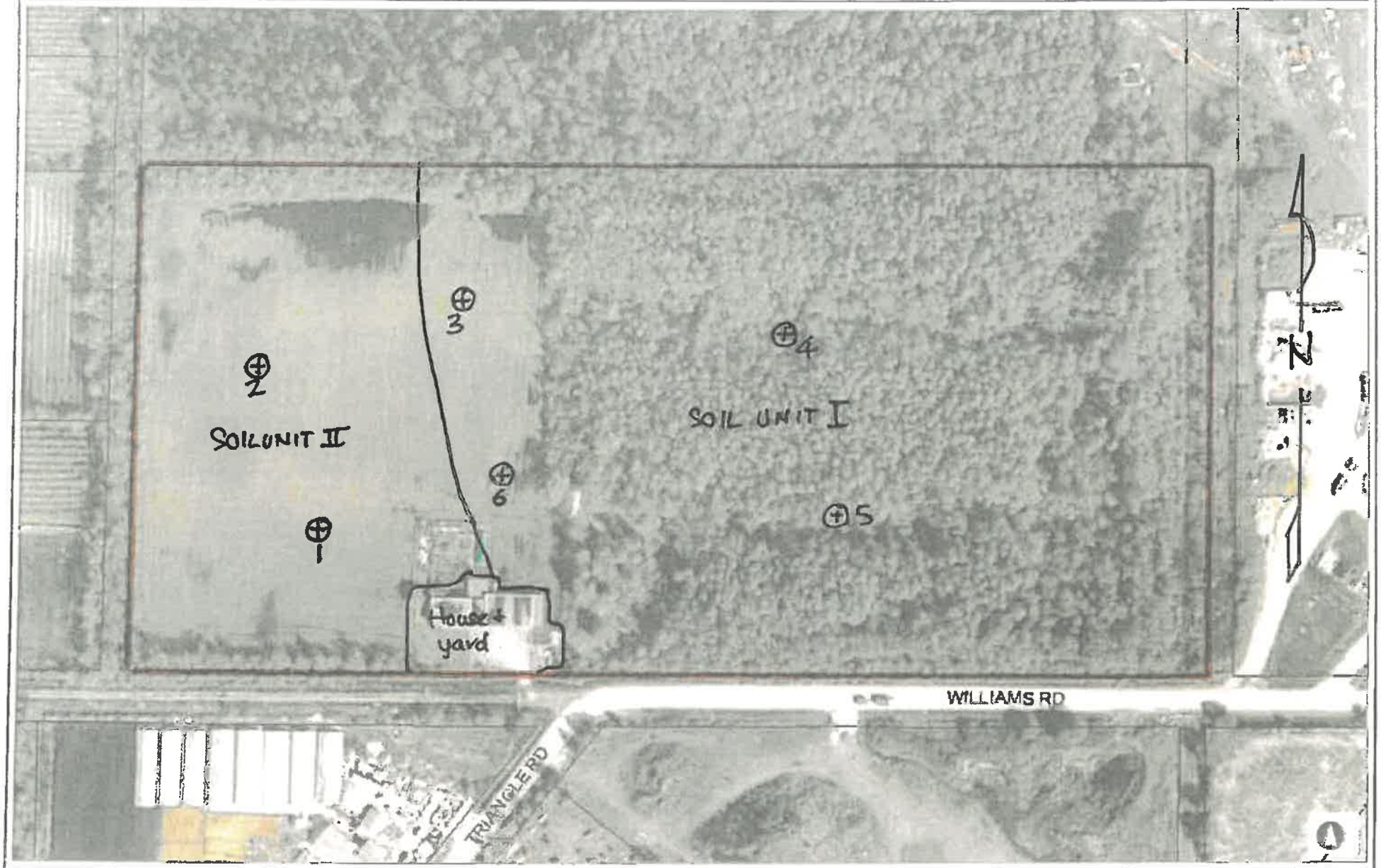
City of Richmond Interactive Map

Figure 3.2: Current 1:2,000 scale On Site Soils Map



101.6 0 50.80 101.6 Meters

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

from 25 to 40cm in depth. The pH was very low and ranged from 3.8 to 4.0. The electrical conductivity was moderately high, 2.5 to 3.24dS/m, indicating a high salt content. The sulphur content was very high and could be toxic to some plants. The topography was near level to very gently undulating. The vegetation was mostly deciduous brush with some area cleared on the western edge. The vegetation boundary generally followed the soil boundary. This Unit was characteristic of the Annis Series.

A typical soil profile was exposed at Soil Pit # 6 and was described as follows:

OF-M	35 - 0cm	dark reddish brown (5YR3/3, moist) fibric to mesic organic; near massive structure; common roots; clear boundary to:
Cg	0 - 10cm	grey (5YR5/1, dry) silty clay loam; massive; no roots.

3.2.2 Soil Unit II

Unit II occupied +/-2.93ha or 28% of the subject area and was found on the western, cleared portion of the property. Unit II was developed from moderately well decomposed organic peat overlying silty clay loam subsoil. Two organic horizons were identified, the surface horizon was friable and well decomposed while the underlying organic layer was massive and moderately well decomposed. The surface layer had a near neutral pH of 6.6 while the underlying organic layer had a very acid pH of 3.1. The electrical conductivity was toxic in the lower organic soil at 9.66dS/m. Also, the Sulphur content in this lower layer was very high at greater than 1000mg/kg. The low pH, high E.C. and very high Sulphur content would render this soil toxic to most crops. There is a large depressional area in the centre-north of this unit which would be subject to flooding for extended periods of the year. Despite having subsurface drain lines installed at 50 foot intervals, the drains are ineffective during the critical spring and fall periods due to high ditch water levels which flood the drain lines.

A typical soil profile was exposed at Pit #1 and was described as follows:

OM	80 - 50cm	dark reddish brown (5YR3/3, moist) mesic organic; weak granular structure; friable; common roots; clear boundary to:
OF	50 - 0cm	dark brown (7.5YR3/3, wet) fibric peat; massive amorphous structure; saturated; no roots; fairly clear boundary to:
Cg	0 - 10cm+	grey (5YR5/1 moist) silty clay loam, massive, soft and wet; no roots.

3.2.3 Soil Unit III

Unit III occupied 0.2ha or 2% of the property and was the house and curtilege area.

3.3 Comparison of MOE and Current Soil Mapping

On the 1:25,000 scale MOE mapping, the entire property is mapped as a complex of Richmond and Annis series. In the current detailed 1:2,000 scale mapping, evidence of both these soils were found but there was a clear distinction between the two soil types with soil more characteristic of the Annis Series on the east and Richmond Series on the west. Comparison at the 12.5 times scale difference is not expected to show good conformance.

4. AGRICULTURAL CAPABILITY

4.1 Ministry of Environment Mapping (Figure 4.1)

The MOE 1:25,000 scale mapping[8] for agricultural capability rated the property as a complex of 60%O4WL - 40%4WD, improvable with drainage and irrigation to 60%O3LW - 40%3DW.

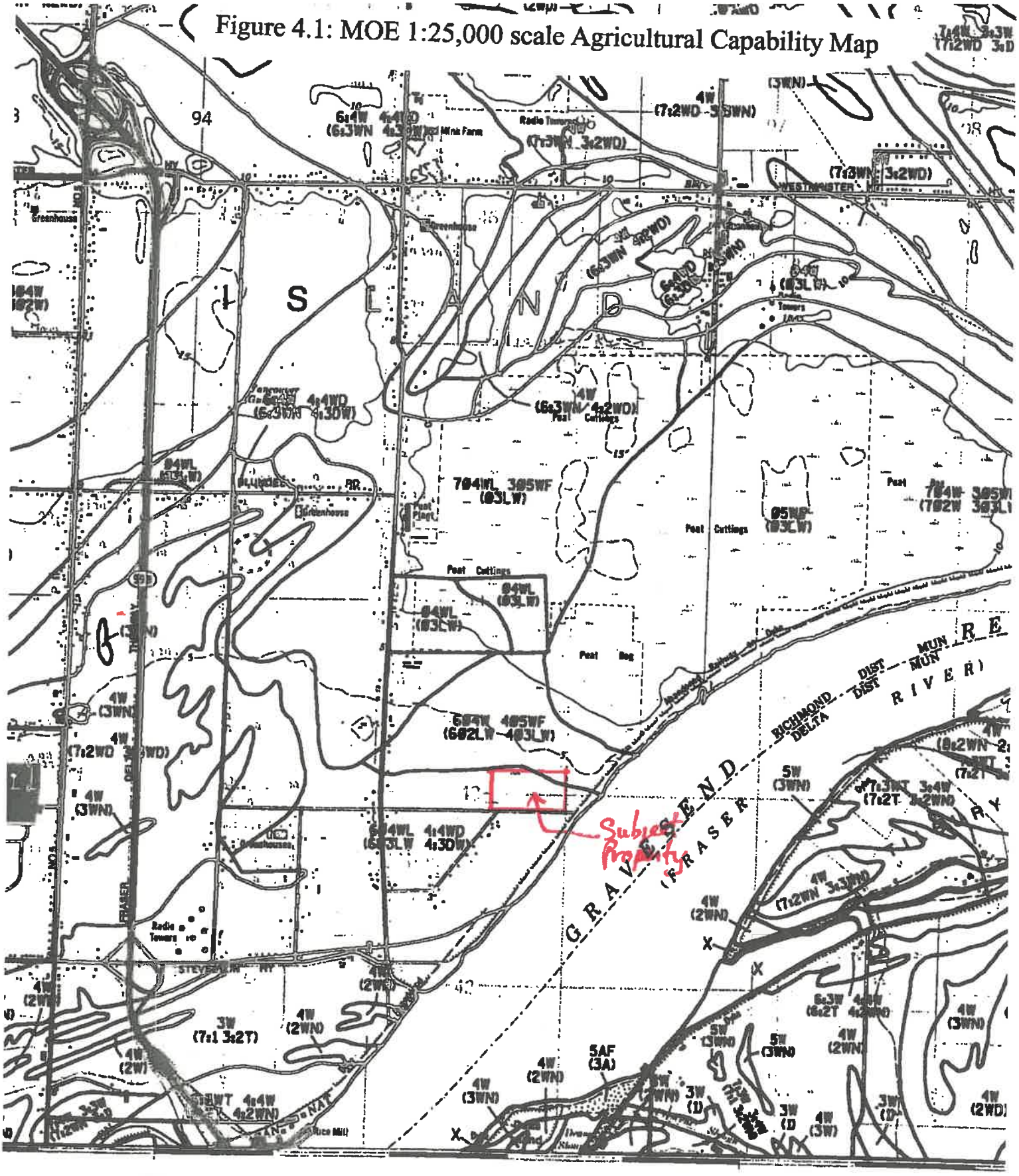
4.2 Detailed On Site Interpretation (Figure 4.2)

Unimproved and improved agricultural capability ratings were applied to the soil units identified on the property. Landscape and climate factors were integrated into the ratings. The Ministry of Environment Land Capability Classification for Agriculture in British Columbia (MOE Manual 1)[2] was used to assign ratings. Excerpts of MOE Manual 1 are included in Appendix F.

4.2.1 Unit I

Soil Unit I was limited by very poor drainage, low pH and moderately high E.C. The shallow organic surface horizon was underlain by a dense silty clay loam mineral horizon which creates a strong lithologic and hydraulic discontinuity. Most of this unit is in invasive European Birch deciduous forest vegetation. If this site were to be cleared and cultivated, the organic layer would be strongly disturbed and mixed with the underlying unweathered mineral soil. Under cultivation the organic material tends to quickly oxidize and disappear from the soil profile leaving a raw, poorly structured mineral soil unfavorable for crops. These soils are difficult to drain effectively and suffer from high water tables well into the growing season. Note: The Birch trees were cut down and the land grubbed in the intervening period since the soil survey was carried out.)

Figure 4.1: MOE 1:25,000 scale Agricultural Capability Map

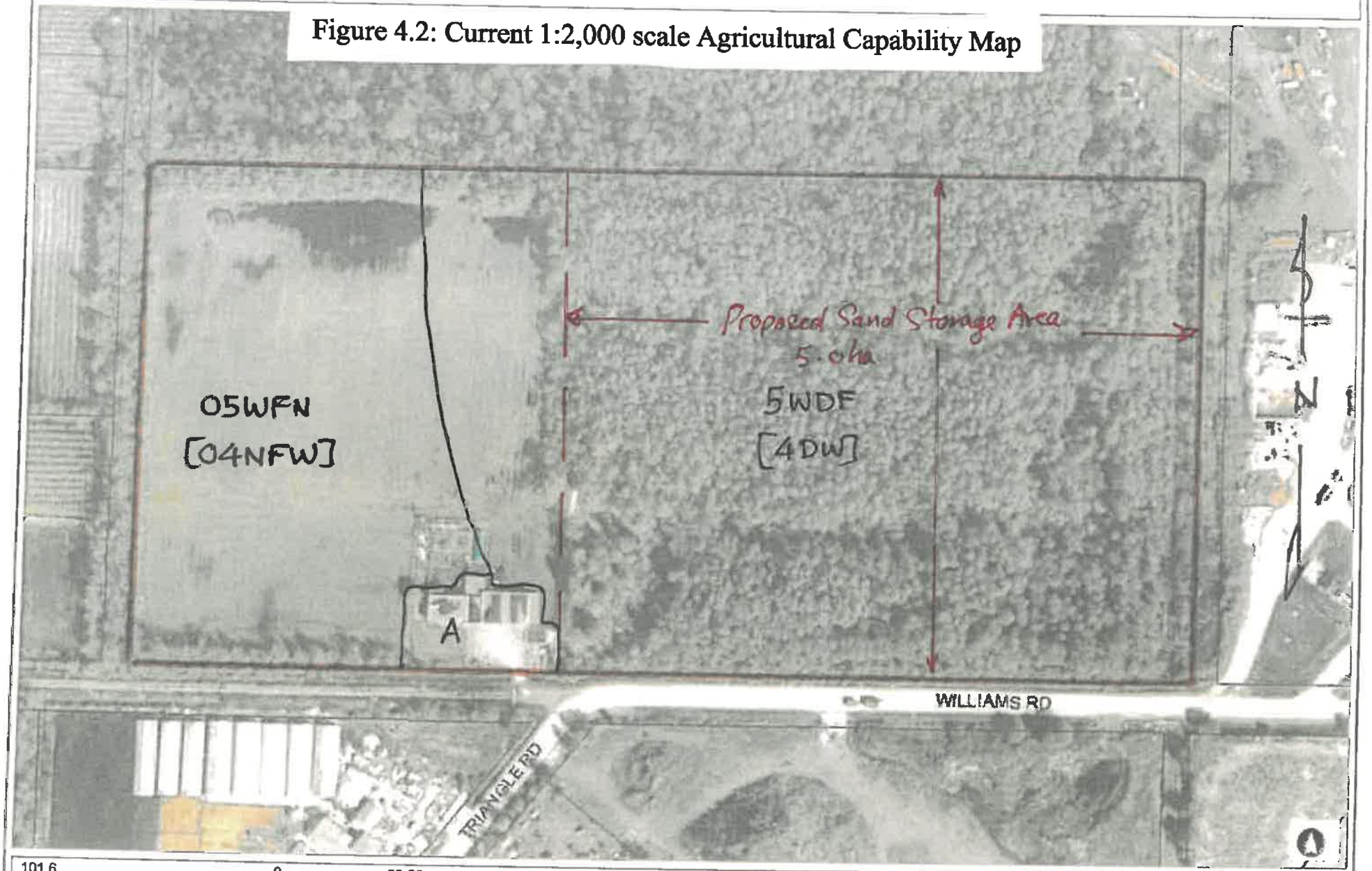


MITCHELL ISLAND

NEW WESTMINSTER DISTRICT

City of Richmond Interactive Map

Figure 4.2: Current 1:2,000 scale Agricultural Capability Map



101.6 0 50.80 101.6 Meters

An unimproved agricultural capability rating of Class 5WDF was applied and limited improvement could be achieved with subsurface drainage and successive lime applications to Class 4DW. Subsurface drain lines would need to be placed on very close spacing to effect improvement in the massive, unweathered mineral subsoil.

4.2.2 Unit II

Unit II was limited by very poor drainage, especially in the depressional area, despite being fitted with subsurface drain lines on 50 foot spacing. The drain lines lack adequate invert due to high ditch water elevations in the spring, winter and fall and are effectively inoperative. The cultivated surface horizon had fairly good structure but the underlying organic soil was massive. The organic subsoil had a very low pH, very high E.C. and very high Sulphur content. Any deep rooted crop would suffer serious damage if it penetrated this horizon. An unimproved agricultural capability rating of Class O5WFN was applied to this unit. With subsurface drainage improved with closer spacing and pumping, successive applications of lime and excessive irrigation to flush out the Sulphur, this unit could be improved over several years to Class O4NFW.

4.2.3 Unit III

Unit III occupied the dwelling, yard and outbuildings on the property and were rated "A" anthropic as disturbed by the activities of man rendering it unsuitable for soil bound agriculture.

4.3 **Summary of Agricultural Capability**

The agricultural capability of the property is summarized in the Table below.

AG. CAP. CLASS	UNIMPR. AG. CAP. (HA)	% OF AREA	IMPROVED AG. CAP (HA)	% OF AREA
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	8.1	98
5	8.1	98	0	0
7	0	0	0	0
Anthropic	0.2	2	0.2	2
TOTAL	**8.3**	**100**	**8.3**	**8.3**

4.4 Comparison of MOE and Current Ratings

The current ratings applied to Unit I are similar to those applied by the MOE mapping. A slightly harsher rating has been applied to the soils on the subject property because of the difficult management issues related to the shallow organic layer overlying dense, unweathered silty clay subsoil on Unit I and the drainage and fertility issues associated with Unit II. The current survey lowers the unimproved and improved classes by one level over the MOE ratings to account for these on site limitations.

5. AGRICULTURAL SUITABILITY

Agricultural suitability is a further interpretation of agricultural potential based on soil, crop, climate and productivity limitations for the site and the area. While agricultural capability is an abstract classification indicating the range of crops which could be grown, agricultural suitability more closely represents the practical commercial options for agricultural use of the land. It has been assumed in making these suitability interpretations that the improvements as required to achieve the improved agricultural capability ratings would be in place. Soil bound uses are discussed for each capability unit. Non-soil bound uses are discussed in general terms.

5.1 Soil Bound Agricultural Uses

The shallow organic layer overlying dense, unweathered clay on Unit I would present significant management challenges for growing annual crops. Long term fertility amendments and drainage improvements would be required to bring these soils up to an acceptable standard for a narrow range of crops. Perennial berry crops would be limited to Blueberries but the shallow organic layer and dissimilar unweathered underlying mineral soil would create rooting limitations. Field crops such as corn or cereals would be poorly suited to this unit due to spring and fall risk of wet soil conditions which would delay planting and harvesting.

In terms of soil bound crops, Unit II on the subject property has moderate to low suitability for shallow rooted crops with moderate to high tolerance for wetness. Leafy vegetables and blueberries are grown on the lands to the west of the subject property with soils similar to Unit II. Deeper rooted annual or perennial crops would be severely limited by the underlying soil conditions.

Forage based agriculture in support of livestock depends on growing forages, field corn and cereals to feed the animals. Forages could be grown on the subject parcel but the wet soil conditions would be unsuitable for corn and cereals. Pasturing livestock on wet soils has the potential for foot disease issues, particularly with sheep and cattle. The suitability for forage production is low to moderate since these organic soils are susceptible to

invasion by undesirable weeds and rushes in forage and planting and harvesting annual field crops is limited by the wet soil conditions in the spring and fall.

5.2 Non Soil Bound Agricultural Uses

Non soil bound uses include greenhouses, mushroom production, feedlot and pot nursery. The primary limitation on the subject property to these uses is the organic soils which have a very low load bearing capacity for buildings. Any of these uses would require stabilization of the organic soils and preload fill in order to provide a suitable building foundation. It would be unusual to find this kind of development on organic soils for this reason. Plastic hoop cold frame greenhouses are common on these soils and are considered suitable for this site. Otherwise, this site is considered unsuitable for most non-soil bound uses.

6. PROPOSED NON-FARM USE OF LAND

6.1 Background

Mathers Bulldozing, a long standing Richmond business, provides an important service to the agricultural community in Richmond and Delta by providing clean, salt free Fraser River sand to Cranberry growers, West Coast Instant Lawns turf farm and other farmers in need of sand. While pre-load sand is commonly available from building sites, this sand is often contaminated with foreign materials which are harmful in agricultural applications such as topdressing. Mathers is the major supplier of agricultural quality sand in Richmond and Delta and has a long time relationship with the local farm community.

Mathers has received a number of letters from agricultural and golf course customers with land in the ALR who depend on the high quality sand supplied by Mathers Bulldozing. These letters are found in Appendix G.

6.2 Proposed Non-Farm Development

6.2.1 Sand Storage Facility

Sanstor would require approximately 5.0 hectares of land for their sand storage operation. The sand storage footprint would be limited to the eastern, recently cleared area of the property and the existing house and curtilege.

The vegetation on the eastern area proposed for sand storage has been carefully cleared and the site grubbed. The surface organic soil would be used to improve the +/-3.15

hectare western area. The surface 300mm of peat on the western area would be stripped and stockpiled and then the surface organic soil on the eastern area would be placed as a base some 500mm thick. Then the stripped surface peat would be replaced giving a total topsoil depth of 800mm. New subsurface drains would be plowed in on 8 metre spacing with a buried mainline collector discharging into a catch basin fitted with a pump to provide artificial invert. The local ditches are not generally adequate for proper drainage in the critical spring and fall periods as the water levels are uncertain. The topsoil would be cultivated, limed and fertilized to prepare a suitable seedbed for a wide range of crops. Agricultural improvements on the site would be carried out during the summer to ensure that soil damage does not occur from the necessary equipment traffic during the development works.

The stripped area proposed for the non-farm use for sand storage would be serially filled with dredged sand on a schedule to satisfy the navigation requirements on the Fraser River and then sold. The minimal infrastructure to be installed would include an access, scale and scale house in the SW corner, a non-permanent fabric roof equipment shed located on the current paved area near the house and use of the existing dwelling as an office. The dredging infrastructure, composed of buried and surface input pipe and drainage water conduit, are already installed along the western boundary of the existing Mathers site and would be reconfigured to fit the new site.

6.2.2 Savage Road Right of Way

A 0.20 hectare area along the eastern boundary is proposed for widening of the Savage Road Right of Way. This RoW application is being made under separate application by Ecowaste Industries. The RoW would be dedicated to the City of Richmond.

6.2.3 Commercial Truck Parking

In addition, if requested or required by the City of Richmond, Sanstor asks that consideration by the Commission also be given to the use of the +/-3.15 hectare western remainder of the site for commercial truck parking. Illegal commercial truck parking on ALR land is an ongoing problem in the City of Richmond because of a chronic shortage of legal truck parking facilities. The Sanstor site is centrally located close to major transportation corridors and is on a heavily used truck route. It should be clearly recognized that this request is not tied to the primary use requested; which is for sand storage; but is ancillary to the principal use requested. If this use is deemed of interest by the Commission, an application will be submitted for the truck parking.

6.3 **Reclamation When Site Decommissioned at End of Tenure**

When the temporary sand storage use ends after the 25 year term, or in the unlikely event

of Sanstor quitting the site, it will be reclaimed for agricultural use. Reclamation would entail:

a) stripping and stockpiling of +/-100,000m3 of sand to be used in reclamation;
b) removal of infrastructure from the site;
c) ripping the native sub-base on the sand storage area to a depth of 1 metre in two directions at one metre spacing to loosen the clay;
d) replace stockpiled sand on the sand storage area to a depth of +/- 2 metres spread evenly over the disturbed site; the target finished elevation would be 1.0 metres geodetic;
e) import Class A compost onto the sand storage site to provide a placed depth of at least 150mm and cultivate into the sand layer top a depth of 400mm;
f) Install a subsurface drainage system on the entire disturbed area;
g) manage fertility as required to bring the site up to an acceptable agricultural standard for a range of crops;
h) establish a cover crop if a perennial crop is not intended for immediate planting;
i) secure a suitable source of irrigation water either from municipal water supply or ditch water having low salt content.

The final reclaimed agricultural capability would be Class 4A unimproved with improvement to Class 2A with irrigation and drainage improvements. This reclaimed land would be highly suited for root crops, leafy vegetables, berries and field crops.

The estimated cost to carry out the decommissioning and reclamation of the sand storage site in case of closure is as follows:

ACTIVITY	DETAILS	COST
REMOVE INFRASTRUCTURE	REMOVE BUILDINGS, SCALE	10,000
STRIP AND STOCKPILE SAND FOR RECLAMATION ABOVE CLAY BASE	50000M2 AREA 2M DEEP = 100,000M3 @$0.50/M3	50,000
RIP CLAY SUBSOIL TO 1M DEPTH IN 2 DIRECTIONS	RIP WITH DOZER AND RIPPER, 3,000M2/HR FOR TWO TREATMENTS = 25 HRS @ $200/HR	5,000
REPLACE STOCKPILED SAND	100,000M3 @ 0.50/M3	50,000
SUPPLY & PLACE COMPOST ON SAND STORAGE AREA	50,000M2 x 0.15M = 7,500M3 @ $15.00/M3 IN PLACE	112,500
DRAINAGE, IRRIGATION, CULTIVATION & SEEDING	50,000/M2 @ $0.50/M2	25,000

MONITORING AND SUPERVISION	DURING DECOMMISSIONING AND RECLAMATION	20,000
ESTIMATED TOTAL RECLAMATION COST		**272,500**

Therefore the total estimated cost to reclaim the sand storage site to an acceptable agricultural condition if the sand storage activity were to cease is $272,500. Bonding to secure this eventuality in the amount of $300,000; which includes a contingency amount of $27,500; would ensure that the site would be returned to productive agriculture.

7. ALTERNATIVE SAND STORAGE SITES IN RICHMOND NOT IN ALR

7.1 Richardson Review

Mathers retained the services of Bruce Richardson, Vice President Industrial Properties at CBRE Commercial Real Estate company, to try to find a suitable relocation site for Mathers Bulldozing. Richardson had been looking for a site for five years and he summarizes his efforts in a letter dated November 17, 2015 and concluded that there were no suitable alternative sites available. This letter is included in Appendix H.

7.2 C&F Alternative Sites Review

C&F prepared a report dated August 30, 2017 entitled "ALC Application #55285 - Sanstor Farms Supplementary Information in response to City of Richmond Staff Report" which addressed the misinformation contained in the Staff Report regarding the availability of alternative sites in Richmond where the sand storage facility could be located outside the ALR. This Report is attached as Appendix I. We carried out a detailed review of all the sites proposed in the staff report using aerial photographs and visual ground survey. We concluded, after reviewing every site identified in the staff report, and other sites with foreshore access on the perimeter of Richmond, that none of these sites were suitable for the sand storage facility for a number of reasons including: site was built out with warehouses or other permanent fixtures, site was a municipal park, site was a marina, site was B.C. Ferries repair facility, lack of access to the Fraser River, site used for new car storage, Ecowaste lands are being converted to light industrial use, North Arm Fraser River is not suitable due to silty material, Mitchell Island is completely built out.

7.3 Vancouver Fraser Port Authority Letter

Mr. Tom Corsie, PPM, Vice President, Real Estate for the Vancouver Fraser Port Authority provided a letter dated April 26, 2019 (Appendix J) in support of the Sanstor

site for replacing the current Mather's site on the adjacent Ecowaste lands. He states that the maintenance of the navigation channel on the South Arm of the Fraser River by the Vancouver Fraser Port Authority is critical to ensure the safe navigation for mariners using the south arm of Fraser River and which also provides positive effects to regional flood control. He goes on to state that the cost of dredging the Fraser River is significant and a portion of cost recovery is obtained through the sale of river sand at various sand sales or sand depots operated by companies that either offer sand and gravel sales, or other site preparation services. One of the more strategic locations for dredge sand storage is the Williams Road area where Mathers has operated for many decades.

If the Mathers site on the Ecowaste land is not available, or an alternative site close by is not available, the dredged sand would probably need to be ocean dumped. This is not only more expensive, it wastes an important resource critical to development of infrastructure in the lower mainland region for sand preload of roads, highways and building sites as well as being an economical sand source for agricultural users. Sand from alternative sources would need to come by truck from Abbotsford or by barge from the Sunshine Coast at significant additional cost.

The current Mathers sand storage facility is incompatible with the proposed light industrial land use on the Ecowaste lands and there is no possibility that Ecowaste would extend the current use beyond 2026. We have carried out a detailed search for alternative sites in Richmond (Appendix H) and determined that the Sanstor Williams Road site is the only available and suitable site for this facility in Richmond.

8. INCLUSION OF LAND INTO THE ALR

Sanstor has an agreement with David Vernon, the agent for the owners of a large, 68 hectare farm property in Deroche, B.C., to include into the ALR a 12.2 hectare portion of that property. This land is currently out of the ALR and has high agricultural capability. The proposed Inclusion Area of 12.2 hectares is made up of 8.3 hectares of Prime Class 1 to 3 land, 0.7 hectares of secondary Class 4 and 5 land and 3.2 hectares of Class 7 slope acting as a buffer to adjacent non-ALR land and to provide continuity to the ALR boundary. Considering only the 8.3 hectares of prime Class 1 to 3 land proposed for inclusion compared to the 5.0 hectares of secondary Class 5/4 land proposed for temporary sand storage non-farm use, the ratio of inclusion to non-farm use would be 1.7:1. Overall, the ratio of inclusion to exclusion would be 2.4:1.

The intent of the land owner is to include a total of 25.8 hectares of land into the ALR under three separate applications of which this is one. Of the total area proposed for inclusion, 18.4 hectares (45.5 acres) are Class 1 to 3 improved capability.

The proposed inclusion land is an integral part of a large dairy farm located on nearby Nicomen Island and provides summer pasture and hay for replacement heifers and dry cows. These non-ALR areas have been in active agricultural use for at least 80 years as evidenced by the cleared land and a remnant walnut orchard in the NE corner with huge walnut trees up to 100 feet tall. Clearly, early settlers recognized the high agricultural potential of this land and chose to establish a farm there despite its isolated location on a bench some 60 metres above the Fraser River floodplain. A plan of the proposed inclusion area with agricultural capability mapped on it is shown on Figure 8 at 1:6,000 scale.

Sanstor has asked David Vernon, the Agent for the land owner, to submit an ALR Inclusion application No.102004 coincident with the sand storage non-farm use application No.102001. Upon securing approval for the Non-Farm Use application, Sanstor will instruct the Agent to proceed with the Inclusion process.

9. IMPACT ANALYSIS

9.1 Impact of Proposed Non-farm Use of Subject Lands on Surrounding Lands

The western +/-3.0 hectares have been rented to a local farmer who is growing ethnic vegetables. The eastern portion of the property has been cleared but remains fallow. The lands to the east are out of the ALR and slated for industrial development. The property to the north is a long established radio grounding transmission site. Large volumes of truck traffic currently arrive and depart from the Ecowaste site and the Mathers sand depot so little change would occur if the new site is activated. The proposed non-farm use would not have any impact on surrounding agricultural lands not currently existing.

9.2 Potential Impact of Non-farm Use for Sand Storage and Processing on Local and Regional Agricultural Productive Capacity

The western +/-3.0 hectares are rented to a local farmer who is growing ethnic vegetables. The eastern portion has been cleared but is lying fallow due to poor soil conditions. Historically the western 35% of the property was in agricultural production while the eastern 65% was cleared circa 1980 but has not been actively farmed since and reverted to deciduous brush. The intent is to have the sand storage occupy the site for a period of 25 years. Once this use is de-commissioned, the land would be reclaimed for agricultural use at the Class 2 level of capability.

Mathers is a major supplier of agricultural sand to Cranberry producers and other farmers including West Coast Instant lawns in Delta which uses substantial quantities of sand to amend its turf fields. While some 5.0 hectares of land will be occupied by the sand

Figure 8: 1:6,000 scale Proposed ALR Inclusion in Deroche

Scale1:~~4,000~~ 6,000

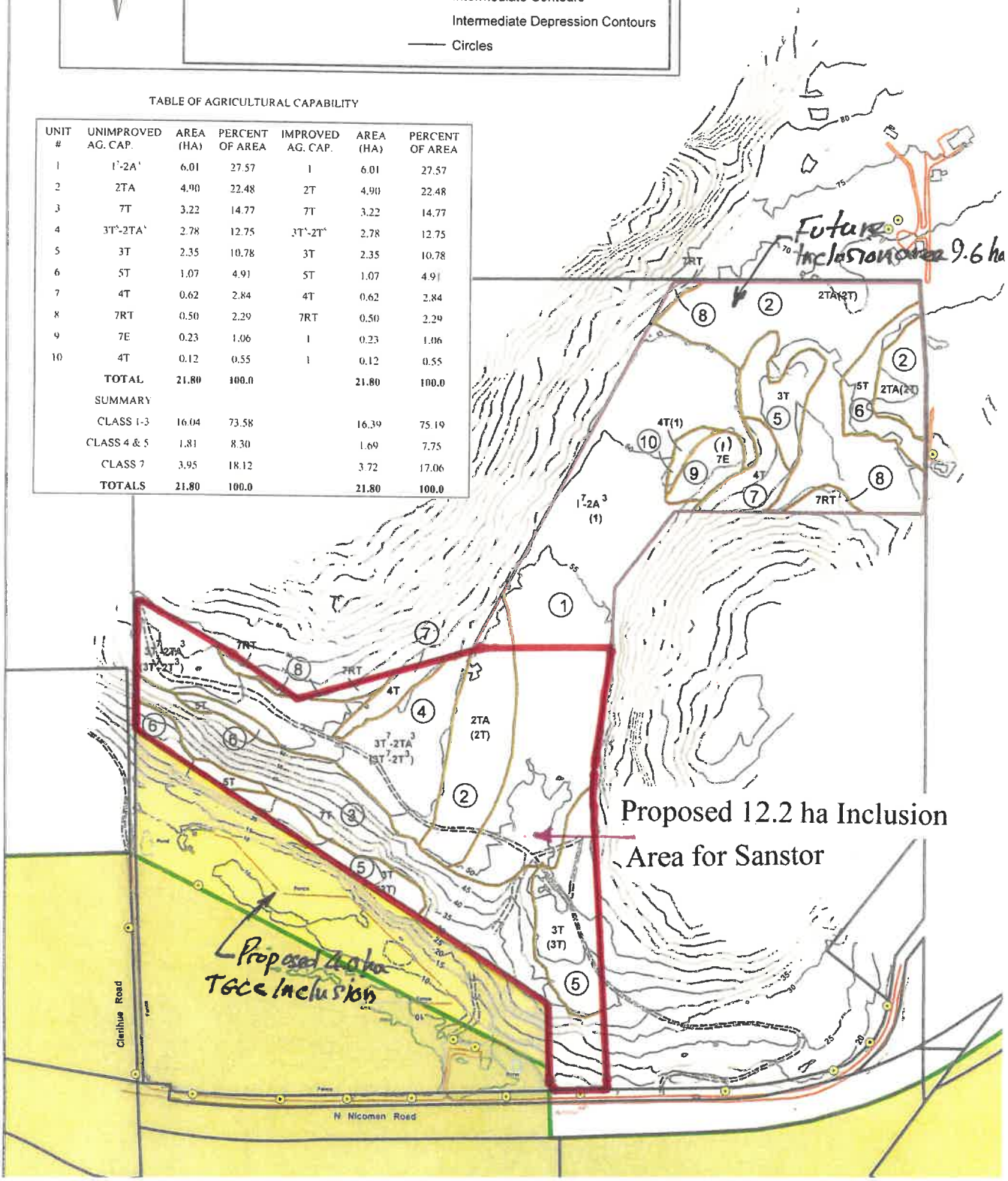
N

Legend

- Property Boundaries
- Study Area Boundary
- Agricultural Capability Bdy
- ALR Boundary & Area
- Applied ALR Inclusion Area
- Fence
- (2) Ag. Cap. Unit #
- Buildings
- Gravel Roads
- Paved Roads
- Ditches
- Ponds
- Index Contours
- Index Depression Contours
- Intermediate Contours
- Intermediate Depression Contours
- Circles

TABLE OF AGRICULTURAL CAPABILITY

UNIT #	UNIMPROVED AG. CAP.	AREA (HA)	PERCENT OF AREA	IMPROVED AG. CAP.	AREA (HA)	PERCENT OF AREA
1	1`-2A`	6.01	27.57	1	6.01	27.57
2	2TA	4.90	22.48	2T	4.90	22.48
3	7T	3.22	14.77	7T	3.22	14.77
4	3T`-2TA`	2.78	12.75	3T`-2T`	2.78	12.75
5	3T	2.35	10.78	3T	2.35	10.78
6	5T	1.07	4.91	5T	1.07	4.91
7	4T	0.62	2.84	4T	0.62	2.84
8	7RT	0.50	2.29	7RT	0.50	2.29
9	7E	0.23	1.06	1	0.23	1.06
10	4T	0.12	0.55	1	0.12	0.55
	TOTAL	**21.80**	**100.0**		**21.80**	**100.0**
	SUMMARY					
	CLASS 1-3	16.04	73.58		16.39	75.19
	CLASS 4 & 5	1.81	8.30		1.69	7.75
	CLASS 7	3.95	18.12		3.72	17.06
	TOTALS	**21.80**	**100.0**		**21.80**	**100.0**



facility, this land has never been cleared and used for agriculture in recent history. The loss of the agricultural sand source currently provided by Mathers on its Ecowaste site would have a serious impact on farmers who depend on a reliable local source of reasonably priced, clean sand.

The temporary (25 year) non-farm use of this +/-5.0 hectares of land would little or no impact on local agricultural productive capacity.

The inclusion of 12.2 hectares of land into the ALR in Deroche with 8.3 hectares of Class 1 to 3 capability will provide protection of this important agricultural land resource in perpetuity and prevent its loss by subdivision into 2 hectare residential lots as currently allowed under the local zoning while out of the ALR. Therefore inclusion into the ALR of this prime agricultural land would offer up a significant regional agricultural benefit.

9.3 **Potential of Non-farm Use of the Subject Lands for Impact on Surrounding Agricultural Operations**

The only agricultural uses are located immediately west of the 3.0 hectare farmed area on the subject property and a small plastic greenhouse operation to the south of the fallow field.

9.4 **Precedent for This Non-farm Use Triggering Future Applications**

The Mathers sand operation is quite unique, and like most other sand deposit sites along the Fraser River, they have been established for many years to service the critical Fraser River channel dredging needs. It is only because of the loss of the longstanding lease on the Ecowaste lands that Mathers has been forced to find an alternative site. Otherwise Mathers would never intend to move their operation.

10. SUMMARY AND CONCLUSIONS

10.1 Some 8.1 hectares or 98% of the 8.35 hectares on the subject lands have a Class 5 unimproved capability. The area occupied by the dwelling and yard is 0.2 hectares and was rated "A", anthropic with no soil bound agricultural capability. With drainage, irrigation and fertility improvements the Class 5 land would improve to Class 4.

10.2 Mathers Bulldozing currently operates a dredged river sand depot on lands adjacent to the subject property which are slated for industrial development in the near future resulting in displacement of the Mathers depot. Mathers has canvassed the local area for a suitable non-ALR site without success.

10.3 Mathers provides an important service to the local agricultural community by supplying clean, salt free sand for Cranberry farmers and others including West Coast Instant Lawns in Delta. Clean sand, locally sourced at a reasonable price, is a critical component in these operations.

10.4 Mathers would like to move its existing operation to the subject property and use the eastern +/-5.0 hectares of the subject property for stockpiling river sand dredged from the Fraser River. This land has not been used for agriculture in recent history.

10.5 The Vancouver Fraser Port Authority needs a dredge sand storage site which is critical to maintaining the Fraser River shipping channel east of the Massey Tunnel. This has been serviced by the Mathers sand storage site on the Ecowaste land for decades and this lease is terminating in 2026. The Sanstor site on Williams Road would serve to continue this critical service.

10.6 Upon expiration of the temporary 25 year Non-farm Use approvals, the land would be reclaimed to a better improved agricultural capability than currently exists, by two classes to Class 2A. The estimated reclamation cost of $300,000 for the sand storage site would be secured by bonding.

10.7 Sanstor is proposing to include 12.2 hectares of land in Deroche, B.C. into the ALR. This land is in active agricultural use and has 8.3 hectares of prime Class 1 to 3 agricultural capability. This land, including the additional proposed inclusion lands totalling 25.8 ha, is currently vulnerable to rural residential subdivision under local zoning which allows 2 hectare lots. If this were to happen, this important and unique agricultural resource would be lost to productive agriculture forever.

C & F LAND RESOURCE CONSULTANTS LTD.

Per: 

Brian M. French, P.Ag.

File:\Sanstor updated report 05-14-2025

APPENDIX A

Resume of Experience, Brian French, P.Ag.

BRIEF RESUME OF EXPERIENCE
Brian M. French, P.Ag.

Business Address: **C&F Land Resource Consultants Ltd.**
4383 Happy Valley Road
Victoria, B.C. Canada V9C 3Z3
Tel: (250) 474-5072; Fax: (250) 474-5073
E-mail: cflrc@shaw.ca

Education: B.Sc.(Agriculture) , Honours Soil Science, 1971
Professional Affiliation: Member, B.C. Institute of Agrologists

Professional Experience:

- 3 years as Staff Agrologist with Agricultural Land Commission responsible for technical support to the Commission and staff, attendance to E.L.U.C. hearings, participated in ALR fine tuning reviews;

- 4 years as consultant to the Ministry of Lands, Parks and Housing carrying out major reviews of crown land suitability for agricultural leases in Omineca and Cariboo regions;

- 39 years as a soils and land use consultant with a broad spectrum of clients including the Agricultural Land Commission, provincial government, municipal government, Municipal Insurance Association, R.C.M.P. major crimes unit, utility companies, major corporations and individuals. Projects completed include many individual parcel agricultural capability assessments; comprehensive land use plans (Maple Ridge Rural Land Use Plan for ALC); technical mediation (Six Mile Ranch ALR exclusion issue for Ministry of Agriculture); Utility Corridor issues (B.C. Gas Surrey-Langley 42" pipeline project and many other sewer, water and drainage projects for G.V.R.D., F.V.R.D. and others); forensic soil and land use services (technical assistance to RCMP-Vancouver Police Joint Task Force on Picton pig farm sites in Port Coquitlam).

Professional Project Profile

- Drainage and irrigation system design and supervision including gravel pit and soil dumpsite storm water management plans; agricultural land drainage and irrigation; urban rain garden soil specification and analysis of water flow in soils.

- Golf course and sports field development and technical services (design, construction and management for various clients including Vancouver Parks Board, Coquitlam Parks Board, Saanich Parks & Recreation, Oak Bay Parks, Shawnigan Lake School);

- Aggregate industry development and reclamation services; responsible for exploration, permitting, preparation of plans, monitoring of work, supervision of rehabilitation and closure. Major clients include Lafarge Canada Inc. and Fraser

Valley Aggregates Ltd. as well as several smaller companies throughout B.C.;

- Soil and inert industrial landfill services; responsible for permitting, preparation of operating and rehabilitation plans, monitoring of works, reporting and closure. Involved in numerous significant operations;

- Composting industry services including development of plans to conform to the Organic Matter Recycling Regulation, Ministry of Environment and municipal bylaws; carry out monitoring and administer closure plans.

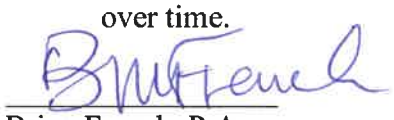
- ALR related issues including subdivision, non-farm use, exclusion applications, preparation of comprehensive soil and agricultural capability reports; review of conflicting professional reports for the Commission.

- Commercial greenhouse planning, permitting and infrastructure design.

- Farm development planning and infrastructure design.

- Assessment of damage claims resulting from off site drainage onto agricultural lands; preparation of estimates of quanta of damages in insurance and Supreme Court actions.

- Forensic analysis of historic aerial photographs to determine changes in land use over time.



Brian French, P.Ag.

May 2025

APPENDIX B
Arbortech Arborist Report

December 14, 2016

Attn.: **John Mathers**
Mathers Bulldozing
11700 No. 5 Rd
Richmond, BC V7A 4E7

ACL File: **16395**

Project Ref: **14671 Williams Rd Richmond BC**

Re: **Preliminary Tree Assessment**

Dear Mr. Mathers,

As requested, I have undertaken an initial site review of the condition of the existing trees located on the subject property. It is my understanding that land uses changes are being contemplated, and that there are municipal Environmental Sensitive Areas (ESA) and Riparian Management Areas (RMA) designated within and adjacent to this property. The purpose of my report is to inform the planning process as to the general viability and value of the existing trees.

Observations

Figure 1.

- The eastern two-thirds of the subject site is treed with a stand of predominantly European birch (*Betula pendula*) trees growing with dense spacing and forming a partially closed-canopy form (modified through naturally occurring tree decline).
- The age class of the birch trees is estimated to be circa 40 years. This could be confirmed by undertaking a ring count of a representative sample from the stand.

145 – 12051 HORSESHOE WAY RICHMOND, BC V7A 4V4 P 604 275 3484 F 604 275 9554
aclgroup.ca

- The majority of the trees within the stand are infested with bronze birch borer (*Agrilus anxius*) and are suffering varying severities of the related damage and dieback. I estimate that approximately 80% of the trees are infested.
- The south interface of the stand is adjacent to existing BC Hydro overhead power lines aligned along the north side of Williams Road, and a swath of trees along that interface have been topped, many of those trees having been killed as a result.

Discussion

European birch is a non-native tree that was originally introduced for use in landscapes, but that has naturalized in British Columbia. It is especially prolific in naturalizing and colonizing peat bog areas of the Lower Mainland region. The native species of trees and vegetation have been suppressed, in some cases to severely diminished levels. This is the case on this site. The European birch is identified as an invasive plant in BC (see enclosure). The tree species that would be expected to be native and indigent to this site would be dominated by shore pine (*Pinus contorta* 'contorta'). Shore pine appears to be mostly absent on this property. Examples of the native shore pine predominant stand conditions are observed in the vicinity of this site, specifically to the northwest, although some levels of birch naturalization has occurred in those stands.

The bronze birch borer insect has been well established in the Lower Mainland (actually throughout most of the Pacific Northwest) for several decades. The insect infests birch trees exclusively (all local species) by laying eggs in the upper heights of their stems and branches. The larvae advance through various stages of their life cycle by boring and feeding within the conducting tissue of the trees, killing them from the top down. Successive infestations occur lower in the crown of the trees year over year. Depending on the size, age class and health of a tree, infested trees are fully killed within approximately 5 years of initial infestation. Birch trees in good health are less susceptible to infestation, as the insect has adapted to sensing trees that are stressed in terms of their health (i.e. from drought or other environmental influences, or from pruning impacts). The birch genera poorly defend against decay advancement, and rapid decay of those dead parts follows the dieback, weakening those stems to the extent that there is high likelihood of failure (breaking out). There are no practical or feasible controls available, especially for large stands such as on this site and surrounding lands, and there is a lack of native predators to this insect. The mortality of birch trees in our region is expected to continue unabated, and this site combined with the surrounding non-native birch stands in this part of Richmond are actually serving as a massive incubation zone for the damaging insect populations to proliferate.

Currently there are assorted land uses in the perimeters of the tree stand on the subject site that are potential targets for tree and tree parts failing and striking. This includes the perimeters of the site where current active residential, landscape and farming zones interface with the forested lands, and also along the Williams Road frontage where there are overhead power lines and public using the roads. Those zones, as well as any interfaces with the forest stand where new active land uses are proposed, are targets of concern in relation to the dying birch trees. It is recommended that the site be assessed using Tree Risk Assessment Qualification (TRAQ) methods, regulated by the International Society of Arboriculture, in conjunction with the project planning, design and construction.

Conclusions

The forest stands within the subject site, including the zones that are designated ESA and RMA at or near this site, are comprised predominantly of European birch. The majority of those trees are in a severely advanced state of decline from bronze birch borer insect infestation damage. The dying tree stand provide habitat for certain wildlife, and serves as canopy in the urban forest. However, it is my opinion that there are significant negative environmental values of this particular stand considering that it exists as a result of invasive colonization by a non-native tree species.

Thank you for choosing Arbortech Consulting for your tree assessment needs. If you require any further information, please contact the undersigned.

Regards,

Prepared By:	***Certifications and Qualifications of the Author:***	***Contact Information:***
	• ISA Certified Arborist #PN-0730A, • Qualified Tree Risk Assessor (TRAQ), • Certified Tree Risk Assessor #0076, • Certified Wildlife and Danger Tree Assessor • Land Survey Technologist	Office: **604 275 3484** Mobile: **604 813 9194** Email: **norm@aclgroup.ca**
Norman Hol, **Senior Consulting Arborist**		

Enclosures;
UBC Invasive Species Checklist, 2012

E-FLORA BC
INVASIVE, NOXIOUS AND PROBLEM PLANTS OF BRITISH COLUMBIA

March 2012 update

A small number of vascular plants in British Columbia are considered invasive, noxious or problem weeds. These are alien species, usually ones that significantly impact rangelands, affect forestry and forest regeneration, or impact on our wetlands. Some are highly invasive and alter natural ecosystems. Some of these plants are legislated as noxious under the BC Weed Control Act (either province-wide or regionally), or are designated by provincial agencies or invasive plant councils as nuisance, noxious or invasive species and targeted for control. The following list provides a summary of 163 weed taxa that fall into these categories. The list is based upon an original list prepared by Tanya Perzoff and also includes additional taxa that have been recently identified as invasive by BC botanists and species added to the BC Weed Control Act in 2011.

The list does not include native species, although taxa with mixed origin--both native and introduced--have been included (e.g. *Phalaris arundinacea*). Additionally, the list includes only taxa that recognized by the BC Conservation Data Centre as part of the BC flora. The BC flora include all species listed in E-Flora BC.

In British Columbia, the Invasive Alien Plant Program (IAPP) (BC Ministry of Forests, Lands and Natural Resource Operations) tracks the spread of some weed species, and encouarges public reporting of these species through their Report-a-Weed initiative. Species tracked under this program are noted in the list by an asterisk (*).

Please refer to Tanya Perhzoff's original list for sources of species designations by provincial agencies.

Scientific Name	English Common Name	Comments	IAPP
Abutilon theophrasti	Velvetleaf	Noxious	*
Acer platanoides	Norway maple	Minor upland invasive	
Acinos arvensis	Mother-of-thyme	Minor upland invasive	
Acroptilon repens	Russian knapweed	Noxious	*
Aegilops cylindrica	Jointed oatgrass	Noxious	
Aegopodium podagraria	Goutweed	Invasive, often urban	
Agropyron pectiniforme	Crested wheatgrass	Minor upland invasive	
Alliaria petiolata	Garlic mustard	Noxious	*
Amaranthus retroflexus	Redroot pigweed	Nuisance, disturbed sites	*
Ambrosia artemisiifolia	Common ragweed	Minor upland invasive	
Ammophila arenaria	European beachgrass	Invasive, sand dunes	
Ammophila breviligulata	American beachgrass	Invasive, sand dunes	

Scientific Name	English Common Name	Comments	IAPP
Anchusa officinalis	Common bugloss	Noxious	*
Anthriscus caucalis	Bur chervil	Noxious	
Anthriscus sylvestris	Wild chervil	Noxious	*
Arctium lappa	Great burdock	Noxious,	*
Arctium minus	Common burdock	Weed	*
Artemisia absinthium	Absinth	Minor upland invasive	*
Avena fatua	Wild oats	Noxious, disturbed sites	*
Barbarea vulgaris	Winter cress	Agricultural/urban weed	
Berberis thunbergii	Japanese barberry	Agricultural/urban weed	
Berteroa incana	Hoary alyssum	Noxious	*
Betula pendula	European birch	Invasive, bogs	
Brachypodium sylvaticum	Slender false brome	Newly arrived in 2008	
Brassica kaber	Charlock, wild mustard	Noxious, disturbed sites	*
Bromus inermis	Smooth brome grass	Moderate upland invasive	
Bromus tectorum	Cheatgrass	Invasive, abundant	*
Buddleja davidii	Butterflybush	Invasive, spreading quickly	*
Butomus umbellatus	Flowering rush	Noxious, principle wetland invasive elsewhere	*
Calluna vulgaris	Scotch heather	Invasive in bogs in or near urban areas	
Calystegia sepium	Morning glory	Nuisance	
Capsella bursa-pastoris	Shepherd's purse	Nuisance	*
Caragana arborescens	Siberian peashrub	Minor upland invasive	
Cardaria draba ssp. draba	Heart-podded hoary-cress	Noxious	
Cardaria draba ssp. chalapensis	Chalapa hoary-cress	Noxious	
Cardaria pubescens	Globe-pod hoary-cress	Noxious	
Carduus acanthoides	Plumeless thistle	Noxious	
Carduus nutans ssp. leiophyllus	Nodding thistle	Noxious	
Centaurea biebersteinii	Spotted knapweed	Invasive, noxious	
Centaurea diffusa	Diffuse knapweed	Invasive, noxious	*
Centaurea x moncktonii	Meadow knapweed	Invasive	*
Centaurea nigra	Black knapweed	Invasive elsewhere	*
Centaurea nigrescens	Short-fringed knapweed	Invasive	
Centaurea solstitialis	Yellow starthistle	Noxious, invasive	*

Scientific Name	English Common Name	Comments	IAPP
Centaurea stoebe ssp. micranthos	Spotted knapweed	Invasive, noxious	
Chelidonium majus	Celandine	Minor upland invasive	
Chenopodium album	Lamb's quarters	Nuisance, abundant	*
Chondrilla juncea	Rush skeletonweed	Noxious	*
Chorispora tenella	Blue mustard	Noxious	
Cichorium intybus	Chicory	Nuisance, disturbed sites	*
Cirsium arvense	Canada thistle	Noxious, abundant	*
Cirsium palustre	Marsh plume thistle	Noxious, abundant	*
Cirsium vulgare	Bull thistle	Nuisance, abundant	*
Conium maculatum	Poison hemlock	Noxious	*
Convolvulus arvensis	Field bindweed	Nuisance, abundant	*
Coronilla varia	Crown vetch	Agriculture/urban weed	
Crataegus monogyna	European hawthorn	Highly Invasive	
Crupina vulgaris	Parastic dodder	Noxious	
Cynoglossum officinale	Common hound's tongue	Noxious	*
Cyperus esculentus var. leptostachyus	Yellow nut-grass	Noxious	
Cytisus scoparius	Scotch broom	Highly invasive	*
Daphne laureola	Spurge-laurel	Agriclture/urban weed	
Descurainia sophia	Flixweed	Noxious	
Digitalis purpurea	Foxglove	Abundant	
Echinochloa crusgalli	Barnyard grass	Nuisance	*
Echium vulgare	Viper's bugloss	Noxious	*
Elymus repens	Quackgrass	Abundant in disturbed sites	*
Erodium cicutarium	Stork's bill	Noxious	
Euphorbia cyparissias	Cypress spurge	Agriculture/urban weed	*
Euphorbia esula	Leafy spurge	Noxious, agriculture	*
Fallopia x bohemica	Bohemian knotweed	Invasive, noxious	
Fallopia convolvulus	Black bindweed	Invasive	
Fallopia japonica	Japanese knotweed	Invasive, noxious	*
Fallopia sachalinense	Giant knotweed	Invasive, noxious	
Galium aparine	Cleavers	Noxious	*
Galium mollugo	White bedstraw	Minor upland invasive	
Geranium robertianum	Herb-Robert	Abundant	*

Scientific Name	English Common Name	Comments	IAPP
Glyceria maxima	Great manna grass	Noxious, minor invasive	
Gnaphalium uliginosum	Marsh cudweed	Nuisance	*
Gypsophila paniculata	Baby's breath	Nuisance	*
Hedera helix	English Ivy	Invasive, primarily urban	*
Heracleum mantegazzianum	Giant cow-parsnip,Giant hogweed	Noxious, nuisance	*
Hesperis matronalis	Dame's rocket	Minor upland invasive	*
Hieracium aurantiacum	Orange hawkweed	Noxious	*
Hieracium caespitosum	Yellow hawkweed	Nuisance	*
Hieracium pilosella	Meadow hawkweed	Nuisance	*
Hordeum jubatum	Foxtail barley	Nuisance	*
Hypericum perforatum	Common St. Johns-wort	Nuisance	*
Hypochaeris radicata	Hairy cat's ear	Agriculture/urban weed	*
Hyoscyamus niger	Black henbane	Noxious	
Ilex aquifolium	English holly	Invasive, urban forests	
Impatiens glandulifera	Policeman's helmet	Invasive	*
Iris pseudacorus	Yellw flag	Noxious, invasive	*
Knautia arvensis	Field scabious	Noxious	*
Kochia scoparia	Kochia, summer cypress	Noxious	*
Lamium galeobdolon	False lamium	Invasive	
Lamium amplexicaule	Common dead-nettle	Nuisance	*
Lepidium latifolium	Broad-leaved pepper-grass	Noxious	*
Leucanthemum vulgare	Ox-eye daisy	Noxious	*
Linaria genistifolia ssp. dalmatica	Dalmation toadflax	Abundant in disturbed sites	*
Linaria vulgaris	Butter-and-eggs	Noxious	*
Lysimachia nummularia	Moneywort	Minor wetland invasive	
Lythrum salicaria	Purple loosestrife	Noxious, wetland invasive	*
Madia glomerata	Clustered tarweed	Nuisance	*
Madia sativa	Coast tarweed	Nuisance	*
Malva neglecta	Common mallow	Nuisance	*
Matricaria discoidea	Pineappleweed	Abundant in disturbed sites	*
Matricaria perforata	Scentless chamomile	Noxious	
Morus alba	White mulberry	Minor upland invasive	
Myriophyllum aquaticum	Parrotfeather	Invasive	*

Scientific Name	English Common Name	Comments	IAPP
Myriophyllum spicatum	Eurasian watermilfoil	Principle wetland invasive	*
Onopordum acanthium	Scotch thistle	Noxious	
Origanum vulgare	Wild marjoram	Minor upland invasive	
Panicum capillare	Common witchgrass	Nuisance	*
Panicum miliaceum	Wild proso millet	Noxious	
Persicaria maculata	Lady's thumb	Nuisance	
Persicaria wallichii	Himalayan knotweed	Invasive	*
Phalaris arundinaceae	Reed canarygrass	Invasive	*
Phragmites australis ssp. australis	European common reed	Invasive subspecies	
Pinus sylvestris	Scot's pine	Minor upland invasive	
Plantago lanceolata	Narrow-leaved plantain	Nuisance	
Plantago major	common plantain	Nuisance	*
Poa annua	Annual bluegrass	Nuisance	
Poa compressa	Canada bluegrass	Minor upland invasive	
Poa pratensis	Kentucky bluegrass	Minor upland invasive	
Persicaria wallichii	Himalayan knotweed	Invasive, noxious	*
Potamogeton crispus	Curly pondweed	Minor wetland invasive	
Potentilla recta	Sulphur cinquefoil	Noxious	*
Prunus laurocerasus	Cherry laurel	Garden escape, urban	
Ranunculus repens	Creeping buttercup	Noxious, disturbed sites	*
Robinia pseudo-acacia	Black locust	Minor upland invasive	
Robinia hispida	Bristly locust	Invasive, Kokanee Creek Provincial Park	
Rosa multiflora	Multiflora rose	Minor upland invasive	
Rubus armeniacus	Himalayan blackberry	Invasive	*
Rumex acetosella	Sheep sorrel	Nuisance, disturbed sites	*
Rumex crispus	Curled dock	Nuisance, disturbed sites	*
Salsola kali	Russian thistle	Noxious	
Saponaria officinalis	Bouncing bet	Increasing, disturbed sites	
Sedum acre	Mossy stoncrope	Increasingly abundant	
Senecio jacobaea	Tansy ragwort	Noxious	*
Senecio vulgaris	Common groundsel	Nuisance	*
Setaria viridis	Green foxtail	Noxious	*
Silene latifolia ssp. alba	White cockle	Noxious	*

Scientific Name	English Common Name	Comments	IAPP
Silene noctiflora	Night-flowering catchfly	Noxious	*
Silene vulgaris	Bladder campion	Nusiance	*
Silybum marianum	Milk thistle	Noxious	
Solanum americanum	Black nightshade	Common, disturbed sites	
Solanum dulcamara var. dulcamara	European bittersweet	Disturbed sites	
Solanum physalifolium	Hairy nightshade	Noxious	
Solanum rostratum	Buffalo-bur	Disturbed sites	
Solanum triflorum	Cut-leaved nightshade	Disturbed sites	
Soliva sessilis	Carpet burweed	Invasive, increasing	*
Sonchus arvensis	Perennial sow-thistle	Noxious	*
Sonchus asper	Prickly sow-thistle	Nuisance	
Sonchus oleraceus	Common sow-thistle	Noxious	*
Sorbus aucuparia	European mountain-ash	Highly invasive	
Spartina anglica	English cordgrass	Invasive	*
Spartina densiflora	English cordgrass	Noxious	
Spartina patens	Saltmeadow cordgrass	Noxious	
Spergula arvensis	Corn spurry	Nuisance	*
Stellaria media	Common chickweed	Nuisance	*
Tanacetum vulgare	Common tansy	Noxious	*
Thlaspi arvense	Field pennycress	Nuisance	*
Torilis japonica	Hedge parsley	Nuisance	
Tragopogon dubius	Goatsbeard, yellow salsify	Nuisance	*
Tribulus terrestris	Puncture vine	Noxious	*
Tripleurospermum inodorum	Scentless mayweed	Noxious	
Tussilago farfara	Coltsfoot	Agriculture/urban weed	
Ulex europaeus	Gorse	Noxious	*
Ulmus pumila	Siberian elm	Agriculture/urban weed	*
Ventenata dubia	North Africa grass	Noxious	
Verbascum thapsus	Great mullein	Nuisance	*
Vinca minor	Periwinkle	Urban invasive, ravines	

References

Bargeron, C.T., C.R. Minteer, C.W. Evans, D.J. Moorhead, G.K. Douce and R.C. Reardon. Technical Coordinators. 2008. Invasive Plants of the United States DVD-ROM: Identification, Biology and Control. USDA Forest Service. Forest Health Technology Enterprise Team. Morgantown, WV. FHTET-08-11. Available online.

Global Invasive Species Database. 2011. Invasive Species Specialist Group (ISSG) of the IUCN Species Survival Commission. Available online.

Invasive.org. 2011. Centre for Invasive Species and Ecosystem Health. Available online.

APPENDIX C

Field Notes, July 9, 2015

FIELD NOTES FOR 14671 WILLIAMS ROAD, RICHMOND, B.C.

July 9, 2015

Pit 1: cleared field, wild grass cover; near level topography.

OM	80 - 50cm	dark reddish brown mesic organic; weak granular structure; friable; common roots; clear boundary to:
OF	50 - 0cm	dark brown fibric peat; massive amorphous structure; saturated; no roots; fairly clear boundary to:
Cg	0 - 10cm+	grey silty clay loam, massive, soft and wet; no roots.

Pit 2: cleared field, wild grass cover, near level topography.

OM	65 - 35cm	dark reddish brown mesic organic; weak granular structure; friable; common roots; clear boundary to:
OF	35 - 0cm	dark brown fibric peat, massive, amorphous structure; no roots; clear boundary to:
Cg	0 - 10cm+	grey to grey brown silty clay loam; massive, soft and wet; no roots.

Pit 3: cleared field, wild grass cover; near level topography.

OM	45 - 30cm	dark reddish brown mesic organic, weak granular structure, friable; common roots; fairly clear boundary to:
OF	15 - 0cm	dark brown fibric to medic organic; massive, amorphous structure; no roots; clear boundary to:
Cg	0 - 5cm+	grey to grey brown silty clay loam; massive; soft and wet; no roots.

Pit 4: In wooded area north; white birch overstory; near level to slightly undulating topography.

OF	20 - 0cm	dark reddish brown fibric organic, weak granular structure; very common roots; clear boundary to:
Cg	0 - 20cm+	grey silty clay loam; massive; few roots.

Pit 5: wooded deciduous area south, near level to slightly undulating; white birch overstory.

OF	40 - 20cm	dark reddish brown fibric organic; weak granular structure; common roots; diffuse boundary to:

OM-F	20 - 0cm	dark brown fibric to mesic organic; massive structure; fairly common roots; clear boundary to:
Cg	0 - 20cm+	grey silty clay loam; massive, moderately firm; very few roots.

Pit 6: near south east side of cleared field; near level topography.

OF-M	35 - 0cm	dark reddish brown fibric to mesic organic; near massive structure; common roots; clear boundary to:
Cg	0 - 10cm	grey silty clay loam; massive; no roots.

APPENDIX D

Exova Laboratories Soil Test Results

(1579)

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V3S 8P8, Canada

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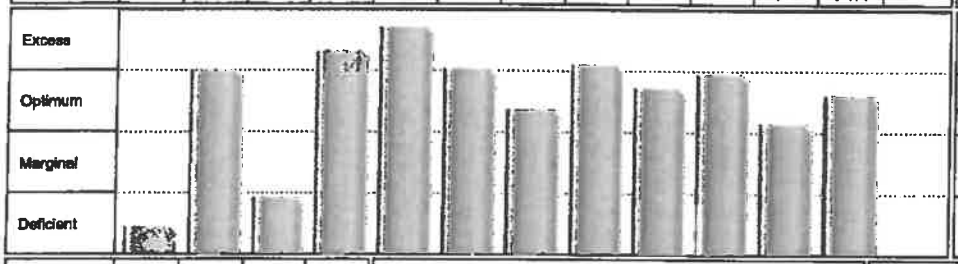
Exova

Farm Soil Analysis

Bill To:	C & F Land Resource	Grower Name:		Lot Number:	1084847
Report To:	C & F Land Resource	Client's Sample Id:	0-40 cm	Report Number:	2030214
		Field Id:	Pit 1 AP	Date Received:	Jul 29, 2015
	4383 Happy Valley Road	Acres:		Disposal Date:	Aug 28, 2015
	Victoria, BC., Canada	Legal Location:		Report Date:	Jul 31, 2015
	V9C 3Z3	Last Crop:	Crop not provided	Arrival Condition:	
Agreement:	101594				

Nutrient analysis (ppm)

Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	BiCarbP
0" - 6"	9	>60	70	93	7480	399	377	15.0	15	3.4	8.9	64.1	



Total lbs/acre	18	120	140	187
Estimated lbs/acre	36	120	140	381

*Nitrate-N **Sulfate-S n/a = not analysed

Soil Quality

pH	EC(dS/m)	OM(%)	Sample#
6.6	0.86	58.9	5153581

Alkaline	*Very Toxic*	*High*
▶ *Neutral*	*Toxic*	*Normal*
Acidic	*Caution*	*Low*
Very Acidic	▶ *Good*	*Very Low*

Texture *Sandy Loam* Hand Texture *n/a*

Sand 53.3 % Silt 35.1 % Clay 11.6 %

Ammonium n/a

Lime 0 T/ac Buffer pH 5.9

BS 79.9 %

Ca 70.7 % Mg 6.2 % Na 2.6 % K 0.3 %

TEC 52.8 meq/100g Na 320 ppm

Est. N Release n/a C:N Ratio n/a

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

	Crop not provided				
Macro-nutrients	Yield	N	P2O5	K2O	S
Growing Condition		To be added (lbs/acre)			
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

The crop is not provided.
Call to request a crop-specific recommendation.

Comments:

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W: www.exova.com

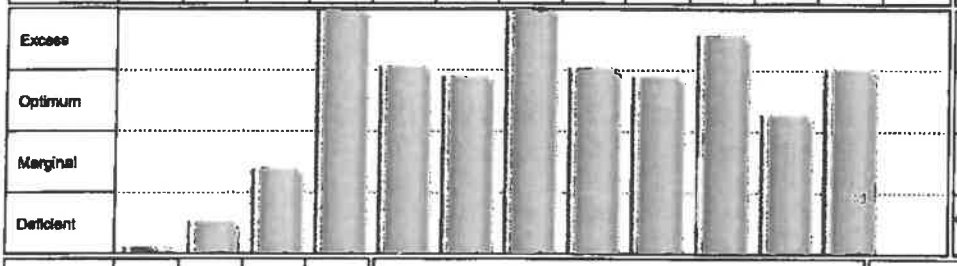
Exova

Farm Soil Analysis

Bill To:	C & F Land Resource	Grower Name:		Lot Number:	1084847
Report To:	C & F Land Resource	Client's Sample Id:	40-100 cm	Report Number:	2030215
		Field Id:	Pit 1 OF-M	Date Received:	Jul 29, 2015
	4383 Happy Valley Road	Acres:		Disposal Date:	Aug 28, 2015
	Victoria, BC., Canada	Legal Location:		Report Date:	Jul 31, 2015
	V9C 3Z3	Last Crop:	Crop not provided	Arrival Condition:	
Agreement:	101594				

Nutrient analysis (ppm)

Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	BiCarbP
0" - 6"	<2	8	105	>1000	1600	230	3490	8.9	20	7.3	15	112	



Total lbs/acre	4	16	210	20000
Estimated lbs/acre	8	16	210	40729

*Nitrate-N **Sulfate-S n/a = not analysed

Soil Quality

pH	EC(dS/m)	OM(%)	Sample#
3.1	9.66	34.8	5153582

Alkaline	Very Toxic	High
Neutral	Toxic	Normal
Acidic	Caution	Low
Very Acidic	Good	Very Low

Texture *Sandy Loam* Hand Texture *n/a*

Sand 62.5 % Silt 28.9 % Clay 8.6 %

Ammonium n/a

Lime 34.4 T/ac Buffer pH 3.5 Est. N Release n/a C:N Ratio n/a

BS 23.2 %

Ca 17.5 % Mg 4.2 % Na 1.0 % K 0.6 %

TEC 45.6 meq/100g Na 100 ppm

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

	Crop not provided				
Macro-nutrients	Yield	N	P2O5	K2O	S
Growing Condition		To be added (lbs/acre)			
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

Comments:

Recommendations are based on general research consensus. They should not replace responsible judgement.

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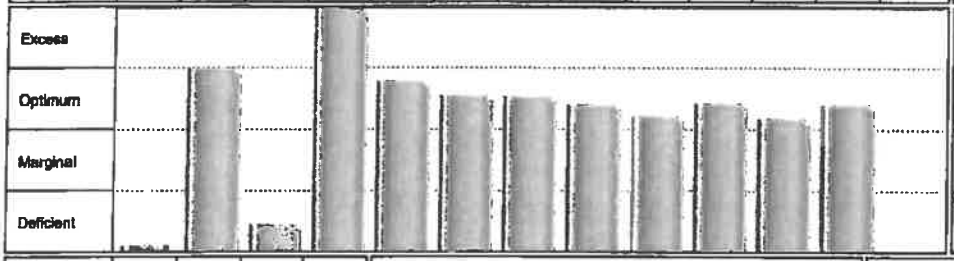
Farm Soil Analysis

Bill To:	C & F Land Resource	Grower Name:		Lot Number:	1084847
Report To:	C & F Land Resource	Client's Sample Id:	0-60 cm	Report Number:	2030216
		Field Id:	Pit 2 OF	Date Received:	Jul 29, 2015
	4383 Happy Valley Road	Acres:		Disposal Date:	Aug 26, 2015
	Victoria, BC., Canada	Legal Location:		Report Date:	Jul 31, 2015
	V9C 3Z3	Last Crop:	Crop not provided	Arrival Condition:	
Agreement:	101594				

Nutrient analysis (ppm)

Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	BiCarbP
0" - 6"	<2	>60	33	300	832	152	540	2.5	<5	2	11	45	



Soil Quality

pH	EC(dS/m)	OM(%)	Sample#
4.1	1.23	64.1	5153583

Alkaline	Very Toxic	High
Neutral	Toxic	Normal
Acidic	Caution	Low
Very Acidic	Good	Very Low

Total lbs/acre	4	120	66	599
Estimated lbs/acre	8	120	66	1220

Texture n/a Hand Texture n/a
Sand n/a Silt n/a Clay n/a
Ammonium n/a
Lime 23.9 T/ac Buffer pH 4.1

BS 17 %
Ca 12.0 % Mg 3.6 % Na 1 % K 0.2 %
TEC 34.6 meq/100g Na 80 ppm
Est. N Release n/a C:N Ratio n/a

*Nitrate-N **Sulfate-S n/a = not analysed

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

	Crop not provided				
Macro-nutrients	Yield	N	P2O5	K2O	S
Growing Condition		To be added (lbs/acre)			
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

The crop is not provided.
Call to request a crop-specific recommendation.

Comments:

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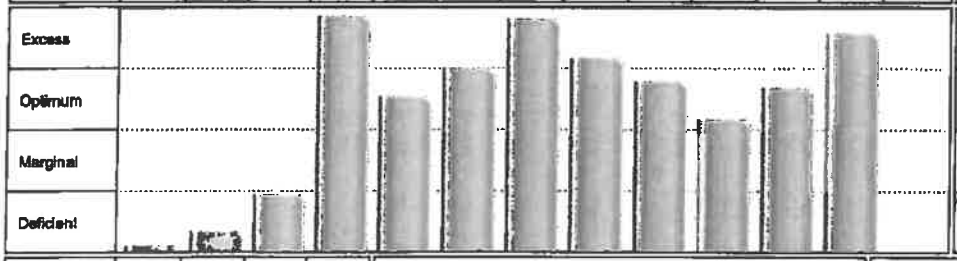
Farm Soil Analysis

Bill To:	C & F Land Resource	Grower Name:		Lot Number:	1084847
Report To:	C & F Land Resource	Client's Sample Id:	0-40 cm	Report Number:	2030217
		Field Id:	Pit 5 OM	Date Received:	Jul 29, 2015
	4383 Happy Valley Road	Acres:		Disposal Date:	Aug 28, 2015
	Victoria, BC., Canada	Legal Location:		Report Date:	Jul 31, 2015
	V9C 3Z3	Last Crop:	Crop not provided	Arrival Condition:	
Agreement:	101594				

Nutrient analysis (ppm)

Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	BiCarbP
0" - 6"	<2	<5	70	215	633	257	1800	21.5	20	1	35.3	334	



Total lbs/acre	4	10	141	430
Estimated lbs/acre	8	10	141	876

*Nitrate-N **Sulfate-S n/a = not analysed

Soil Quality

pH	EC(dS/m)	OM(%)	Sample#
4.0	2.50	62.3	5153584

Alkaline	Very Toxic	High
Neutral	Toxic	Normal
Acidic	Caution	Low
Very Acidic	Good	Very Low

Texture *Sandy Loam* Hand Texture *n/a*

Sand 61.3 % Silt 21.8 % Clay 16.9 %

Ammonium n/a

Lime 31.5 T/ac Buffer pH 3.7 Est. N Release n/a C:N Ratio n/a

BS 21 %

Ca 7.5 % Mg 5.0 % Na 8.1 % K 0.4 %

TEC 42.3 meq/100g Na 780 ppm

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

	Crop not provided				
Macro-nutrients	Yield	N	P2O5	K2O	S
Growing Condition		To be added (lbs/acre)			
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

The crop is not provided.
Call to request a crop-specific recommendation.

Comments:

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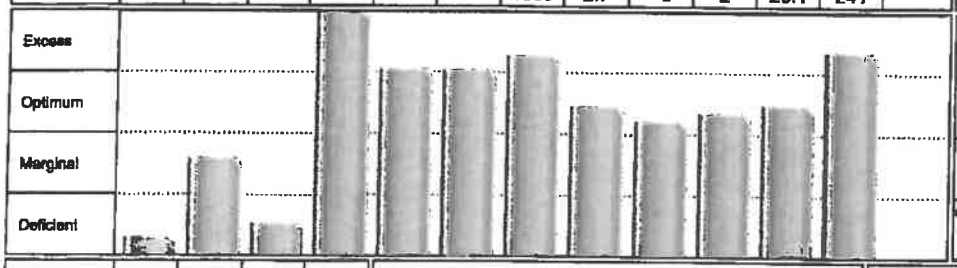
Farm Soil Analysis

Bill To:	C & F Land Resource	Grower Name:		Lot Number:	1084847
Report To:	C & F Land Resource	Client's Sample Id:	0-35 cm	Report Number:	2030218
		Field Id:	Pit 6 OF	Date Received:	Jul 29, 2015
	4383 Happy Valley Road	Acres:		Disposal Date:	Aug 28, 2015
	Victoria, BC., Canada	Legal Location:		Report Date:	Jul 31, 2015
	V9C 3Z3	Last Crop:	Crop not provided	Arrival Condition:	
Agreement:	101594				

Nutrient analysis (ppm)

Depth	N*	P	K	S**	Ca	Mg	Fe	Cu	Zn	B	Mn	Cl	BiCarbP
0" - 6"	6	21	40	602	1460	427	1300	2.7	<5	2	25.1	241	



Total lbs/acre	12	42	79	1204
Estimated lbs/acre	24	42	79	2452

*Nitrate-N **Sulfate-S n/a = not analysed

Soil Quality

pH	EC(dS/m)	OM(%)	Sample#
3.8	3.24	77.0	5153585

Alkaline	*Very Toxic*	*High*
Neutral	*Toxic*	*Normal*
Acidic	*Caution*	*Low*
Very Acidic	*Good*	*Very Low*

Texture *n/a* Hand Texture *n/a*

Sand n/a Silt n/a Clay n/a

Ammonium n/a

Lime 27.6 T/ac Buffer pH 3.9 Est. N Release n/a C:N Ratio n/a

BS 27.7 %

Ca 17.0 % Mg 8.2 % Na 2.3 % K 0.2 %

TEC 43.0 meq/100g Na 230 ppm

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

	Crop not provided				
Macro-nutrients	Yield	N	P2O5	K2O	S
Growing Condition		To be added (lbs/acre)			
Excellent					
Average					
Your Goal					
Removal Rate (Seed/Total)					
Micro-nutrients	Iron	Copper	Zinc	Boron	Manganese
To be added (lbs/ac)					

The crop is not provided.
Call to request a crop-specific recommendation.

Comments:

Exova
Testing Advising Assuring
www.exova.com

Project Information

Project ID: TRIANGLE RD
Project Name: MATHERS
Project Location: Triangle Rd, Rmd
Legal Location:
PO/AFE#:
Proj. Acct. Code:

Billing Information

Company: CF Land Resource
Address: 4383 Happy Valley Rd
Victoria BC V9C 3Z3
Attention: Brian French
Phone: (250) 474-5072
Cell: (604) 908-1466
Fax: (250) 474-5073
E-mail: cflr@shaw.ca
Agreement ID:
Copy of report:

Copy of Report To:

Company:
Address:
Attention:
Phone:
Cell:
Fax:
E-mail:
Copy of invoice:

RUSH Priority

Upon filling out this section, client accepts that surcharges will be applied to the analysis

Date Required
As Indicated | All Analysis

When "ASAP" is requested, turn around will default to a 100% RUSH priority, with pricing and turn around time to match. Please contact the lab prior to submitting RUSH samples.

Signature

Sample Custody (please print)

Sampled by:
Company:
I authorize Exova to proceed with the work indicated on this form:
Date: Initial:

This section for Lab use only

Date/Time stamp: 15-07-29A11:11 RCVD

Report Results								QA/QC Report
	X	E-mail		Online		PDF		
		Mail		Fax		Excel		

Special Instructions/Comments (please include contact information including ph. # if different from above).

Include Regulatory Requirements Below:

	Sample Identification	Location	Depth (m)	Date/Time sampled	Matrix	Sampling Method	Number of Containers	CM PT	BSA	Enter tests above (√ relevant samples below)								
1	PIT 1 AP		0-40	07/09/15			1	✓	✓									
2	PIT 1 OF-M		40-100	07/09/15			1	✓	✓									
3	PIT 2 OF		0-80	07/09/15			1	✓	✓									
4	PIT 5 OM		0-40	07/09/15			1	✓	✓									
5	PIT 6 OF		0-35	07/09/15			1	✓	✓									
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Indicate below any deficiencies in the condition of samples:

- Were Exova supplies used?
- Was there any damage to the shipping container?
- Were the containers packaged well?
- Were any extra samples received (document below)?
- Are samples within recommended holding times/temp?

Environmental Sample Information Sheet

Note: Proper completion of this form is required in order to proceed with analysis

Please indicate any potentially hazardous samples

Page of Control # B047204

LOT: 1084847 COC

Shipping:
COD Y/N
Cooler temp:

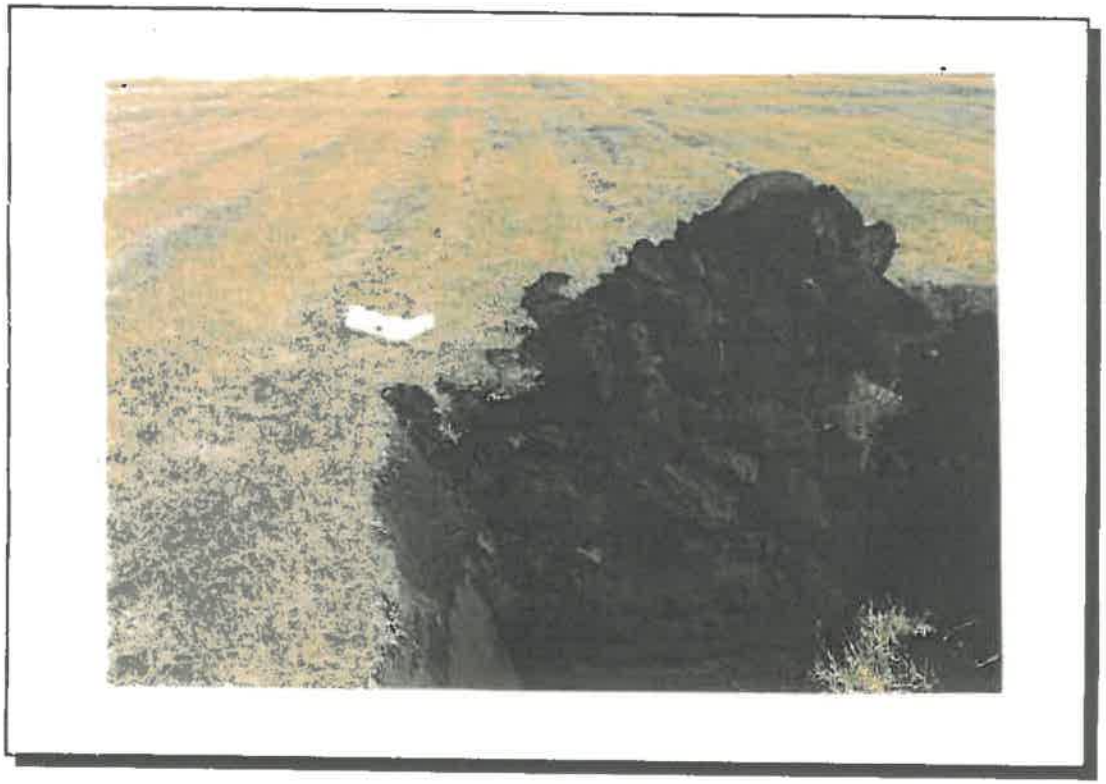
and size of coolers received:
Delivery Method: Hand
Waybill:
Received by: MC

ED 120-00

APPENDIX E

Photographs of Soil Pits and Landscape

PLATE 1: 14671 WILLIAMS ROAD, RICHMOND, B.C.: July 9, 2015

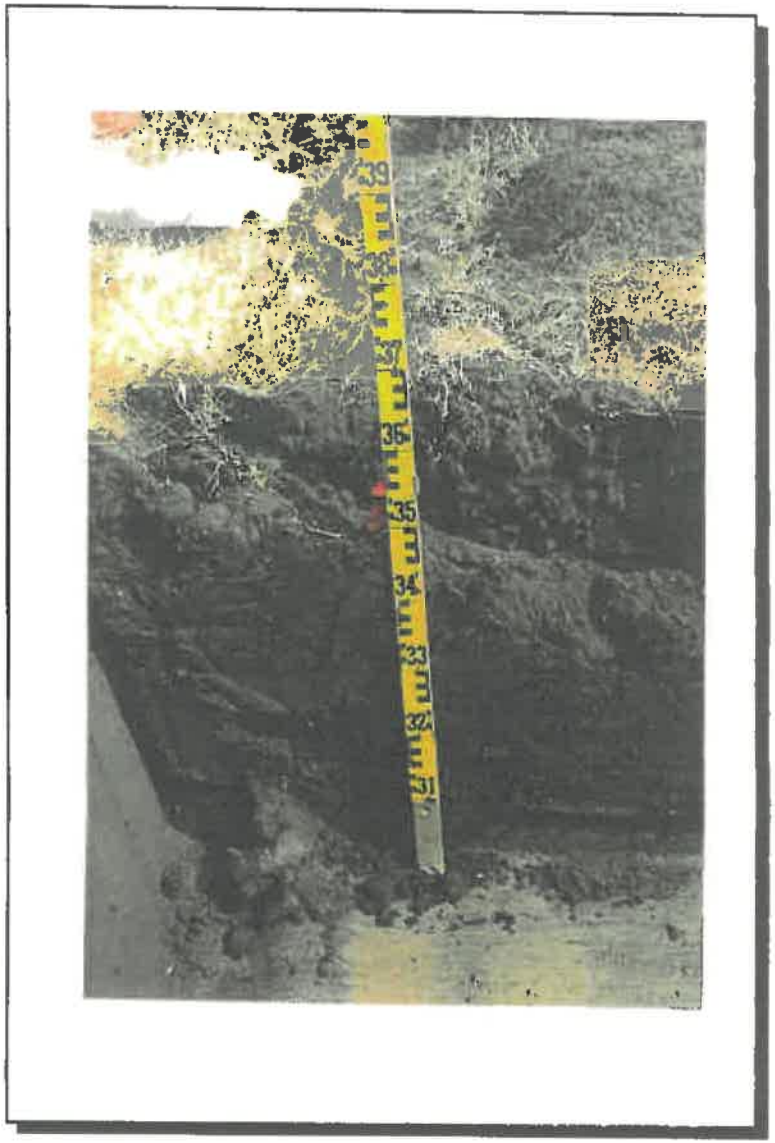


1(a): Landscape at Soil Pit #1

1b):Soil Pit #1, 100cm organic peat over silty clay loam

PLATE 2: 14671 WILLIAMS ROAD, RICHMOND, B.C.: July 9, 2015

2(a): Landscape at Soil Pit #2



2b):Soil Pit #2, 30cm organic peat over silty clay loam

PLATE 3: 14671 WILLIAMS ROAD, RICHMOND, B.C.: July 9, 2015

3(a): Landscape at Soil Pit #3

3b):Soil Pit #3, 45cm organic peat over silty clay loam

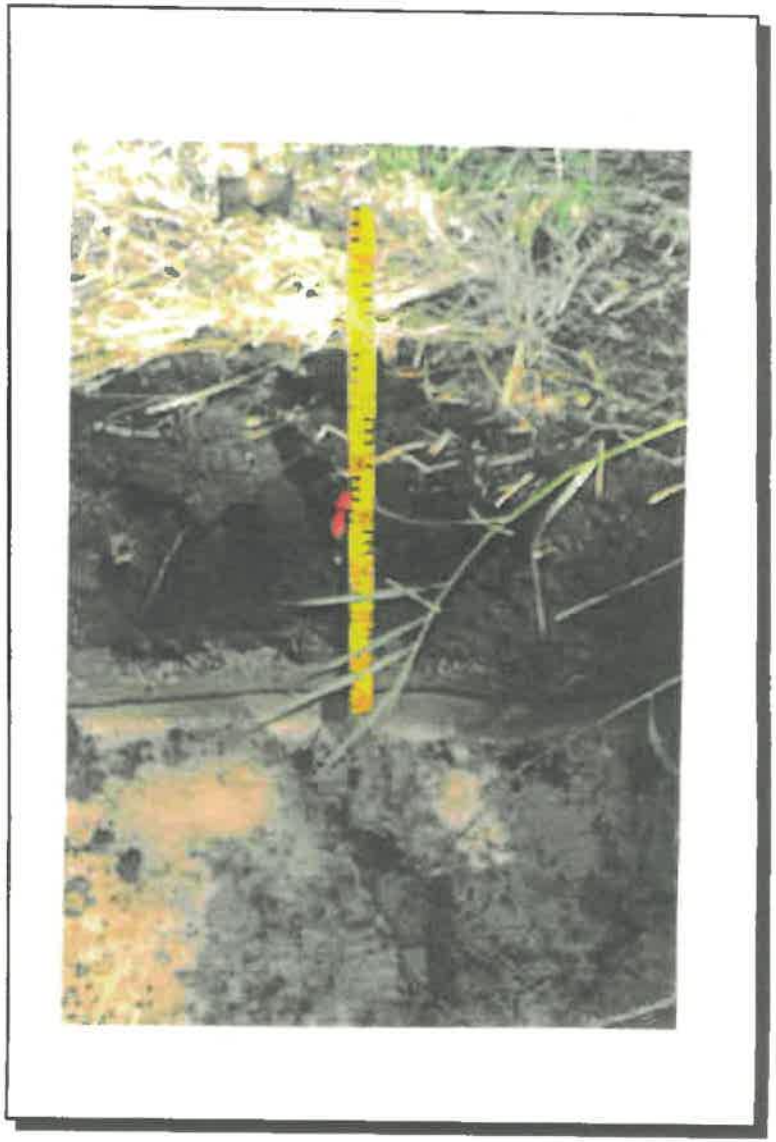
PLATE 4: 14671 WILLIAMS ROAD, RICHMOND, B.C.: July 9, 2015

4(a): Landscape at Soil Pit #4

4b):Soil Pit #4, 20cm organic peat over silty clay loam

PLATE 5: 14671 WILLIAMS ROAD, RICHMOND, B.C.: July 9, 2015

5(a): Landscape at Soil Pit #5



5b):Soil Pit #5, 40cm organic peat over silty clay loam

PLATE 6: 14671 WILLIAMS ROAD, RICHMOND, B.C.: July 9, 2015

6(a): Landscape at Soil Pit #6

6b):Soil Pit #6, 35cm organic peat over silty clay loam

PLATE 7: 14671 WILLIAMS ROAD, RICHMOND, B.C.: July 9, 2015

Pan view of cleared area on west side of site

APPENDIX F

Excerpts from MOE Manual 1

LAND CAPABILITY CLASSIFICATION FOR AGRICULTURE IN BRITISH COLUMBIA

MOE MANUAL 1

Ministry of Environment
Surveys and Resource Mapping Branch
and
Ministry of Agriculture and Food
Soils Branch

Kelowna, British Columbia
April, 1983

4. LAND CAPABILITY CLASSES FOR MINERAL SOILS

The capability class, the broadest category in the classification, is a grouping of lands that have the same relative degree of limitation or hazard for agricultural use. The intensity of the limitation or hazard becomes progressively greater from Class 1 to Class 7. The seven land capability classes for mineral soils are defined and described as follows.

CLASS 1 LAND IN THIS CLASS EITHER HAS NO OR ONLY VERY SLIGHT LIMITATIONS THAT RESTRICT ITS USE FOR THE PRODUCTION OF COMMON AGRICULTURAL CROPS.

Land in Class 1 is level or nearly level. The soils are deep, well to imperfectly drained under natural conditions, or have good artificial water table control, and hold moisture well. They can be managed and cropped without difficulty. Productivity is easily maintained for a wide range of field crops.

CLASS 2 LAND IN THIS CLASS HAS MINOR LIMITATIONS THAT REQUIRE GOOD ONGOING MANAGEMENT PRACTICES OR SLIGHTLY RESTRICT THE RANGE OF CROPS, OR BOTH.

Land in Class 2 has limitations which constitute a continuous minor management problem or may cause lower crop yields or slightly smaller range of crops compared to Class 1 land but which do not pose a threat of crop loss under good management. The soils are deep, hold moisture well and can be managed and cropped with little difficulty.

CLASS 3 LAND IN THIS CLASS HAS LIMITATIONS THAT REQUIRE MODERATELY INTENSIVE MANAGEMENT PRACTICES OR MODERATELY RESTRICT THE RANGE OF CROPS, OR BOTH.

The limitations are more severe than for Class 2 land and management practices are more difficult to apply and maintain. The limitations may restrict the choice of suitable crops or affect one or more of the following practices: timing and ease of tillage, planting and harvesting; and methods of soil conservation.

CLASS 4 LAND IN THIS CLASS HAS LIMITATIONS THAT REQUIRE SPECIAL MANAGEMENT PRACTICES OR SEVERELY RESTRICT THE RANGE OF CROPS, OR BOTH.

Land in Class 4 has limitations which make it suitable for only a few crops, or the yield for a wide range of crops is low, or the risk of crop failure is high, or soil conditions are such that special development and management practices are required. The limitations may seriously affect one or more of the following practices: timing and ease of tillage, planting and harvesting; and methods of soil conservation. Note that in areas which are climatically suitable for growing tree fruits and grapes the limitations of stoniness and/or topography on some Class 4 lands are not significant limitations to these crops. (Refer to Chapter 10).

CLASS 5 LAND IN THIS CLASS HAS LIMITATIONS THAT RESTRICT ITS CAPABILITY TO PRODUCING PERENNIAL FORAGE CROPS OR OTHER SPECIALLY ADAPTED CROPS.

Land in Class 5 is generally limited to the production of perennial forage crops and specially adapted crops (crops such as cranberries suited to unique soil conditions not amenable to a wide range of common crops). Productivity of these suited crops may be high. Class 5 lands can be cultivated and some can be used for cultivated field crops provided unusually intensive management is employed and/or the crop is particularly adapted to the conditions peculiar to these lands. Cultivated field crops may be grown on some Class 5 land where adverse climate is the main limitation, but crop failure can be expected under average conditions. Note that in areas which are climatically suitable for growing tree fruits and grapes the limitations of stoniness and/or topography on some Class 5 lands are not significant limitations to these crops. (Refer to Chapter 10).

CLASS 6 LAND IN THIS CLASS IS NONARABLE BUT IS CAPABLE OF PRODUCING NATIVE AND/OR UNCULTIVATED PERENNIAL FORAGE CROPS.

Land in Class 6 provides sustained natural grazing for domestic livestock (i.e. cattle and sheep) and is not arable in its present condition. Land is

placed in this class because of severe climate, or the terrain is unsuitable for cultivation or use of farm machinery, or the soils do not respond to intensive improvement practices. Some unimproved Class 6 lands can be improved by draining, diking and/or irrigation.

CLASS 7 LAND IN THIS CLASS HAS NO CAPABILITY FOR ARABLE CULTURE OR SUSTAINED NATURAL GRAZING.

All classified areas not included in Classes 1 to 6 are placed in this class. Class 7 land may have limitations equivalent to Class 6 land but they do not provide natural forage for sustained grazing by domestic livestock due to climate and resulting unsuited natural vegetation. Also included are rockland, other nonsoil areas, and small water-bodies not shown on the maps. Some unimproved Class 7 lands can be improved by draining, diking and/or irrigation.

AWSC (upper 50 cm)	Definitive Soil Texture	Best Improved Rating
>60 mm	sandy loam or finer	1
45-60 mm	loamy sand to coarse sandy loam	2A
25-44 mm	sand to coarse loamy sand	3A
10-24 mm	very gravelly sand	5A
<10 mm	gravel	no improvement

Adverse climate (C): This subclass is used on a subregional or local basis and is derived from 1:100 000 scale "Climatic Capability for Agriculture" maps (see "Thermal Limitations" pg. 43). It indicates thermal limitations to agricultural capability including the adverse affect on plant growth during the growing season by minimum temperatures near freezing and/or insufficient heat units, and/or, extreme minimum winter temperatures which injure or kill dormant or near dormant fruit trees.

Improvement of adverse climate due to thermal limitations is not considered practical. The Improved Rating is equivalent to the Unimproved Rating.

Undesirable soil structure and/or low perviousness (D): This subclass is used for soils difficult to till, requiring special management for seedbed preparation and soils with trafficability problems for common farm implements. Also included are soils which have insufficient aeration, absorb and distribute water slowly, or have the depth of rooting zone restricted by conditions other than wetness (high water table) or consolidated bedrock or permafrost.

The guidelines suggested for class designations are based on texture, structure, consistence, permeability (hydraulic conductivity of disturbed samples in the laboratory) and depth to root restricting layer. These restricting layers may include clay enriched horizons, compact soil parent materials, cemented horizons, horizons with massive structure, or horizons with weak structure and firm to very firm consistency. Soils with good tilth in the upper 25 cm may be rated one class better than the guidelines indicate. Tilth

is the physical condition of soil as related to its ease of tillage, fitness as a seedbed, and impedance to seedling emergence and root penetration.

CLASS 1 : A root restricting layer does not occur within 75 cm of the mineral soil surface, and the upper 25 cm has a non-sticky wet consistence and a texture usually coarser than silty clay loam, and permeability is usually greater than 1.0 cm/hr in the upper 100 cm.

CLASS 2D: A root restricting layer occurs within 50 to 75 cm of the mineral soil surface, or the upper 25 cm has a slightly sticky wet consistence and usually has a texture of silty clay loam, clay loam or sandy clay, or the slowest permeability is usually 0.5 to 1.0 cm/hr in the upper 100 cm.

CLASS 3D: A root restricting layer occurs within 25 to 50 cm of the mineral soil surface, or the upper 25 cm has a sticky wet consistence and usually has a texture of silty clay or clay, or the slowest permeability is usually 0.15 to 0.5 cm/hr in the upper 100 cm.

CLASS 4D: A root restricting layer occurs within 25 cm of the mineral soil surface, or the upper 25 cm has a very sticky wet consistence and usually has a texture of heavy clay, or the slowest permeability is usually less than 0.15 cm/hr in the upper 100 cm.

Some features of undesirable soil structure and/or low perviousness are improvable to varying degrees (amelioration of soil texture, deep ploughing or blading to break-up root restricting layers); others, such as strongly cemented horizons, are not. The Improved Rating for this subclass, if indicated, should be determined on the basis of past experience with improving comparable soils. If such experience is not available no improvement is assumed and the Improved Rating is equivalent to the Unimproved Rating.

sheet, rill or wind erosion, and/or the area is dissected by moderately deep to deep gullies with small areas of intact soil between the gullies. Improvements are not feasible and farm machinery cannot be reasonably or safely operated. Class 6 land in its present condition provides sustained natural grazing for domestic livestock but Class 7 land does not.

Erosion is usually a continuing limitation. It is often practical to reduce the affect of present erosion but improvement of the effects of past erosion is not considered. The Improved Rating is equivalent to the Unimproved Rating.

Fertility (F): Soils with this subclass are those limited by fertility characteristics that are either correctable with constant and careful use of fertilizers and/or other soil amendments, or are difficult to correct in a feasible way. The limitations may be due to lack of available nutrients, inadequate (low) cation exchange capacity or nutrient holding ability, high acidity or alkalinity, high levels of carbonates, the presence of toxic elements or compounds, or high fixation of plant nutrients. The limitations are assessed on the rooting zone depth (upper 50 cm of mineral soil) unless otherwise stated. Limitations due to salinity are not considered in this subclass.

CLASS 1 : Soils are well supplied with nutrients easily and continuously available to plants. Fertility status neither restricts the range or productivity of a wide range of crops.

CLASS 2F: Includes both, soils with minor fertility limitations in the upper 50 cm, such as minor nutrient imbalances, inadequate exchange capacity or nutrient holding ability, or moderate acidity or alkalinity, and/or soils with moderate to severe fertility problems below the 50 cm depth. Fertility status does not restrict the range of crops, but routine additions of fertilizer and/or other soil

amendments are required to maintain productivity for a wide range of crops (Improved Rating is Class 1).

CLASS 3F: Includes soils with moderate nutrient imbalances, low cation exchange capacity or nutrient holding ability, high acidity or alkalinity and/or high levels of carbonates. Fertility status does not restrict the range of crops, but moderate, ongoing additions of fertilizer and/or other soil amendments are required to maintain productivity for a wide range of crops (Improved Rating is Class 1).

CLASS 4F: Includes soils with severe nutrient imbalances, very low cation exchange capacity or nutrient holding ability, very high acidity or alkalinity, very high levels of carbonates and/or high fixation of plant nutrients. Fertility status significantly restricts the range of crops, but with intensive and judicious applications of fertilizers and/or other soil amendments, productivity for a wide range of crops is attainable. (Improved Rating is Class 1, or Class 2F if improvement results in lower crop yields than common for Class 1 lands).

CLASS 5F: Includes soils with very severe nutrient imbalances, extreme acidity or alkalinity and/or extremely high levels of carbonates. Fertility status restricts the range of crops to perennial forages or other specially adapted crops such as cranberries. With very intensive, closely controlled and carefully monitored applications of fertilizers and/or other soil amendments, these soils are improvable in crop range, climate permitting. If expected crop range upon improvement is wide the Improved Rating is 2F, otherwise 3F.

CLASS 6F: Soils in which the very poor fertility status is unsuited for agricultural crops and is impractical to improve with feasible management practices. Specially adapted native plant species are present which are suitable for grazing by domestic livestock.

CLASS 7F: Soils which contain elements or compounds toxic to vegetation, or support plants poisonous to animals which cannot be removed with feasible management practices.

Inundation (I): This subclass includes soils where overflow by streams, lakes or marine tides causes crop damage or restricts agricultural use. The following criteria based on relative hazard or increasing limitation to plant growth are suggested for class designation.

CLASS 1 : Soils are not subject to damaging overflow.

CLASS 2I: Soils are subject to occasional, very brief (1 day) inundation during the growing period causing slight crop damage, or the occurrence of winter inundation causing high water tables affecting only deep-rooted perennial crops.

CLASS 3I: Soils are subject to frequent, brief (2 days) overflow during the growing period causing minor crop damage but no crop loss, and/or are flooded until mid-spring forcing late seeding and adversely affecting perennial crops during the winter months.

CLASS 4I: Soils are subject to either frequent or extended overflow during the growing period causing moderate crop damage and occasional crop loss, or are flooded until late spring preventing seeding in some years.

CLASS 5I: Soils are subject to frequent overflow of extended duration (7 days or more) during the growing period or are flooded until early summer making the land suitable only for perennial forage crops and/or improved pasture. Effective grazing period is longer than 10 weeks.

CLASS 6I: Extended flooding (>6 weeks) and/or very frequent overflow during

the growing season with effective natural grazing period of 5 to 10 weeks.

CLASS 7I: Flooded for most of the growing season; not useable for agriculture.

Inundation can be prevented by diking and no further hazard is assumed to exist. The Improved Rating for this subclass in such a case is CLASS 1. Any hazard or limitation expected to continue after diking due to high water tables is indicated by the Subclass W (excess water). Note that lands with Unimproved Ratings of 6I or 7I are improvable by diking.

Salinity (N): This subclass includes soils adversely affected by soluble salts which reduce crop growth or restrict the range of crops that may be grown. The following guidelines for class designation are suggested. The salt content is expressed as the electrical conductivity of the extract from a water-saturated paste.

CLASS 1 : No limitations to crop growth or range of crops. Soils have low (<2 mS/cm) salt content from 0 to 100 cm.

CLASS 2N: Only salt sensitive crops are adversely affected. Soils have low (<2 mS/cm) salt content from 0 to 50 cm and have moderate (2 to 4 mS/cm) salt content from 50 to 100 cm.

CLASS 3N: Most crops are adversely affected. Soils have moderate (2 to 4 mS/cm) salt content from 0 to 50 cm and/or have high to very high (>4 mS/cm) salt content from 50 to 100 cm.

CLASS 4N: Moderate limitation to most crops. Soils have high (4 to 8 mS/cm) salt content from 0 to 50 cm.

CLASS 5N: Salt content is sufficiently severe to preclude most crops, but salt-tolerant forage crops can be established and maintained. Soils have very high (>8 mS/cm) salt content in the 0 to 50 cm depth.

CLASS 6N: Soils are too salty for cultivated crops but support specially adapted, native salt-tolerant plant species, some of which are suitable for grazing by domestic livestock.

CLASS 7N: Soils are too salty for cultivated crops and do not support native plants suitable for grazing or soils which support poisonous plants which cannot be removed with feasible management practices.

There are different reasons for, and types of, salinity problems. Improvement practices and their success in alleviating limitations due to salinity vary depending on site and soil conditions. The Improved Rating for this subclass, if indicated, should be determined on the basis of past experience with improving comparable soils. If such experience is not available no improvement is assumed and the Improved Rating is equivalent to the Unimproved Rating.

Stoniness (P): This subclass applies to soils with sufficient coarse fragments* to significantly hinder tillage, planting, and/or harvesting operations. The suggested guidelines for class designation are based on the sieved proportion of "coarse gravels" (2.5 to 7.5 cm diameter), cobbles (7.5 to 25 cm diameter) and stones (>25 cm diameter) of the total soil in the upper 25 cm of mineral soil.

CLASS 1 : Total coarse fragment content (2.5 cm diameter or larger) offers no or very slight hindrance to cultivation. Total coarse fragment content is 5% or less with cobbles and stones occupying 0.01% or less of the sieved soil.

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* In this case coarse fragments refer to "coarse gravels" plus cobbles plus stones, i.e. fragments 2.5 cm diameter or larger.

CLASS 4T: Simple slopes varying from 16 to 20% or complex slopes varying from 11 to 15%. Note that in areas which are climatically suitable for growing tree fruits and grapes, a CLASS 4 level Topograghy limitation may not be considered a significant limitation to these crops. (Refer to Chapter 10).

CLASS 5T: Simple slopes varying from 21 to 30% or complex slopes varying from 16 to 30%. Note that in areas which are climatically suitable for growing tree fruits and grapes, a CLASS 5 level Topography limitation may not be considered a significant limiation to these crops. (Refer to Chapter 10).

CLASS 6T: Slopes, either simple or complex, varying from 31 to 60% and the land in its present condition provides sustained natural grazing for domestic livestock.

CLASS 7T: Slopes, either simple or complex, greater than 30%. The land in its present condition is not useable for either arable agriculture or sustained natural grazing by domestic livestock.

Improvement of topographic limitations is considered impractical. The Improved Rating is equivalent to the Unimproved Rating.

Excess water (W): This subclass applies to soils for which excess free water, other than from inundation (flooding), limits their use for agriculture. The excess water occurs because of imperfect to very poor drainage due to high water tables, seepage, or runoff from surrounding areas. The following guidelines for class designation are suggested.

CLASS 1 : Crop damage due to excess water is not a factor.

CLASS 2W: Occasional occurrence of excess water during the growing period causing slight crop damage, or the occurrence of excess water during

the winter months adversely affecting deep rooted perennial crops. Water level is rarely, if ever, at the surface and excess water is within the upper 50 cm for only short periods (less than 2 weeks) during the year.

CLASS 3W: Occasional occurrence of excess water during the growing period causing minor crop damage, but no crop loss, or the occurrence of excess water during the winter months adversely affecting perennial crops. Water level is near the soil surface until mid-spring forcing late seeding, or the soil is poorly and in some cases imperfectly drained, or the water level is less than 20 cm below the soil surface for a continuous maximum period of 7 days during the growing period.

CLASS 4W: Frequent or continuous occurrence of excess water during the growing period causing moderate crop damage and occasional crop loss. Water level is near the soil surface during most of the winter and/or until late spring preventing seeding in some years, or the soil is very poorly drained.

CLASS 5W: Frequent or continuous occurrence of excess water during the growing period making the land suitable for only perennial forage crops, and/or improved pasture. Water level is near the soil surface until early summer, or the maximum period the water level is less than 20 cm below the soil surface is 6 weeks during the growing period, or the soil is very poorly drained, commonly with shallow organic surface layers. Effective grazing period is longer than 10 weeks.

CLASS 6W: Continuous occurrence of excess water during the growing season with an effective natural grazing period of 5 to 10 weeks. The water level is at or above the soil surface except for a short period in mid-summer.

CLASS 7W: Under water most of the growing season; not useable for agriculture.

Water control (ditching or tiling) will generally improve this limitation by at least one class depending on landscape position, and source and type of excess water. The Improved Rating should be assessed on a site specific basis, using regional experience from comparable soils in the area which have been improved. Note that lands with Unimproved Ratings of 6W or 7W can sometimes be improved by draining.

Permafrost (Z): The presence of a cryic (permanently frozen) layer is a severe limitation to agricultural production. In addition to maintaining undesirable cold soil temperatures, drainage problems are complicated when permafrost is present in the upper 150 cm. If permafrost occurs below 150 cm depth from the soil surface, and its depth is unaffected by cultivation, it poses a less severe limitation to agricultural production than it would if it occurred above 150 cm. Because of limited experience regarding the effect of this limitation on agricultural use, partial guidelines for permafrost conditions are suggested as follows.

CLASS 4Z: Permafrost occurs below 150 cm from the soil surface during the growing season and does not interfere with crop production.

CLASS 6Z: Permafrost occurs within 150 cm of the soil surface during the growing season. The land in its present condition provides sustained natural grazing for domestic livestock.

CLASS 7Z: Permafrost occurs within 150 cm of the soil surface during the growing season. The land in its present condition is not useable for either arable agriculture or sustained natural grazing by domestic livestock.

Improvement of permafrost conditions is assumed impractical. The Improved Rating is equivalent to the Unimproved Rating.

APPENDIX G

Support Letters from Farmers

MAYLAND FARMS LTD.
2611 No. 7 Road
Richmond, B.C. V6V 1R3

August 27, 2015

TO WHOM IT MAY CONCERN:

We, Mayland Farms Ltd., are Cranberry producers in Richmond and sand topdressing is a critical part of our cranberry bog management. We require approximately 3,000 yards of clean, salt-free sand every year.

We have purchased this sand from E. Mathers Bulldozing Co. Ltd. for many years. The sand supplied by Mathers is excellent quality in terms of its particle size, consistency and it is free of salt. The cost of Mathers sand is very reasonable, an important consideration for agricultural producers. We know that there are very limited suppliers of high quality topdressing sand in the Delta - Richmond area and worry that if Mathers is forced out of the area, we will have to import sand from suppliers in Abbotsford at significantly higher cost.

As agricultural producers, we support the application by Mathers to relocate on the property at 14671 Williams Road in Richmond. We believe Mathers provides an important agricultural input to our cranberry operation.

Yours truly,

MAYLAND FARMS LTD.

David May.
(Pres)

MAYFAIR LAKES GOLF & COUNTRY CLUB
5460 No. 7 Road
Richmond, B.C. V6V 1R7

August 27, 2015

TO WHOM IT MAY CONCERN:

We, Mayfair Lakes Golf & Country Club, require topdressing sand and sand for green and tee maintenance on a regular basis. We require approximately 3,000 yards of clean, salt-free sand every year.

We have purchased this sand from E. Mathers Bulldozing Co. Ltd. for many years. The sand supplied by Mathers is excellent quality in terms of its particle size, consistency and it is free of salt. The cost of Mathers sand is very reasonable. We know that there are very limited suppliers of high quality topdressing sand in the Delta-Richmond area and worry that if Mathers is forced out of the area, we will have to import sand from suppliers in Abbotsford at significantly higher cost.

We support the application by Mathers to relocate on the property at 14671 Williams Road in Richmond. We believe Mathers provides an important service to golf course operators and agricultural producers in Richmond.

Yours truly,

MAYFAIR LAKES GOLF & COUNTRY CLUB

COLUMBIA CRANBERRY CO. LTD.
4291 No. 7 Road
Richmond, B.C. V6V 1R6

August 27, 2015

TO WHOM IT MAY CONCERN:

We, Columbia Cranberry Co. Ltd., are Cranberry producers in Richmond and Delta and sand topdressing is a critical part of our cranberry bog management. We require approximately 5,000 yards of clean, salt-free sand every year.

We have purchased this sand from E. Mathers Bulldozing Co. Ltd. for many years. The sand supplied by Mathers is excellent quality in terms of its particle size, consistency and it is free of salt. The cost of Mathers sand is very reasonable, an important consideration for agricultural producers. We know that there are very limited suppliers of high quality topdressing sand in the Delta - Richmond area and worry that if Mathers is forced out of the area, we will have to import sand from suppliers in Abbotsford at significantly higher cost.

As agricultural producers, we support the application by Mathers to relocate on the property at 14671 Williams Road in Richmond. We believe Mathers provides an important agricultural input to our cranberry operation.

Yours truly,

COLUMBIA CRANBERRY CO. LTD.

Arthur W. Savage

COUNTRY MEADOWS GOLF CLUB
SAVAGE CREEK GOLF CLUB
8400 No. 6 Road
Richmond, B.C. V6W 1E3

August 27, 2015

TO WHOM IT MAY CONCERN:

We, Country Meadows Golf Club and Savage Creek Golf Club, require topdressing sand and sand for green and tee maintenance on a regular basis. We require approximately 4,000 yards of clean, salt-free sand every year.

We have purchased this sand from E. Mathers Bulldozing Co. Ltd. for many years. The sand supplied by Mathers is excellent quality in terms of its particle size, consistency and it is free of salt. The cost of Mathers sand is very reasonable. We know that there are very limited suppliers of high quality topdressing sand in the Delta-Richmond area and worry that if Mathers is forced out of the area, we will have to import sand from suppliers in Abbotsford at significantly higher cost.

We support the application by Mathers to relocate on the property at 14671 Williams Road in Richmond. We believe Mathers provides an important service to golf course operators and agricultural producers in Richmond.

Yours truly,

COUNTRY MEADOWS GOLF CLUB

and SAVAGE CREEK GOLF CLUB

Westcoast Farms LTD.
Willow Bay Farms LTD.
Willow Bay [illegible] LTD.
[illegible] Mustang Holdings

Westcoast
INSTANT
LAWNS

Enviro-smart Organics Ltd.
a full cycle company

August 31, 2015

TO WHOM IT MAY CONCERN:

West Coast Instant Lawns has been using E. Mathers Bulldozing Company Ltd. for all our sand requirements since 1996. Over the last 19 years we have made free draining sand turf fields by applying 6 to 12 inches of sand on our soil based fields which allows us to harvest turf during the wet months. Westcoast has been topping up these sand fields approximately every two years.

The reason we use sand from E. Mathers is because we have tested sand from all the other sand suppliers within our logistical area and we have found that Mathers sand is consistent in quality in terms of its particle size and it is free of salts as compared to other suppliers.

Our composting operation consistently uses approximately 100,000 cubic yards of clean, salt free sand from Mathers, This sand helps us meet the strict B.C. Nursery Trades Association specification as required by the landscape industry.

E. Mathers has always given a preferred price to agricultural producers and this is important for farmers to remain competitive.

There is no real alternative for supply of clean, salt free sand in the Delta area and if E. Mathers were to shut down we would be forced to source sand from suppliers in Abbotsford at significantly higher cost.

We at Westcoast Instant Lawns support the application by E. Mathers Bulldozing Company Ltd. to relocate on the property at 14671 Williams Road in Richmond, B.C. Over the years I have talked with other farmers that have benefitted from being able to have a reliable, consistent source of sand for their farm operations in Delta and Richmond.

Yours truly,

West Coast Instant Lawns

D Goodwin

Daryl Goodwin, President

4295 - 72nd St. Delta, BC V4K 3N2
Phone: 604.946.0201 Fax: 604.946.0221

APPENDIX H

Richardson Site Survey Report

COMMERCIAL REAL ESTATE SERVICES

CBRE

Bruce Richardson
Vice President/Nominee

CBRE Limited, Real Estate Brokerage
Industrial Properties

1021 West Hastings Street, Suite 2500
Vancouver, BC V6E 0C3

+1 604 662 5127 Tel
+1 604 684 9368 Fax

bruce.richardson@cbre.com
www.cbre.ca

November 17, 2015

To Whom it May Concern

I have worked at CBRE for 31 years which is the largest real estate network in the world, with over 300 offices in North America. I have a Bachelor of Commerce form the Urban Land program at UBC and throughout my career I have specialized in Richmond industrial real estate. During my career I have been involved in several significant deals..... relocating IKEA's store within the City of Richmond... moving the Canada Post 700,000 square foot Processing Plant from Georgia Street in Vancouver onto the Airport. Five years ago, during the relocation for Canada Post, I spent 6 months looking for a site for Canada Post. We could not find a site as there was virtually no supply of land available for them, this the reason they ended up leasing land from the Airport Authority. Their requirement in terms of land size was similar to yours so I have an excellent understanding of the supply of industrial land in the City of Richmond.

For the last 5 years, I have been searching for a suitable site that is near the south arm of the Fraser River for your soil storage operation. There is no sites that have come available in the last 5 years that would suit your needs. As you need a site near the Fraser River I can say it is almost impossible to find what you are looking for.

Richmond is surrounded by water on 3 sides making the supply of industrial sites very limited. Further the demand from companies who need to be near the Airport puts even more demand on the industrial land. The supply is limited as it is a rare situation that the City of Richmond can only grow eastward.

I confirm that it will be near impossible to find a site in the City of Richmond for your soil storage operation.

Please call me if you any questions or concerns.

Yours truly,

CBRE LIMITED

Bruce Richardson, B.Comm.
Vice President / Nominee
Industrial Properties
Direct Line (604) 662-5127

BR/cc

S:\Bruce Richardson\2015\Correspondence\BR04-11-15-LTR.docx

APPENDIX I

C&F Alternative Site Review

J

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

August 30, 2017

Agricultural Land Commission
Suite 133 - 4940 Canada Way
Burnaby, B.C. V5K 4N6
Attention: Shawna Mary Wilson, Planner

Dear Ms. Wilson:

Re: ALC Application # 55285 - Sanstor Farms Supplementary Information in Response to City of Richmond Staff Report

The applicant is very concerned with some of the statements and information contained in the July 14, 2017 City of Richmond staff report which was presented to Planning Committee of Council on July 18, 2017 when the consideration of the above noted application was heard. This letter sets the record straight in regard to the misleading and inaccurate statements contained in the staff report. Some of the issues in dispute are quite complex and I have tried to provided clarifying details and attachments where deemed useful.

1. **Intent of the Staff Report**

In an email to Mathers Bulldozing (owner) from John Hopkins, Richmond Planner, dated June 1, 2017 stated as follows: "Your non-farm use application report (staff report) will be presented as an options report to Planning Committee outlining the rationale to deny the application, and the rationale to support the application. This is a very unique type of report to prepare as all sides of the proposal need to be fully analyzed.". When the staff report was made available to us, we were shocked to find that instead of a balanced analysis presenting both alternatives, it simply recommended denial and the report did not contain a single statement in support of the application or an alternative supportive Council resolution for consideration. The June 1, 2017 email is attached hereto as Schedule A.

2. **Issues with Staff Report**

2.1 Findings of Fact

Page 2 under "findings of fact", fourth paragraph states that Ecowaste has advised staff that Mathers could continue to operate on its current site for potentially another five years. This is misleading and does not reveal important terms of the lease offered up to Mathers by Ecowaste. The current lease runs until December 31, 2018. Ecowaste has offered a new lease ending on December 31, 2020, a term of two years. There is a renewal clause extending the

lease until December 31, 2021 and a second renewal clause extending the term to December 31, 2022. Both renewal clauses carry a provision for cancellation of the offer by written notice by either party 60 days prior to the expiry date of the current lease.

While in aggregate, the potential term of a lease extends out for five years, the only secure term is for a termination date of December 31, 2020, a bit more than two years from today. Ecowaste is actively developing its property, including the site occupied by Mathers, and has provided flexibility in the draft lease to not grant the renewals if it chooses.

Mathers sand storage operation requires significant off site infrastructure which would require considerable time to secure right of way and construct piping to the river and could not be accomplished in a short time period. This is why Mathers started searching for a new site five years ago, a process which did not reveal a suitable site to this date except the Subject Property of this application.

2.2 Environmentally Sensitive Area Designation (ESA)

On Page 5 the staff report outlines the ESA designation on the area proposed for the sand storage facility. At the request of staff, we commissioned an environmental review of the site and surrounding lands by Applied Ecological Solutions Inc. We also commissioned an Arborist report by Arbortech Consulting. The staff report generally ignores the findings of these reports and maintains that the site has very high ecological value. Of particular concern is the refusal by staff to recognize the high risk which the stand of European Birch, an invasive species listed in the BC Weed Control Act, poses to the native birch trees in Richmond. This stand is severely infected with the bronze birch borer (*Agrilus anxius*) which is a serious threat to native Birch trees.

While the area is designated as an ESA, it is in the ALR and our understanding is that trees can be removed in anticipation of agricultural development. The owners intend to improve the western portion of the site for intensive crop production whether or not the site is approved for the sand storage facility and the trees will be removed in any event.

2.3 Richmond Agricultural Advisory Committee (AAC)

On Page 6, the report makes brief reference to the AAC which supported the application in a meeting held on July 14, 2016. The benefits provided by Mathers to local farmers through assess to clean, reasonably priced, salt free sand for top dressing cranberry fields and turf farms was discussed. The texture of the sand dredged and deposited on Mathers site is ideal for topdressing.

2.4 Staff Comments: Potential Alternative Sites for a Sand Storage Facility

On Page 6 and following, the staff report discusses alternative sites which are zoned for Industrial or Industrial Storage in the OCP. Reference is made to "Attachment 6" a map of Richmond showing lands with these zoning designations. There is no discussion of the land use status of these lands, their availability for the proposed use or their suitability for the specialized use of dredge sand storage. It was made clear to staff on many occasions that the specific site conditions required to establish a dredge sand facility were very strict. It would have to be close to the Fraser River, have access to the River for inlet and outfall piping, be at a location along the river where sand accumulates and needs dredging on a regular basis, be vacant and have a reasonable price or rental rate commensurate with this low value storage use.

I have taken the Attachment 6 map and enlarged it to fit an air photo overlay obtained from the City of Richmond map website for 2016 to assess the current land use of the lands identified by blue color as suitable lands by staff. Each site is enclosed in red and given a number corresponding to enlarged air photo sheets of each site which enables detailed assessment of each site. These maps and air photos are attached as Schedule B. The identified sites are discussed below:

2.4.1 **Site 1: South Foot of No. 2 Road**

This site is on the main arm of the Fraser River at the south foot of No. 2 Road. This site is located in a narrow channel north of Steveston Island. The site is entirely in current use with a marina and mixed industrial buildings. There does not appear to be any land not in current use.

2.4.2 **Site 2: South Foot of Garden City Road**

This site is covered in its entirety by a large industrial - warehouse facility.

2.4.3 **Site 3: South Foot of Shell & No. 5 Roads**

This triangular shaped area has two large buildings and two City owned parks. There is no opportunity for locating a sand storage facility on these lands.

2.4.4 **Site 4: South foot of No. 5 Road and Highway 99**

This site has complex land use and ownership. B.C. Ferries owns and operates a ferry ship facility, Mainland Sand and Gravel has a waterlot for barge loading and unloading of aggregates; the city owns a parcel north of Rice Mills Road; and Mathers owns a parcel at

11700 No, 5 Road. None of these sites are suitable for the intended use because of existing ownership, or other constraints including lack of access to the River.

2.4.5 **Site 5: South Foot of No. 6 Road**

This site is used for offloading and storage of new cars from ships berthing at a dock on the main arm. It is unrealistic to expect that the owner would give up this valuable space for Mathers operation.

2.4.6 **Site 6: 14940 & 14960 Triangle Road**

These city owned properties are directly south of the Subject Property owned by Sandstor Farms. The city at the last minute made an offer to Mathers to lease these lands. This issue will be discussed later.

2.4.7 **Site 7: Ecowaste Lands**

Mathers currently operates along the west side of this large property which is currently being developed for industrial warehouse use. There is no future opportunity for Mathers to occupy any of this site.

2.4.8 **Site 8: Harbors Board lands**

The Harbors Board lands are being developed for industrial use and most of the site is currently occupied by these uses or in the development stage. The Mathers operation would be incompatible with these uses similar to the case on the neighboring Ecowaste site.

2.4.9 **Site 9: NE corner of Richmond Fronting on North Arm of Fraser River**

This site is located on the North Arm of the Fraser River. I have been advised by Mathers that the North Arm has low velocity flows which do not carry large sediment loads during the freshet and therefore this channel does not require frequent dredging to maintain river traffic. Also, the local traffic is generally low draft tug and barge rather than deep sea freighters which use the Main Arm. Also, the quality of the sand dredged from the North Arm is very silty and unsuitable for most preload uses and is totally unsuitable for agricultural use. This constraint applies to all remaining sites identified along the North Arm. In addition, the site is fully occupied by industrial buildings and what appears to be a driving range.

2.4.10 **Site 10: North Arm between Knight Street bridge and No. 7 Road**

This site has the same physical constraints as noted in #9 above. In addition, the site is completely occupied by existing industrial uses and buildings.

2.4.11 **Site 11: Mitchell Island**

Mitchell Island is completely occupied by existing heavy and light industrial uses.

2.4.12 **Site 12: West of Knight Street Bridge to Shell Road**

This site is completely occupied by existing commercial and industrial uses.

2.4.13 **Site 13: South Terminus of Oak Street Bridge**

This site is completely occupied by high density commercial and industrial uses.

2.4.14 **Site 14: West of Arthur Laing Bridge**

This small peninsula is only accessible from Vancouver and is a marina and boat storage facility.

2.4.15 **Site 15: North of Westminster Hwy Between McCallan and Lynas Lane**

This site on the North Arm is completely occupied by commercial - industrial uses.

2.5 **Summary of Possible Sites Identified by Staff Report**

The detailed analysis of the Attachment 6 map provided by Richmond as potential sites for relocation of the Mathers sand storage facility has shown that there are no suitable sites within the City of Richmond currently zoned for industrial use or out of the ALR which could be purchased or leased by Mathers for its facility. This was demonstrated by Mathers to be the case during its previous five year search for potential sites carried out by a professional commercial real estate person and discussions with Richmond Staff. The staff report suggests that there are many alternatives to the Subject Property where Mathers could relocate but this is incorrect.

The severe constraints imposed by the requirements for a sand storage facility forced Mathers to consider the Subject Property, not out of choice, but out of necessity.

2.6 **City of Richmond Staff Offer of Land on Triangle Road**

In an email from Kirk Taylor Senior Manager, Real Estate for the City of Richmond to

Mathers, he makes an offer to lease 11.7 acres of city owned lands on Triangle Road for the sand storage facility. Included in one version of the offer was an agreement by Mathers to sell its land on No. 5 Road to the City. The offers were considered by Mathers and rejected because first, the lease terms were three times the rate currently paid to Ecowaste and Mathers was not prepared to consider sale of its No. 5 Road property. Mathers had, early on in its search for an alternative site, approached the City about the Triangle Road site but was rebuffed. Only at the eleventh hour prior to the application going before Planning Committee did the offer of the Triangle Road property arise. Mathers was not pleased with this turn of events which made it look like they were unwilling to consider this alternative without good reason, which was not the case. The offer was rejected based on sound financial analysis which determined that the lease rate was commensurate with the very high price paid by the City for the land, not a reasonable and traditional lease rate based on the intended use. Clearly the lease rate offered was consistent with a much higher value commercial or industrial use than sand storage.

Inclusion of the No. 5 Road Mathers property in the lease proposal was disturbing to Mathers because the application was made on the Subject Property alone and should not have involved other property owned by them. The discussion at Planning Committee by staff placed strong emphasis on the Triangle Road and No. 5 Road offer and the Attachment 6 map showing purported alternative sites without an adequate opportunity for Mathers to explain the circumstances. This caused a lot of confusion among the Councillors to the detriment of Mathers application.

In conclusion, Mathers has expended considerable effort over the last five years to find another suitable site for its operation which is out of the ALR and is or could be properly zoned. This search was unsuccessful and has resulted in the purchase of the Subject Property with a commitment to improve and intensively farm the western portion of the site. The proposed sand storage site is adjacent to major industrial development out of the ALR which will reduce the potential for impact on agriculture.

Yours very truly,

C & F Land Resource Consultants Ltd.

per:

Brian M. French, P.Ag.

Shaw Webmail SCHEDULE "A" **atwall@shaw.ca**

Sanstor Non-Farm Use Application - June 20th Planning Committee

From : Hopkins,John <JHopkins@richmond.ca> Thu, Jun 01, 2017 01:01 PM
Subject : Sanstor Non-Farm Use Application - June 20th Planning Committee
To : 'Mathers Bulldozing' <mathersbulldozing@gmail.com>
Cc : 'Kabel Atwall' <atwall@shaw.ca>, cflrc <cflrc@shaw.ca>

Hi all,

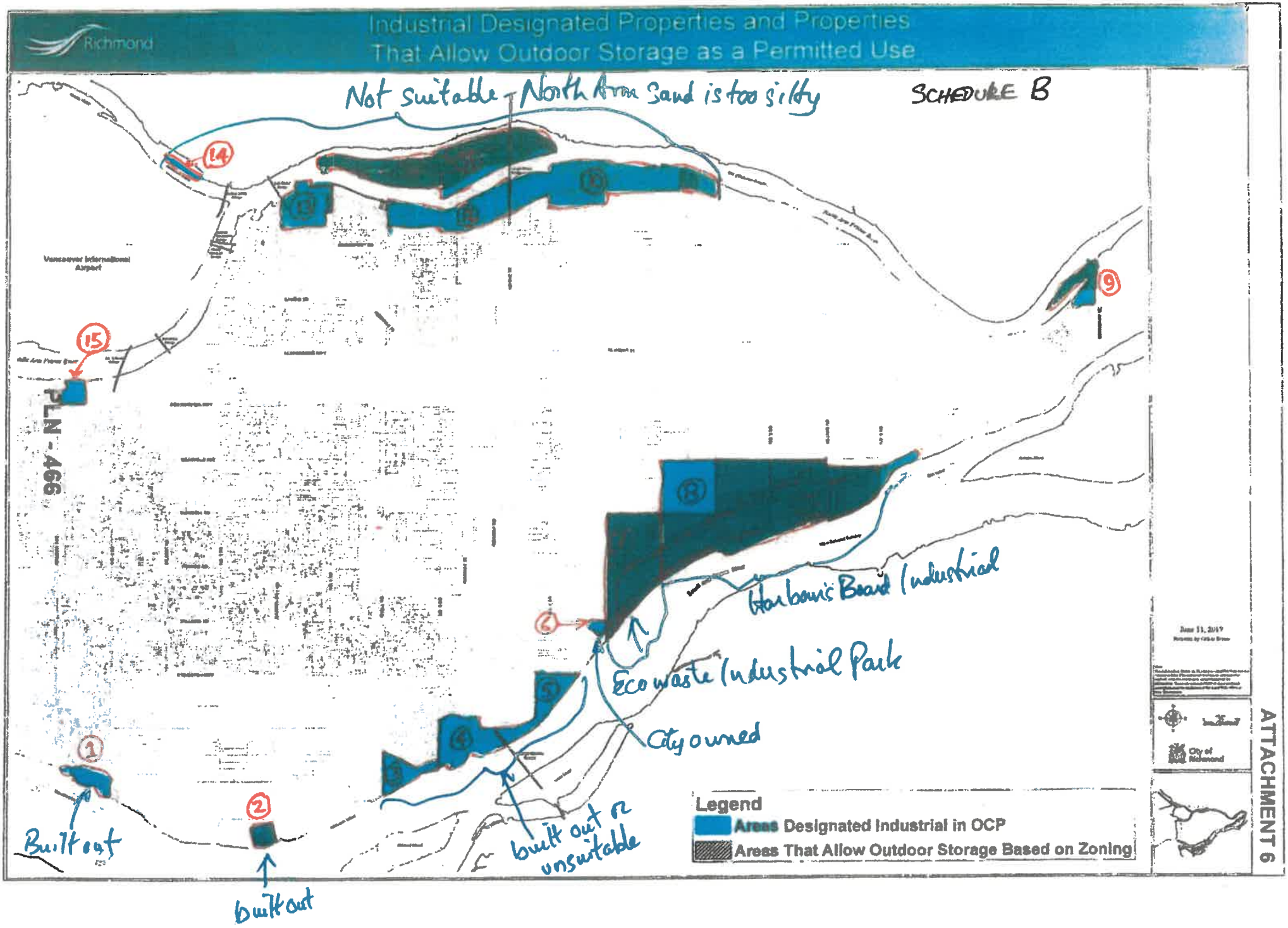
The Sanstor Farms non-farm use application report has been moved from the June 6th Planning Committee meeting to the June 20th Planning Committee meeting. Part of the reason for this is agenda management as there are a number of reports going to both the June 6th and June 20th Planning Committee agendas. The other reason is that there is some additional information required for the report as requested by senior staff.

Your non-farm use application report will be presented as an options report to Planning Committee outlining the rationale to deny the application, and the rationale to support the application. This is a very unique type of report to prepare as all sides of the proposal have to be fully analyzed. If the application is denied at any point along the way, our report will also include a map of industrially zoned parcels that would allow outdoor storage use. We will also be meeting with our Real Estate Manager to further review City-owned lands that may have potential for a sand storage facility.

With the report going to the June 20th Planning Committee meeting agenda, it would then be presented to the June 26th Council meeting. I don't expect those dates to change. If you have any questions on this please let me know.

John

John Hopkins, MCIP, RPP
Senior Planner, Policy Planning Department,
Planning & Development Division
City of Richmond
Tel: 604.276.4279
Fax: 604.276.4052
Email: jhopkins@richmond.ca


Richmond
Industrial Designated Properties and Properties
That Allow Outdoor Storage as a Permitted Use
Not suitable - North Arm Sand is too silty
SCHEDULE B
Vancouver International Airport
PLN - 466
Harbour's Board Industrial
Eco waste Industrial Park
City owned
built out or unsuitable
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Areas Designated Industrial in OCP
Areas That Allow Outdoor Storage Based on Zoning
ATTACHMENT 6

SCHEDULE B.

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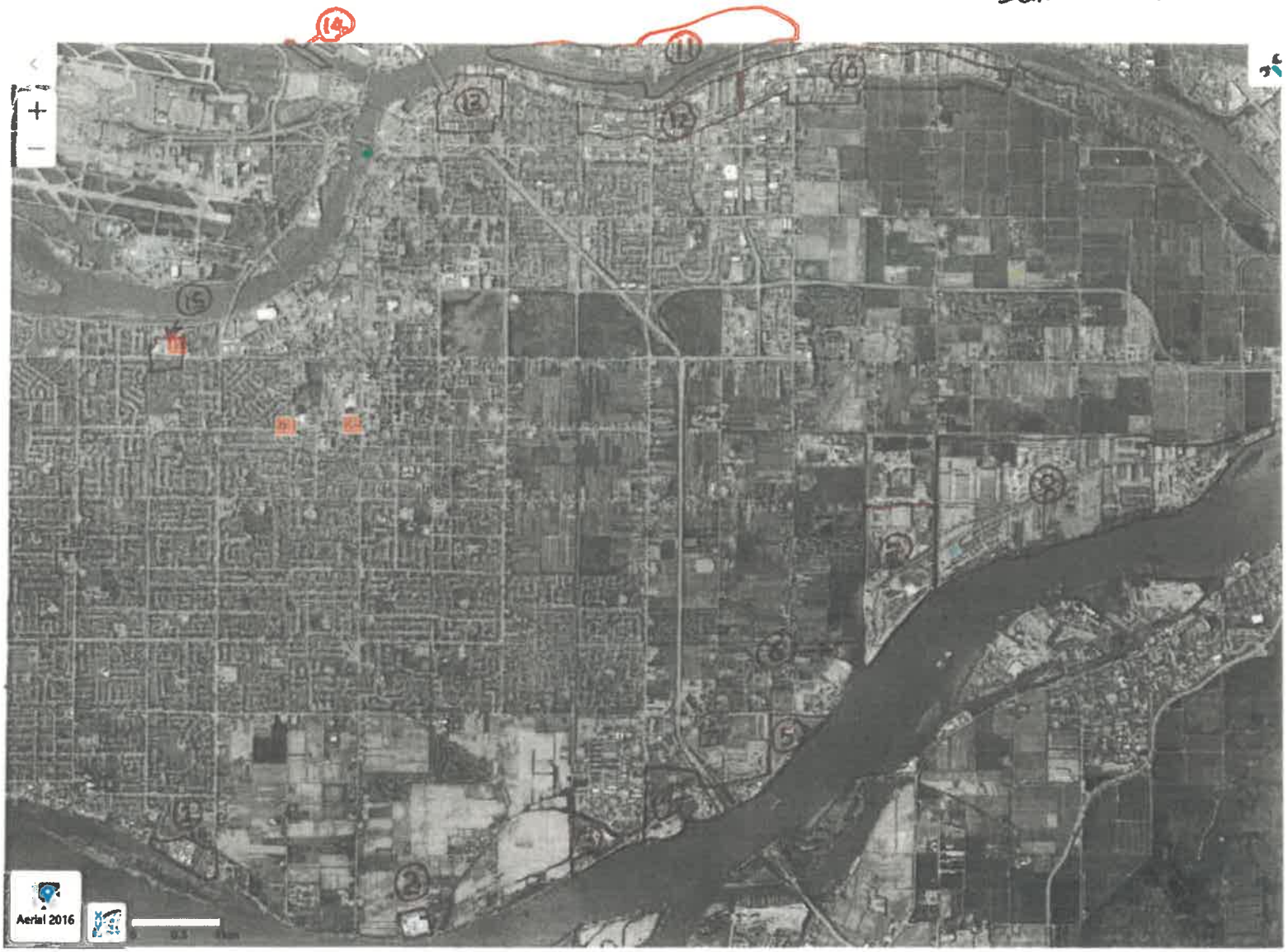

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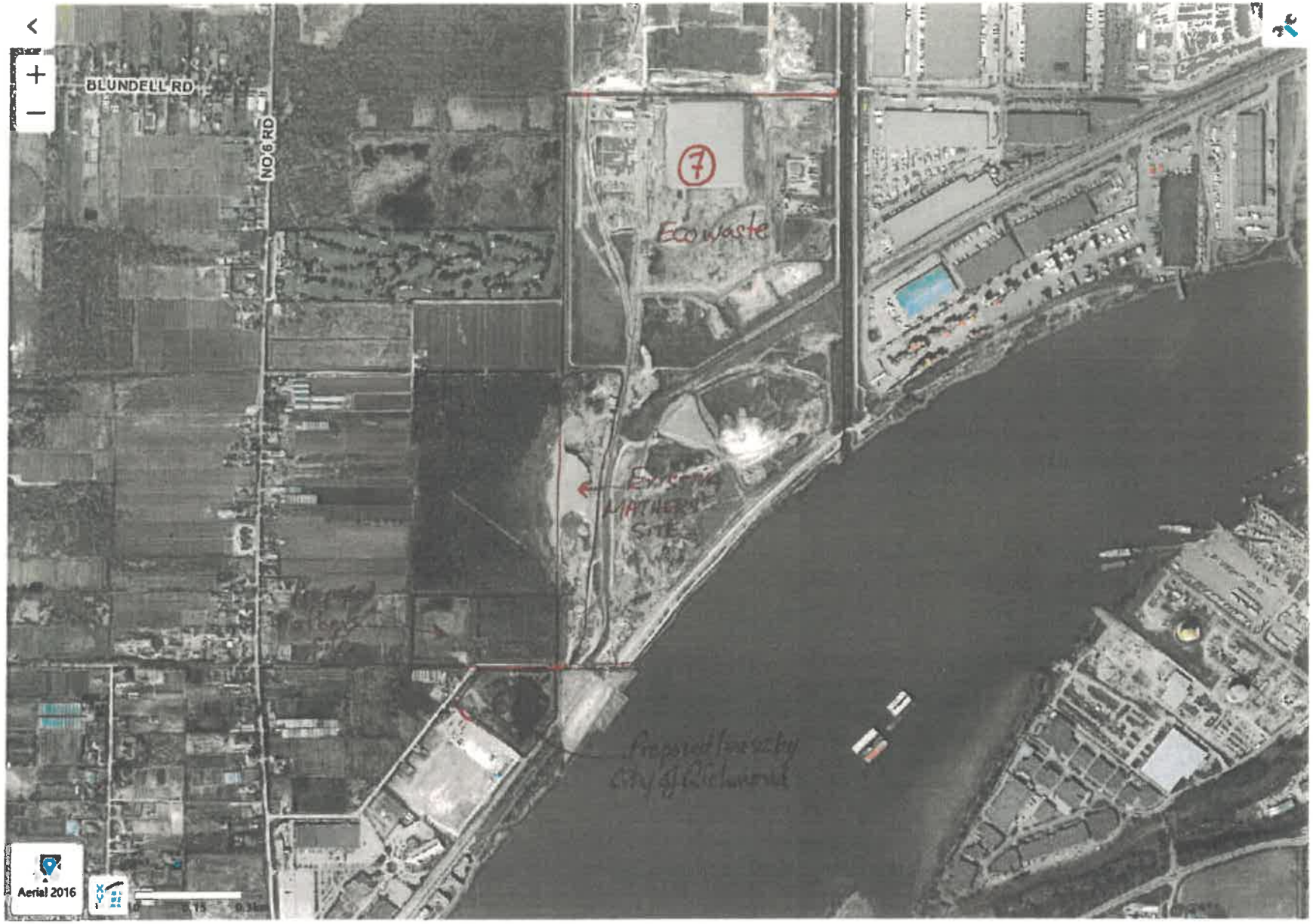

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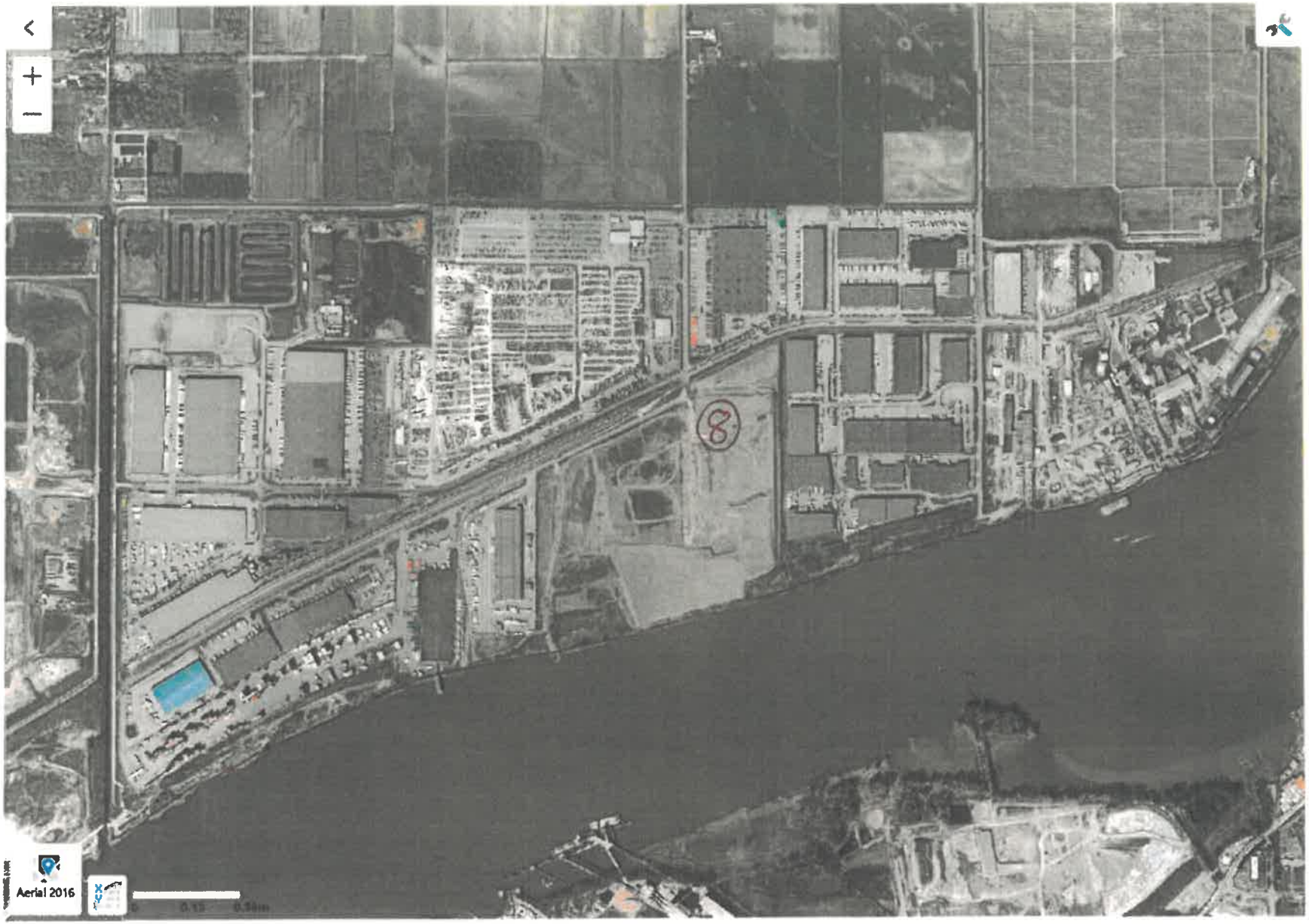

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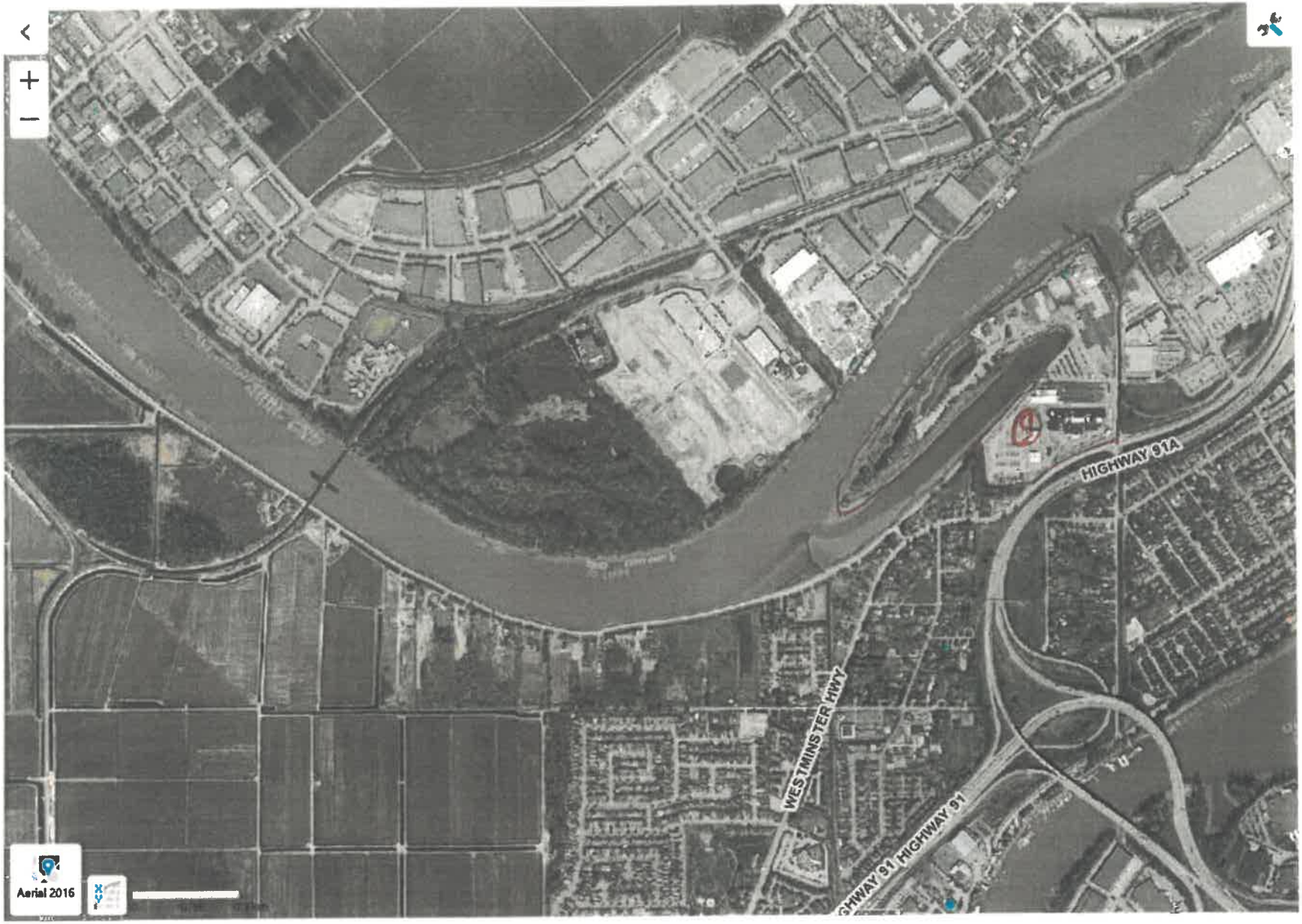

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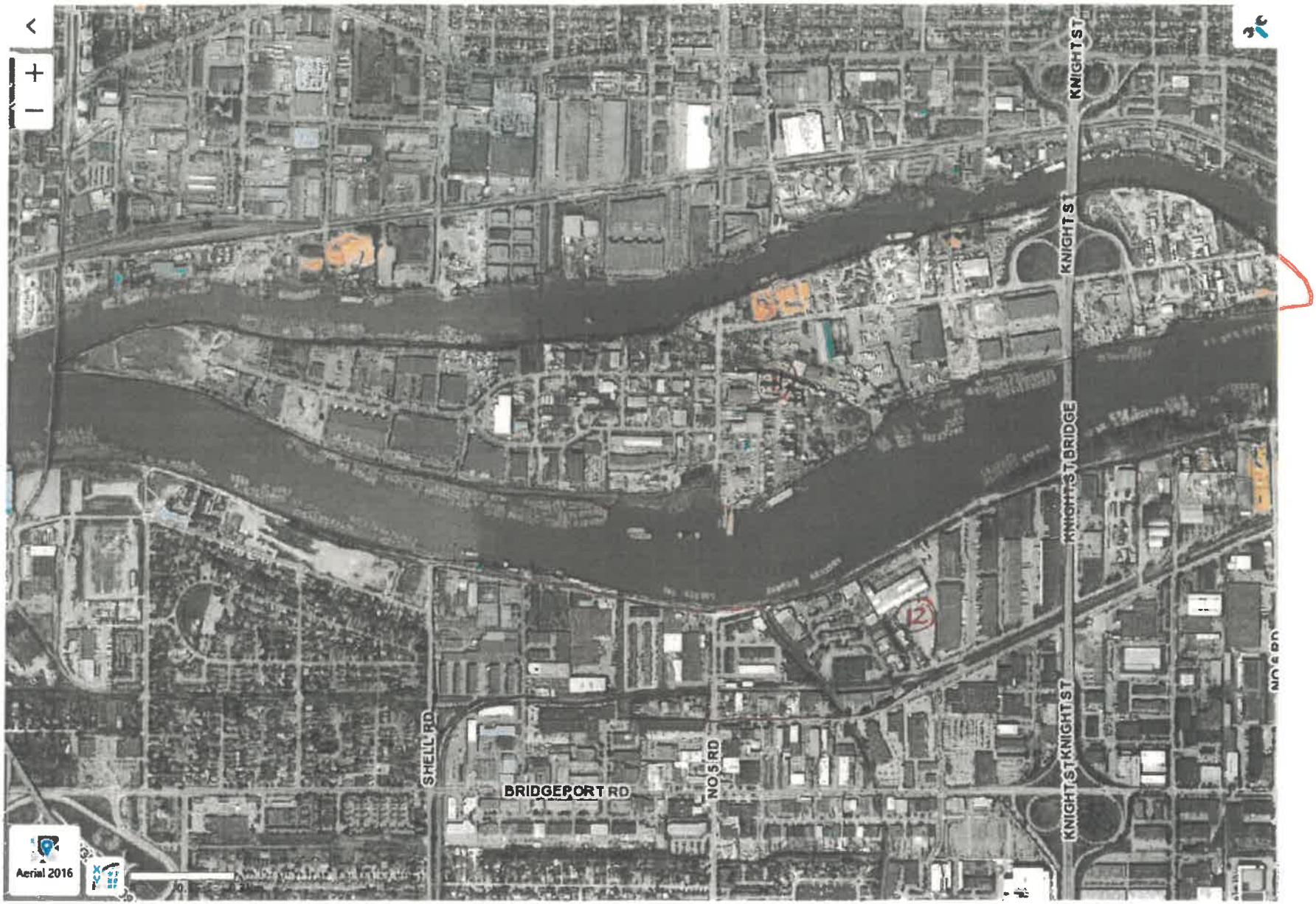

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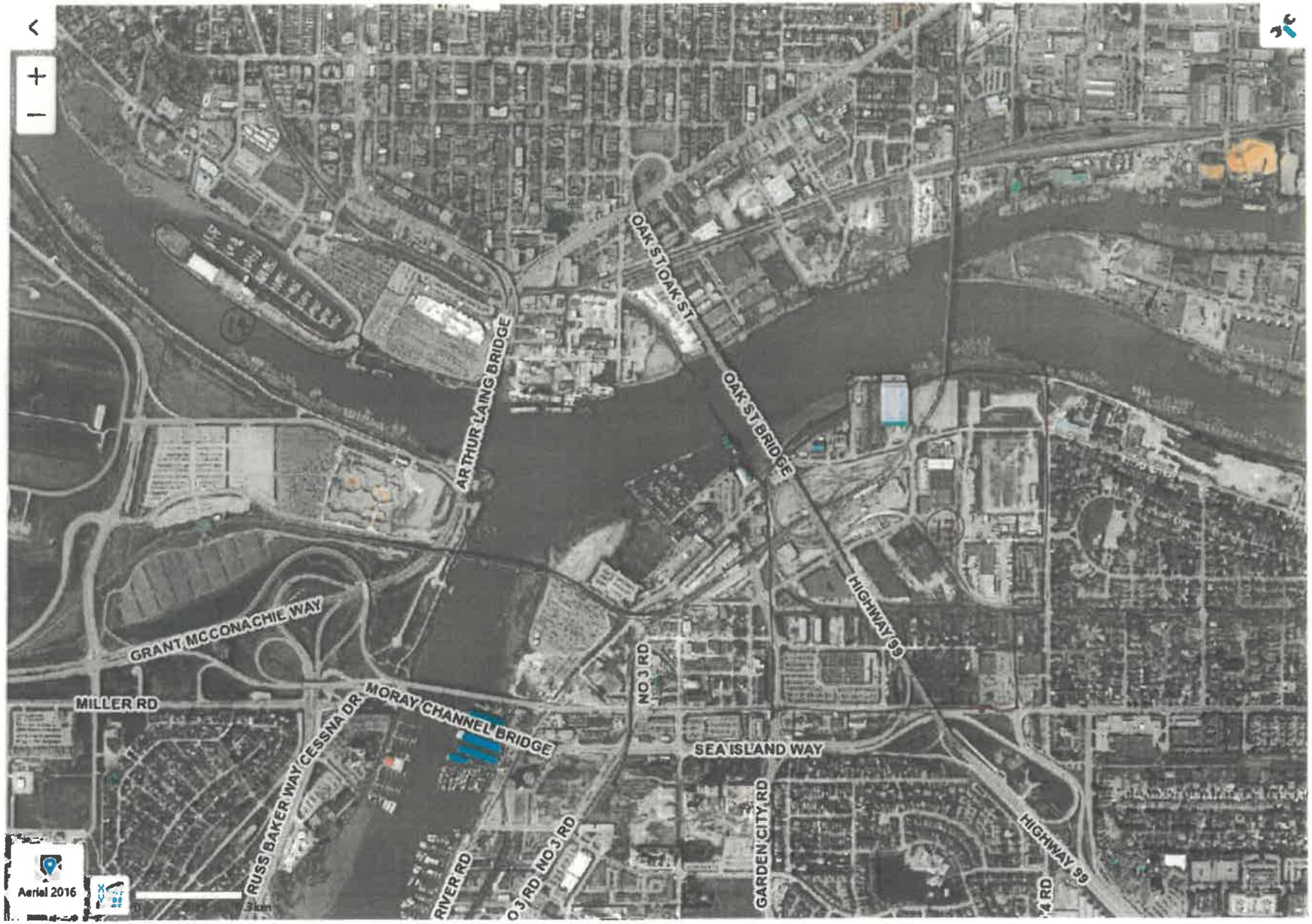

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APPENDIX J

Letter from Tom Corsie, Vancouver Fraser Port Authority

(1579)

PORT of vancouver

Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place
Vancouver, B.C. Canada V6C 3T4
portvancouver.com

Email: mathersbulldozing@gmail.com

April 26, 2019

Mr. Bruce Mathers
E. Mathers Bulldozing Co. Ltd.
7200 Francis Road
Richmond, BC V6Y 1A2

Dear Mr. Mathers:

RE: Letter of Support

I am writing to express support for the application to the Agricultural Land Commission (ALC) by Mathers Bulldozing Co. Ltd. to use a 15 acre property that it owns on Williams Road in Richmond for sand storage. The Vancouver Fraser Port Authority has a long term contract to perform annual maintenance dredging of the Fraser River main navigation shipping channel. Each year many hundreds of thousands of cubic meters of sand is removed in order to ensure safe navigation for mariners using the south arm of Fraser River which also provides positive effects to regional flood control.

The cost of dredging the Fraser River is significant and a portion of cost recovery is obtained through the sale of river sand at various sand sales or sand depots operated by companies that either offer sand and gravel sales, or other site preparation services. One of the more strategic locations for sand sales is the Williams Road area where Mathers has operated for many decades. As their lease with Eco Waste will likely end in the short to medium term, it is important to find a replacement site in the immediate area.

We agree the Mathers Williams Road property, although classed as ALR land is ideal for this purpose. We understand Mathers is not requesting removal from ALR designation, but is proposing to fill and preload that portion of the site not suitable for agriculture. We also understand appropriate mitigation for the indefinite sand storage use would be provided to that portion of the site which will continue to be farmed. As a portion of the site is unable to support agriculture in its current form, the filling and preloading of that area would also not preclude an agricultural use in the future.

Sincerely,

Tom Corsie PPM
Vice President, Real Estate

Canada