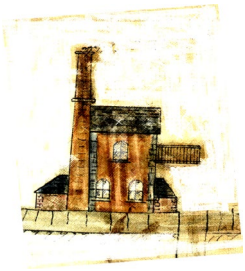
ANITA DAVEY CONSULTING SERVICES LTD.



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March 8, 2023

Comoxvalleyrd Agricultural Assessment Report 2023-03-08

Comox Valley Regional District
770 Harmston Avenue,
Courtenay, BC V9N 0G8

Attention: Mr. Mark Hart

Re: Land Agricultural Capability Assessment
1893 Spike Road, Courtenay

Dear Sir;

Introduction

This letter provides a professional opinion of the capacity of the 2.0 Hectares of agricultural land at 1893 Spike Road, Courtenay, British Columbia, for the purpose of determining agricultural capability in the Comox Valley Regional District.

The Regional District has retained Anita Davey Consulting Services to assess the feasibility of pursuing agricultural endeavours only on the portion of the property not considered wetland.

This work was carried out in accordance with Agricultural Land Commission's Guidelines for classifying agricultural capabilities[1], the Ministry of Environment's Land Capability Classification for Agriculture in BC[2] and BC Department of Agriculture's Methodology for Land Capability for Agriculture[3].

[1] https://www.alc.gov.bc.ca/
[2]https://www.alc.gov.bc.ca/assets/alc/assets/library/agricultural-capability/land_capability_classification_for_agriculture_in_bc_1983.pdf
[3]https://www.alc.gov.bc.ca/assets/alc/assets/library/agricultural-capability/methodology_land_capability_for_agriculture_bcli_1973.pdf

Background

The property was purchased by the Regional District from a private owner. The previous owner had attempted some agricultural pursuits in the recent past, and previous owners had utilized the non-wetland land to support livestock in various forms, but most notably equines and equestrian activities. This report is to assess the capability only of the land not considered wetland regarding suitability for agricultural purposes. The wetland portion of this property has not been assessed and will not form any part of this report.

Site Visit

Anita Davey, P.Ag. visited the site on March 1, 2023 to assess only the site and soil conditions of the area of the property not considered wetland.

Location

The legal address of the property is The East 1/2 of the South West 1/4 of Section 19, Township 6, Comox Land District, Plan 552E, Except That Part in Plan 205 RW. The PID is 008-992-789. The property is in Electoral Area C of the Comox Valley Regional District.

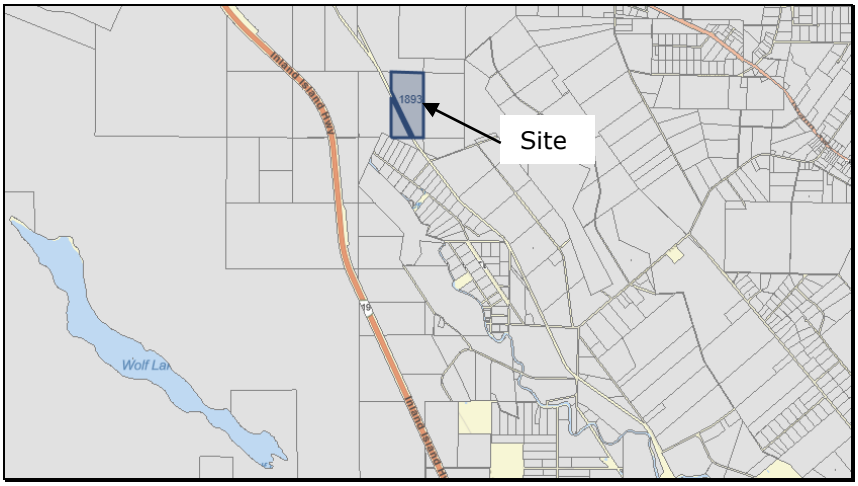

Figure 1: Site Location relative to the Comox Valley Regional District on the Eastern side of Vancouver Island. North is to the top of this page. Do not scale.

Topography

The lot is an upland plateau gently sloping down from Southwest to Northeast, mostly level from North to South, and is a total of 29.88 Hectares in size, made up mostly of wetland, with approximately 2.0 Hectares of land as the area of study available for agricultural purposes. The lot is bounded on

all sides by adjacent rural residential and agricultural properties. Access to the property is along a common track used historically as a railroad grade. The overall lot slope is approximately 0.5% from Southwest to Northeast. There are no visible outcrops of bedrock on the property. There are no significant geomorphological features on the property.

Vegetation

The subject property is located within the Coastal Western Hemlock vegetation zone of Eastern Vancouver Island. The predominant vegetation of the 2.0 Ha study area is a combination of mature evergreen trees, cleared grassed and fallow areas to provide livestock foraging or proposed cropland. A significant wetland area surrounds the forest and cleared areas, encompassing the remainder of the property's land surface. Remains of trees within the wetland area indicates growth of the wetland in the past, but no indications are present that this wetland is increasing currently.

Drainage

The main drainage feature is the large wetland which covers a significant portion of the property and extends beyond the property boundaries. Approximately 85% of this property is covered by the wetland drainage feature. A small, unnamed watercourse drains across the Southeast corner of the subject property into the wetland. No natural drainage features were observed on the 2.0Ha study area, although a small machine-created depression in the approximate middle of the study area was observed capturing and collecting seasonal precipitation and sub-surface water run-off.

Geology and Soils

Reference to published geology maps indicates that the site is underlain by undifferentiated sedimentary rocks of the Nanaimo Group, which formed in the Late Cretaceous Period of Geological Time. Quaternary sediments were mapped as offshore glaciomarine sediments. No rock outcrops were observed in the field, however.

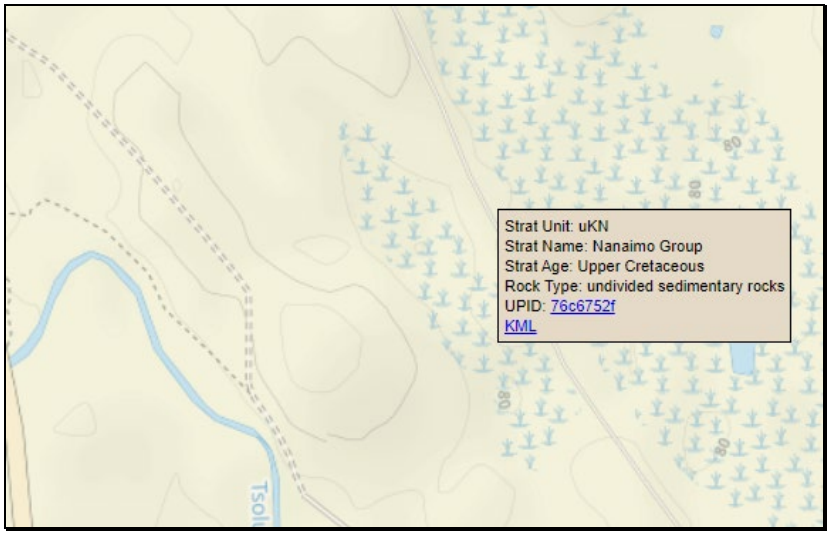

Figure 2: Bedrock Geology of subject property (from Map Place). North is towards the top of the page. Do not scale.

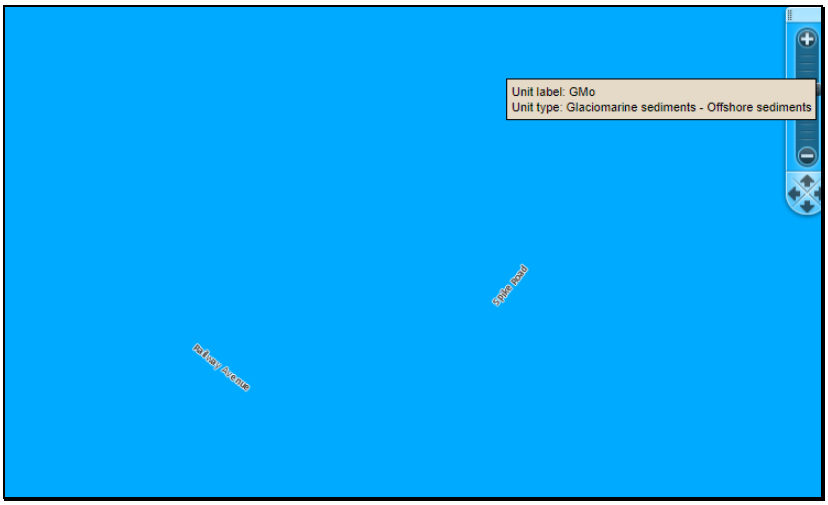

Figure 3: Quaternary Geology of subject property (from Map Place). North is towards the top of the page. Do not scale.

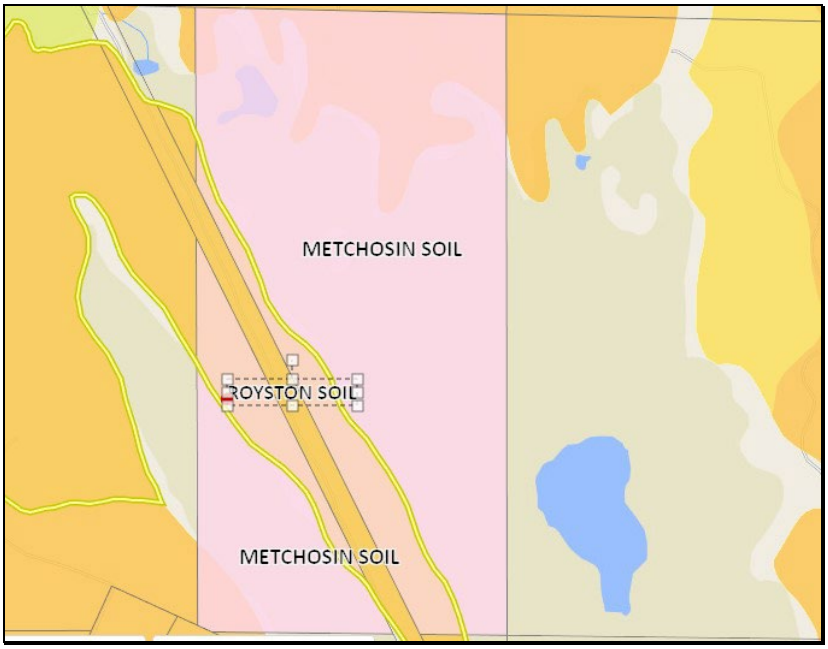

Figure 4: Soil Classification of subject property (from iMapBC). North is towards the top of the page. Do not scale.

Four test pits were excavated around the remaining 2.0Ha non-wetland area, which exposed moist, loose sand with silt and some cobbles to boulders to a depth of 0.85 to 0.9m below the ground surface, where the test pits were terminated at the restrictive layer of glacial till. The soil description determined by hand texturing in situ is cobbley loam. No ground water was observed infiltrating into the test pits, although lower layers of the soil in the test pits were observed to be wet to saturated. Reference to published soil maps indicates the soil is classified as Royston soil. Royston soils are found in "morainal deposits" overlying "less resistant sedimentary bedrock formations"[4] and are found in "gently to steeply sloping"[5] topographies. No humus, or organic material, layer was noted during the site visit. In-situ observation and hand texturing confirms this soil type is Royston soil as opposed to Metchosin soil which is also indicated on the soil map as occurring on the property. Metchosin soil is very different in colour, texture and drainage capacity, and therefore does not match the soil indicated in the visible soil pits.

[4, 5] http://www.env.gov.bc.ca/esd/distdata/ecosystems/Soils_Reports/bc57_report.pdf

Figure 5: View of a soil test pit on the subject property taken March 1, 2023.

Proposed Development

The proposed development is to create an appropriate agricultural plan to utilise the available approximately 2.0Ha of land on the property not occupied by the wetland.

Discussion and Recommendations

The Agricultural Land Commission ranks the lands incorporated into the ALR based on 2 conditions:

- Climate
- Soil type and conditions

Soil conditions are further characterized into 12 subclasses:

- Soil moisture deficiency (drought tolerance)
- Adverse climate
- Undesirable soil structure and/or low perviousness
- Erosion
- Fertility
- Inundation (flooding probability)
- Salinity
- Stoniness (soil particles larger than 2.5cm in diameter)
- Depth to solid bedrock
- Topography
- Excess water (seasonal high water table)
- Permafrost

The ALC has 7 capability classifications, with Class 1 having few to no impediments to agricultural yields with no improvements required, and Class 7 having no soil-bound agricultural capability even with extensive improvements.[6] Improvements are tasks such as drainage, irrigation, organic material additions or tree removal.

Specific conditions to the 2.0Ha of area on this property not occupied by the wetland may be assessed as:

- Climate Zone: Coastal Western Hemlock biogeoclimatic zone, very dry subzone
- Royston soil type, moist to saturated conditions at time of study, with the following subclasses:
    - Moisture deficiency:
        - Average water holding capacity
        - Adequate drainage capability
        - Adequate depth of soil
        - Good potential for a variety of crops, with improvements
    - Adverse Climate: moderate impact with summer heat and winter cold becoming more relevant
    - Perviousness: slow
    - Erosion: no evidence or past erosion, but susceptible to future erosion during flooding (waterborne) or drought (windborne) conditions
    - Fertility: moderate with no improvements to good with improvements
    - Inundation: seasonally, moderate to high potential for brief to extended inundation due to rising level of water in adjacent wetland
    - Salinity: not assessed
    - Stoniness: slight hindrance to cultivation in the upper 25 to 30cm of soil. Significant hindrance in lower layers of soil, but should be mitigated with judicious shallow tilling or ploughing.
    - Depth to solid bedrock: minor limitation as bedrock is greater than 75 centimetres from surface and bedrock outcrops are greater than 75 metres apart.
    - Topography: no limitation as simple slopes are less than 5% in all aspects of property and no complex slopes are present.
    - Excess water: minor limitation as water level is rarely, if ever, within the upper 50 centimetres of the soil and only for short periods of time during the year. Summer drought may be the constraint

[6]https://www.alc.gov.bc.ca/assets/alc/assets/library/agricultural-capability/land_capability_classification_for_agriculture_in_bc_1983.pdf

- Permafrost; no limitations as permafrost does not occur within 150 centimetres of the soil surface and does not interfere with crop production.

With the limiting conditions listed above, the land capability assessment of the terrain not occupied by the wetland could be considered a Class 5 or a Class 6 without improvements to the soil, or potentially, and with improvements to the soil, upgraded to Class 3 or Class 4 and capable of supporting a wide variety of crops such as root vegetables, berries, fruit trees, or a combination of any of these.

Improvements to this soil could be tasks such as cobble and boulder removal and creation of a humus (organic material) layer prior to expectations of high production or crop yields. Also for consideration could be drainage, collection and storage of winter high water conditions for summer irrigation during drought periods.

Alternatively, non-soil bound agriculture (i.e. livestock, poultry, greenhouses, or mushroom growing) may also be considered.

Closure

The property is a combination of wetland and upland soil.

Based on the results presented herein, the soil available in the 2.0Ha upland section of the property is adequate for soil-bound and non-soil bound agricultural purposes without any improvements, or useful for soil-bound agriculture if improved. A wide range of crops suited for the climate and available soil may be considered, but specific varieties or species are beyond the scope of this report.

We trust that this meets your present requirements. Should you have any questions, please do not hesitate to contact the undersigned at your earliest convenience.

Yours truly,

Anita Davey

Anita Davey, B.Sc., P.Ag.