

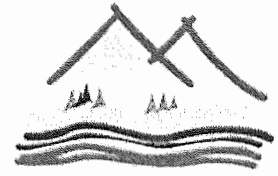
MayorandCouncillors

From: Darrell Zbeetnoff <zbeetnoffdarrell16@gmail.com>
Sent: Monday, 18 June 2018 10:31
To: MayorandCouncillors
Subject: Submission Re: Proposed bylaw to ban concrete in Large Agricultural Buildings and Commercial Greenhouses
Attachments: Agrologist Opinion Jun 18 2018.pdf

Dear Mayor and Council,
The attached document is a professional agroloist opinion on your proposed bylaw. Please make available for the public hearing to be held Jun 18 2018.
Regards,
Darrell Zbeetnoff, Director

Zbeetnoff Agro-Environmental Inc.
15787 Buena Vista Avenue
White Rock, BC, Canada, V4B1Z9
PH: 604-535-7721
FAX: 604-535-4421
Cell: 604-612-8786
[www,zbeetnoffagro-environmental.com](http://www.zbeetnoffagro-environmental.com)





ZBEETNOFF
AGRO-ENVIRONMENTAL
INC.

15787 Buena Vista Avenue
White Rock, BC, V4B 1Z9

W: 604.535.7721
C: 604.612.8786
F: 604.535.4421

zbeetnoff@telus.net
www.zbeetnoffagro-environmental.com

June 18, 2018

To: Richmond Mayor and Council

Topic: Cannabis Bylaw Framework and Regulation of Agricultural Structures

My name is Darrell Michael Zbeetnoff. I am a Professional Agrologist, Certified Agricultural Consultant and Registered Environmental Farm Planner. My company, Zbeetnoff Agro-Environmental Inc., has provided consulting services to stakeholders in BC agriculture since 1988. I have provided extensive services to the most agricultural sectors in environmental farm planning, business planning, marketing, energy options and issues analysis.

The purpose of the attached opinion is to focus discussion on the potential impact on agriculture of Richmond's "Proposed Regulations for Agricultural buildings and Greenhouses" as explained in a Report to the Richmond's General Purposes Committee from Barry Konkin, Manager of Policy Planning and Carli Edwards, Manager of Community Bylaws and Licensing, entitled "Cannabis Bylaw Framework and Regulation of Agricultural Structures, April 18, 2018" (CBFR&RAS).

The objective of the City's CBF&RAS appears to be to strictly limit and/or prohibit cannabis retailing, production, research and development, and distribution in Richmond to counter the effects of:

1. The federal legalization of cannabis for medicinal and recreational purposes, which is anticipated to lead to increased threats to the safety of the community, interfere with community planning objectives, and lead to increased municipal costs related to equipment and staffing costs to implement City bylaws and regulations.
2. Provincial legalization of cannabis activity in the Agricultural Land Reserve (ALR), anticipated to lead to the conversion of food production greenhouses to cannabis production and construction of new greenhouse facilities purpose-built for cannabis production in Richmond's farming areas.

While there is provision in the cannabis legislation for municipalities to regulate the impacts of federal cannabis legalization, there is no similar provision for municipalities to regulate cannabis production on farmland in the ALR. As such, Richmond is proposing to introduce bylaws, one of which would restrict

the use of concrete in the construction of agricultural buildings, including greenhouses, with the intent of limiting cannabis production on the ALR in Richmond.

While Richmond cannot outright prohibit agricultural practices and activities permitted by the Provincial Acts and Regulations, the municipality can regulate and restrict agricultural activities that legitimately violate the intent of City bylaws to provide good government, community benefit, stewardship of the public assets of its community and foster the economic, social and environmental well-being of its community. In this instance, the application of at least two provincial laws is being challenged:

1. The Agricultural Commission Act and Regulation, specifically the permitted use of the ALR for the purposes of the production of marihuana for medical purposes, and
2. The Farm Practices (Right to Farm) Act, specifically the right to use normal farm practices to carry out farming operations.

Richmond proposes to limit construction methods of agricultural buildings, to protect high-quality soils for future soil-based agriculture, by:

- a) Prohibiting use of concrete slab floors and strip footing type construction to support an agricultural building or greenhouse
- b) Limiting farm building construction methods (not including greenhouses) to individual spread footing construction, not permitting concrete grade beams connecting concrete pad foundations
- c) Limiting interior agricultural building impermeable surfaces to no greater than 10% of gross ground level floor area (not including greenhouses)
- d) Exempting agricultural buildings less than 300m² (3,230 sq.ft.) in area, but not including greenhouses.

This opinion discusses why the arguments (Section 5 of Konkin/Edwards report) provided by Richmond to support the bylaw do not pass muster as a rationale for an attack on farming practices in general and agricultural operations with large buildings and greenhouses, in particular.

A. Richmond Claim (paraphrased):

Large agricultural buildings and commercial greenhouses negatively impact the soil -capability of land and limit the ability to undertake soil-based farming in the future by:

- a. **Removing and wasting existing soil and importing fill**
- b. **Loss of farmland at the end of the building lifespan**
- c. **Compaction of the underlying subsoil.**

Reality:

Land preparation, soil handling and site remediation associated with large agricultural buildings and commercial greenhouses are determined by municipal requirements related to existing soil, decommissioning and remediation. For example, see Delta requirements.

More Reasonable Approach:

Local governments can require large agricultural building developments and commercial greenhouses to conserve topsoil. Many greenhouses create berms with the topsoil along the perimeter of their properties, which can be spread back on the subsoil, if and when the large agricultural building and/or greenhouse is no longer used or required for its intended purpose.

Local governments can require that large agricultural and commercial greenhouse developments post bonds or other security to ensure that structures that have lost their functionality are dismantled and the land returned to natural state.

Agricultural soil remediation, including full relief from subsoil compaction is a widespread successful practice, used for dealing with agricultural impacts associated with construction and maintenance of pipelines. Local governments can require from agricultural developers that the land bases of decommissioned large agricultural buildings and greenhouses are restored to the pre-existing natural state, when decommissioning occurs. Protocols developed for soil handling, storage and remediation to restore soil quality and productivity are practical and effective.

B. Richmond Claim:

Native soil removal, in conjunction with construction of agricultural buildings with impermeable surfaces, can also have impacts on storm water drainage.

Reality:

Since Richmond is below sea level, all storm water is ultimately removed by pumping into the ocean. Impermeable surfaces do not change the amount of storm water requiring handling but, if not managed, have the potential to increase peaks and rapidity of storm water flow.

More Reasonable Approach:

Local governments can require large agricultural buildings and commercial greenhouses to detain storm water on site by means of detention ponds to relieve pressure on regional drainage systems in storm events. This strategy is used successfully in several neighbouring municipalities including Surrey and Delta.

C. Richmond Claim:

When building and foundation removal and remediation activities are completed, the soils are likely to be at a lower agricultural capability when compared to the previous undisturbed soils It is more likely that a site occupied by large agricultural buildings and greenhouses would not be used for soil-based agriculture in the future

Reality:

Extensive soils displacement and handling associated with highway and pipeline construction in BC indicates that soil productivity in the remediated state may, in fact, exceed the pre-existing state. Remediation practices are extremely sophisticated in North America generally and the

protocols developed for the Trans Mountain Expansion Pipeline are readily transferrable to Richmond soils.

More Reasonable Approach:

Local governments can require large agricultural buildings and commercial greenhouses to remediate soils under decommissioned large agricultural buildings and commercial greenhouses, based on protocols that have been demonstrated to be effective locally.

Other Comments:

With respect to the likelihood that remediated soils would not be used for soil-based agriculture in the future, this is conjectural and highly dependent on the economics associated with various cropping options in the future. Given that greenhouse productivity per square meter is over 25 times field-based agriculture, greenhouse production may be around for some time. In terms of climate change adaptation, greenhouse technology in energy efficiency and recycling is well-placed to deal with the vagaries and risks associated with precipitation and temperature variability, disease, and pests.

With respect to other large agricultural buildings, individual circumstances will determine if they may be repurposed for use in other agricultural enterprise. There are many examples of livestock barns converted into implement sheds for blueberry and vegetable operations. In any case, even field based agricultural operations need storage, crop handling and storage areas and repurposed buildings are often economical options.

D. Other Relevant Comments

It is important to highlight that farm operations construct agricultural buildings with more expensive concrete slabs and strip footings for various sound reasons, including:

- Exclusion of vermine (livestock)
- Elimination of weed pests (greenhouse)
- Better control of disease
- Stable foundation for glass greenhouses, particularly on peaty soils found in many areas of Richmond and the Lower Mainland
- Use of concrete as a medium for radiant heating and passive energy (heat storage)
- Sanitation respecting feed, animal and plant health
- Ease of movement in tending greenhouse crops, harvesting and handling of produce
- Ease of movement in handling manure, livestock feed,
- Recycling of water and nutrients (greenhouse)
- Protection of groundwater, soils and the environment in the storage and handling of woodwaste and petroleum, storage and mixing of pesticides and fertilizers, operation of boilers, and servicing and maintenance of farm equipment.

Prohibition of concrete slabs and strip footings in large agricultural buildings and greenhouses has the potential to create substantial additional operational costs in new structures. This

potential impact also needs to be considered in relation to Richmond's OCP which seeks to "ensure that the integrity of the ALR and its existing boundaries for both soil and non-soil bound agriculture (e.g., greenhouses) is maintained (Section 7.0: Agriculture and Food).

The usefulness of concrete in farming operations to protect the environment is recommended in the Environmental Farm Planning program. Concrete is one of the most inert structural substances (when dry), the easiest to recover from the environment during site reclamation, and for which there are existing recycling opportunities.

Sincerely,

A handwritten signature in black ink, appearing to read "Darrell M. Zbeetnoff". The signature is fluid and cursive, with a large initial "D" and "Z".

Darrell M. Zbeetnoff, P.Ag., CAC
Director, Zbeetnoff Agro-Environmental Inc.