

Report to Committee

To:

Planning Committee

Director, Development

Date:

September 22, 2016

From:

Wayne Craig

File:

RZ 14-667707

Re:

Application by Matthew Cheng Architect on behalf of the Arul Migu

Thurkadevi Hindu Society of BC for Rezoning of the Westerly 110m of

8100 No. 5 Road from Agricultural (AG1) to Assembly (ASY)

Staff Recommendation

That Richmond Zoning Bylaw 8500, Amendment Bylaw 9586, for the rezoning of the westerly 110 m of 8100 No. 5 Road from "Agricultural (AG1)" to "Assembly (ASY)", be introduced and given first reading.

Wayne Craig

Director, Development

(604-247-4625)

Att.

REPORT CONCURRENCE

CONCURRENCE OF GENERAL MANAGER

Staff Report

Origin

Matthew Cheng Architect has applied on behalf of the Arul Migu Thurkadevi Hindu Society of BC, to the City of Richmond to rezone the westerly 110 m (360.9 ft) of 8100 No. 5 Road from "Agricultural (AG1)" to "Assembly (ASY)" to permit development of a temple and related uses including a multi-functional hall. A non-farm use application was endorsed by Council on December 14, 2015 and forwarded to the Agricultural Land Commission. On May 24, 2016, the South Coast Regional Panel of the Agricultural Land Commission approved the proposal. A location map and an aerial photograph are included in Attachment 1.

Project Description

The subject site is 10.955 m² (2.7 acres) in area. The owners are proposing to use approximately 40% of the site for institutional uses and the remaining 60% of the site would be used for agriculture. The proposed institutional building will have 1,281.5 m² (13,794.5 ft²) of floor area. Most of the floor area will be on the main floor (1,128.9 m² [12,151.5 ft²]) which would include a worship hall and a multi-functional hall. Two dormitory units would occupy 152.6 m² (1.643 ft²) of floor area on the second floor above part of the multi-functional hall. The multifunctional hall will front No. 5 Road and will be used for community support services such as a gathering place for seniors, language, cultural and religious studies and a dining hall after religious services. The main entrance to the worship hall is proposed on the east side of the building, and onsite parking areas, including bicycle parking, are proposed in various locations around the building. A Development Application Data Sheet providing details of the development proposal is contained in Attachment 2. A site plan and building elevations are provided in Attachment 3.

Surrounding Development

To the North: The subject site abuts three properties to the north.

- 1. To the northwest is the Richmond Chinese Evangelical Free Church with associate parking area located at 8040 No. 5 Road, which is zoned "Assembly
- 2. The middle portion of the subject site abuts the rear portion of the site located at 12180 Blundell Road, which is zoned "Agriculture (AG1)". The site is also owned by Richmond Chinese Evangelical Free Church and is occupied by a single detached house. Currently, there are no farming activities occurring on the site.
- 3. To the northeast is the Fujian Evangelical Church located at 12200 Blundell Road, which is zoned "Assembly (ASY)".

To the South: A property owned by Thrangu Monastery Association at 8140 No. 5 Road containing a temple building on a split-zoned property with "Assembly (ASY)" on the westerly 110 m and "Agriculture (AG1)" on the remaining portion. Active farming is undertaken on the back portion of the site in the form of an orchard.

The BC Muslim Association at 12300 Blundell Road containing temple-related To the East: buildings and off-street parking. The entire site is zoned "Assembly (ASY)".

To the West: Across No. 5 Road, "Agricultural (AG1)" zoned properties.

Related Policies & Studies

2041 Official Community Plan (OCP)

The westerly 110 m of the subject site is designated "Community Institutional" in the 2041 OCP and "Agriculture, Institutional and Public" in the McLennan Sub-Area Plan, and the remaining portion is designated "Agriculture" in both plans. The proposal complies with the existing OCP and Sub-Area Plan land use designation (Attachment 4).

Agricultural Land Reserve (ALR) and No. 5 Road Backlands Policy

The subject property is entirely within the Agricultural Land Reserve (ALR). Removal of the parcel from the ALR is neither proposed nor required as it is consistent with the No. 5 Road Backlands Policy which was agreed upon by City Council and the Agricultural Land Commission (ALC) in 1990 and updated and incorporated into the City's 2041 OCP in 2016 (Attachment 5).

The Backlands Policy allows all land uses permitted in the "Assembly (ASY)" zoning district to locate on the westerly 110 m (361 ft.) of properties on No. 5 Road. All proposals for lands subject to the Backlands Policy are required to enter into various legal agreements as deemed necessary to ensure active farming of the 'backlands'. A statutory right-of-way is required to be registered on title for a future farm access road along the eastern edge of the property. The proposal is consistent with the requirements of the Backlands Policy.

Environmentally Sensitive Areas (ESA)

Approximately 62% of the site (6,782 m²) is designated as an Environmentally Sensitive Area (ESA) in the City's OCP. Most of this area is proposed to be for agricultural uses which would be exempted from an ESA Development Permit. However, a portion of the ESA is located on the portion of the site that is proposed to be zoned "Assembly (ASY)". Therefore, an ESA DP will be required as a condition of final adoption of the zoning amendment bylaw.

Flood Plain Designation and Protection Bylaw No. 8204

The proposed redevelopment must meet the requirements of the Richmond Flood Plain Designation and Protection Bylaw No. 8204. Registration of a flood indemnity covenant on Title is required prior to final adoption of the rezoning bylaw.

Consultation

Agricultural Advisory Committee (AAC)

The AAC reviewed and supported the non-farm and rezoning proposal at its meeting held on January 29, 2015 subject to conditions related to drainage concerns. Excerpts from the minutes can be found in Attachment 6. In response, an agricultural plan prepared by a professional agrologist was submitted, in addition to providing further drainage details. An addendum to the Agricultural Plan was submitted which addressed the specific AAC concerns on soil salvage and additional drainage details. Further details on the Agricultural Plan can be found in the Analysis section and in Attachment 7.

Public Consultation

A rezoning sign has been installed on the subject property. Staff have not received any comments from the public about the rezoning application in response to the placement of the rezoning sign on the property.

Should the Planning Committee endorse this application and Council grant first reading to the rezoning bylaw, the bylaw will be forwarded to a Public Hearing, where any area resident or interested party will have an opportunity to comment. Public notification for the Public Hearing will be provided as per the Local Government Act.

Analysis

Building Floor Area and Height

The proposed uses are permitted under the "Assembly (ASY)" zone. The proposed building area will be approximately 1,281.6 m² (13,794.5 ft²). The proposed Floor Area Ratio (FAR) is 0.117, which is significantly less than the maximum FAR of 0.5 under the "Assembly (ASY)" zone. The building will consist of two halls (a multi-functional hall and a worship hall) connected by a covered corridor, with a second storey element above a portion of the multi-functional hall where the two-dormitory units would be located. The floor area of the main floor would be 1,128.9 m² (12,151.5 ft²), and the second storey element would be 152.6 m² (1,643 ft²).

The top of the parapet of the dining hall would be 7.3 m (24 ft) high and the top of the parapet of the worship hall would be 9.7 m (31.85 ft) high. This is less than the maximum height of 12.0 m in the "Assembly (ASY)" zone.

Environmentally Sensitive Areas – Development Permit Requirement

Approximately 62% of the site (6,782 m²) is designated as an Environmentally Sensitive Area (ESA) and the proposed parking area would encroach onto the western portion of the ESA. Based on the Development Permit Area designation in the OCP, an ESA Development Permit will be required. Under the ESA Development Permit exemption criteria specified in the 2041 OCP, agricultural activities would not be subject to the ESA Development Permit requirements if the applicant provides information to demonstrate that the site will be farmed by legitimate farmers. Further review will be conducted at the Development Permit stage to determine the value of the ESA and appropriate compensation.

As part of the ESA Development Permit review, the applicant would be required to provide:

- confirmation by a registered professional of the existing vegetation and determine appropriate mitigation and compensation measures for impacts on the ESA area;
- detailed landscape plans; and
- details of the landscape buffer between the proposed non-farm use and farm use and secure a legal agreement to be registered on title that identifies that the on-site agricultural landscape buffer to be implemented.

Building Height - Variance Requested

Two roof-top sculpture elements above the worship hall are proposed. The roof-top sculpture are an important element for this congregation and represent South Indian architecture. The tallest of the two sculptures would be 16.2 m (53 ft) high whereas the other sculpture would be approximately 14 m (45.9 ft) high. This would require a Development Variance Permit (DVP) to vary the maximum height of a building or structures from 12.0 m (39.4 ft) to 16.2 m (53 ft). The roof-top sculptures would not contribute significantly to the overall massing of the building and would not include any habitable floor area. Further, the roof-top sculptures are set back from the building walls and would not have any negative shadowing impacts on adjacent properties.

The height variance is in keeping with the surrounding building heights. The following table provides a synopsis of religious assembly building heights for existing buildings within the No. 5 Road institutional corridor.

Table 1: Synopsis of Existing Religious Assembly Maximum Building Heights

Site	Maximum Building Height	
Shia Muslim at 8580 No. 5 Road	20.1 m (66 ft.) for 2 spires and 15.4 m (51 ft.) for large architectural dome	
India Cultural Centre at 8600 No. 5 Road	17 m (56 ft.) for steel frame Onion dome. >12 m (40 ft.) for 5 small domes	
Thrangu Monastery at 8140 No. 5 Road	21.4 m (70 ft.)	
Existing LMT at 10060 No. 5 Road	21 m (69 ft.) or 22.57 m (74 ft.) geodetic (existing Main Buddha Hall)	
Proposed LMT Expansion at 10060 No. 5 Road	25.9 m (85 ft.) or 27.48 m (90 ft.) geodetic (proposed new Main Buddha Hall)	

The height variance will be reviewed as part of the ESA DP review and would be forwarded to the Development Permit Panel for consideration as a condition of final adoption of the zoning amendment bylaw. If the variance is not issued by Council, the maximum building height will need to be 12.0m (39.4 ft).

Vehicular Access and On-Site Parking

One vehicular access point will be from No. 5 Road and a 4.0 m (13.1 ft) wide road dedication is required along the entire No. 5 Road frontage. The owner would be responsible for the design and construction of a new 1.5 m (5 ft) wide concrete sidewalk at the new property line, and between the existing curb and new sidewalk, a treed and grassed boulevard through a standard Servicing Agreement prior to final adoption of zoning amending bylaw. Transportation staff have reviewed the proposed driveway configuration and parking layout, and had no concerns.

The total number of required parking spaces is 88 based on the proposed floor area. The parking requirements will be met through provision of 80 parking spaces and implementation of a Traffic Demand Measure (TDM) in accordance with Zoning Bylaw section 7.4.4.

Based on the TDM adjusted rate, the number of parking spaces may be reduced to 79 parking spaces. The applicant has proposed a total of 80 parking spaces on-site (i.e., 9% reduction), and end-of-trip cycling facilities as a TDM measure in accordance with section 7.4.4 of Zoning Bylaw 8500. As part of the ESA DP review, the applicant would be required to register a legal agreement on title to ensure that end-of-trip cycling facilities (e.g., lockers, showers and changing rooms) are provided to the satisfaction of the City's Transportation staff. This would be forwarded to the Development Permit Panel for consideration as a condition of final adoption of the zoning amendment bylaw.

Prior to issuance of a building permit, a construction parking and traffic management plan must be submitted. Further, the owner has been advised that they must submit a parking management plan if any special events are planned. The plan should indicate the timing of the event, anticipated attendance, and how traffic and parking during those special events would be managed.

Agricultural Plan

The applicant has provided an agricultural plan prepared by a professional agrologist (Attachment 7). The plan describes the agricultural capability of the site and provides a detailed farm implementation plan.

The congregation intends to grow a selection of vegetables and fruits on a small portion of the agricultural land and plant approximately 815 blueberry trees, and donate farm products for charity or use them for community purposes and/or self-consumption. The operation of the farm will be led by an established Richmond farmer who has extensive hands-on experience in biodynamic farming and the members of the congregation with previous farming experience. The proposal also includes an agricultural buffer between the institutional building and the agricultural portion of the site.

In order to increase agricultural capability of the subject site, the plan proposes a subsurface drainage system, and salvage of topsoil from the proposed institutional portion of the site to be spread evenly across the agricultural portion of the land. Details of the drainage plan including the following:

- The site will be connected to the City's storm sewer system on No.5 Road. The revised plan also shows that field drainage will be by a ditch on the south property line and site grading will direct surface water into the ditch and then into the main storm sewer pipe under the proposed parking area.
- The size of the storm sewer pipe under the parking area will be 250mm to prevent any potential flooding issues.
- No filter sock will be attached to the subsurface drainage pipe as requested by the AAC.
- Approximately 1,500 m³ soil will be salvaged from the institutional portion of the site to be spread over the agricultural area.

The cost to implement the agricultural plan is estimated to be \$59,925. Staff recommend that a legal agreement and security be requirements of the forthcoming rezoning application process to ensure the farm plan is implemented. The agreement will require confirmation that the

agricultural backlands are in full farm production, which must be verified by a report submitted from the consulting agrologist prior to release of the security.

Site Servicing and Frontage Improvements

Prior to issuance of a Building Permit, the developer is required to enter into a City's standard Servicing Agreement for the design and construction of required frontage beautification works and service connections. The developer is also required to pay DCC's (City & GVS & DD), School Site Acquisition Charge, Address Assignment Fee and Servicing Costs.

Financial Impact

The rezoning application results in an insignificant Operational Budget Impact (OBI) for off-site City infrastructure (such as roadworks, waterworks, storm sewers, sanitary sewers, street lights, street trees and traffic signals).

Conclusion

The proposed temple is consistent with the Official Community Plan's backlands policy. The proposal would also be consistent with the form and character of the surrounding area. An ESA Development Permit would be required prior to final adoption, and as part of the ESA Development Permit review, the height variance for the two roof-top structures would be considered along with the 10% onsite parking reduction. The list of rezoning considerations is included in Attachment 8 which has been agreed to by the applicant.

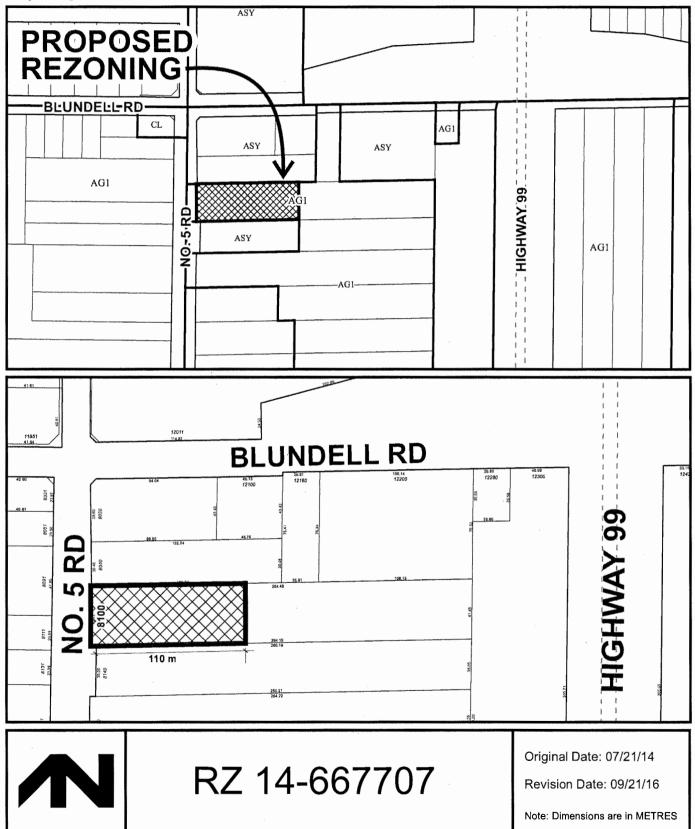
It is recommended that Richmond Zoning Bylaw 8500, Amendment Bylaw 9586 be introduced and given first reading.

John Hopkins Senior Planner (604-276-4279)

JH:cas

- Att. 1: Location Map and Aerial Photo of Site
 - 2: Development Application Data Sheet
 - 3: Site plan and Building Elevations
 - 4: Land Use Map from McLennan Sub-Area Plan
 - 5: Excerpt from 2041 Official Community Plan (No. 5 Road Backlands Policy)
 - 6. Excerpt from the Minutes from the January 29, 2015 Agricultural Advisory Committee Meeting
 - 7: Agricultural Plan
 - 8: Rezoning Considerations







City of Richmond





RZ 14-667707

Original Date: 07/21/14

Revision Date:

Note: Dimensions are in METRES



Development Application Data Sheet

Development Applications Division

RZ 14-667707 Attachment 2

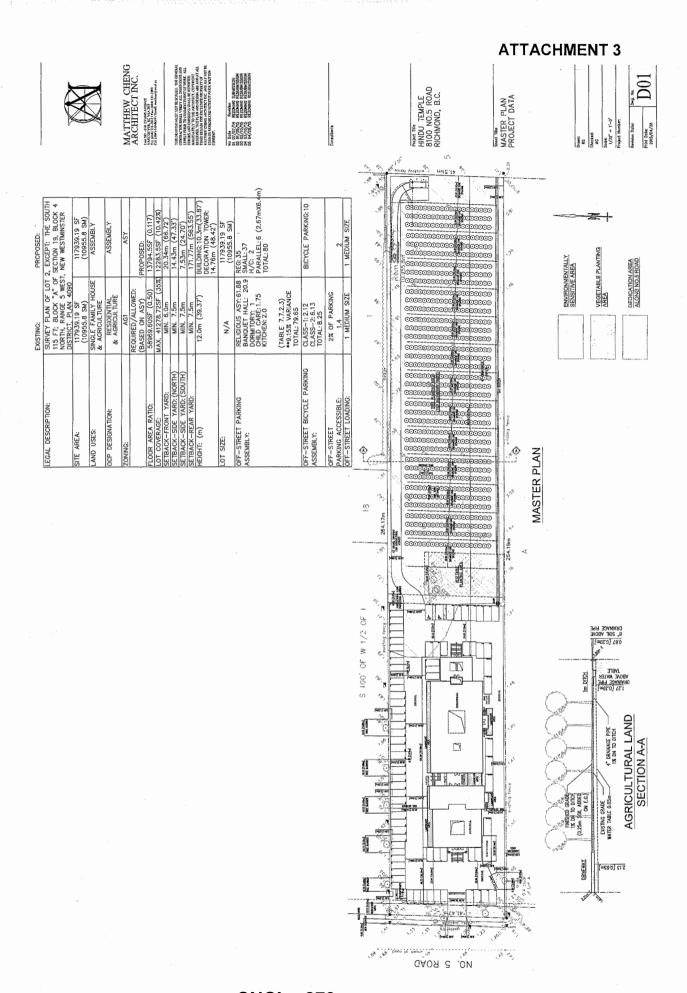
Address: 8100 No. 5 Road

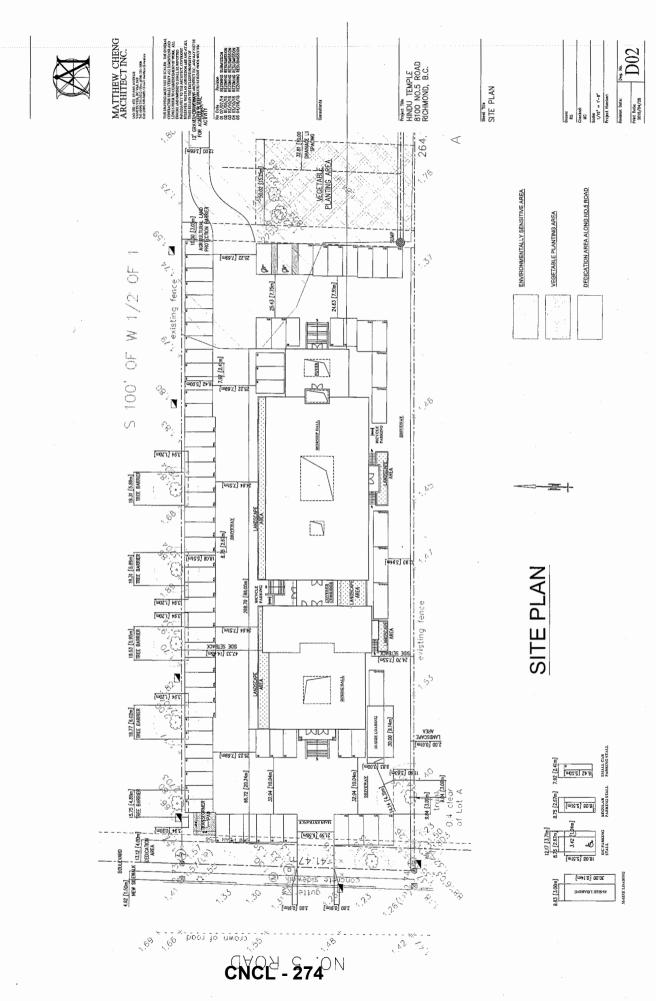
Applicant: Arul Migu Thurkadevi Hindu Society of BC

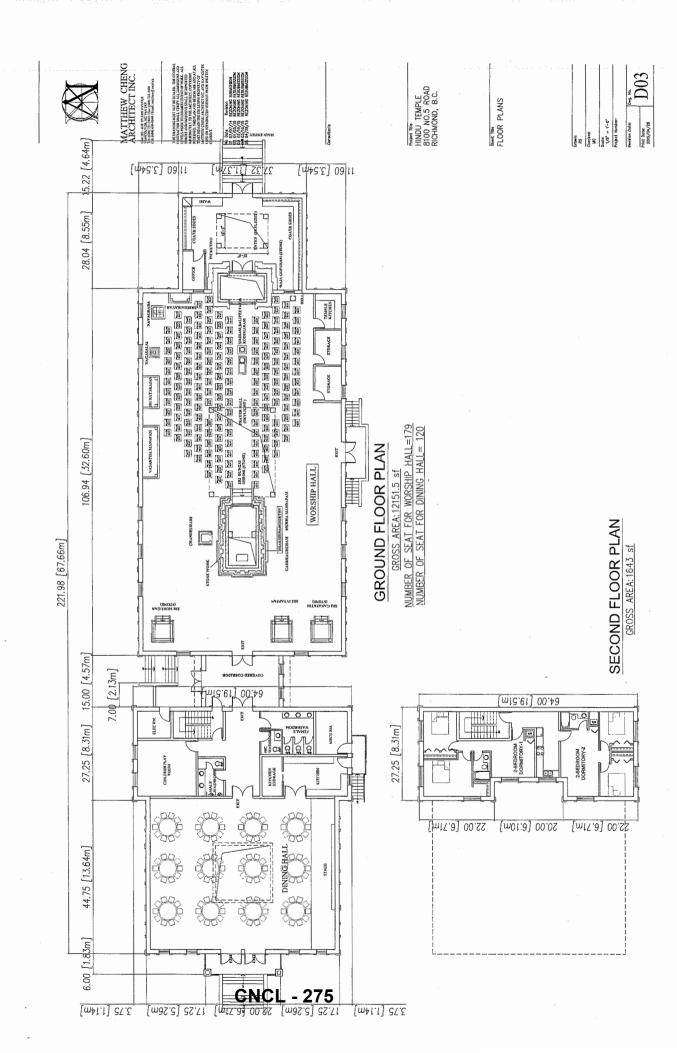
Planning Area(s): East Richmond – McLennan Sub Area

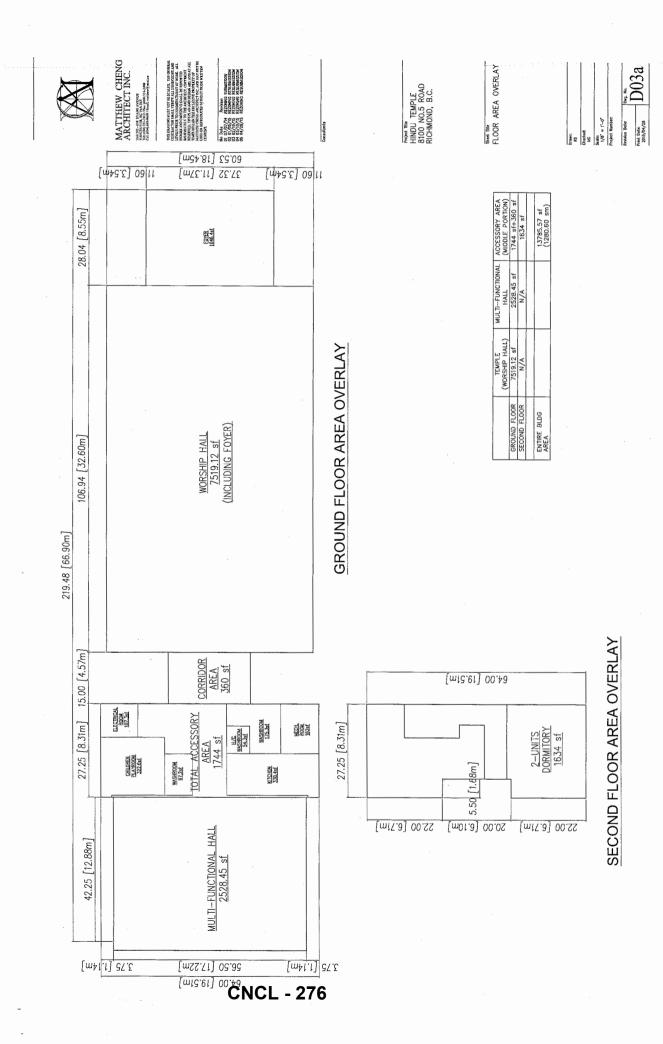
	Existing	Proposed	
Owner:	Domenica Taddei & Giuseppe Taddei	Arul Migu Thurkadevi Hindu Society of BC	
Site Size (m²):	10,955 m ²	10,790 m ² (after 4m dedication)	
Land Uses:	A single detached house (to be demolished)	Westerly 110m: Institutional Remaining portion: Agriculture	
OCP Designation (General):	Westerly 110m: Community Institutional Remaining: Agriculture	No change	
McLennan Sub Area Plan Designation:	Westerly 110m: Agriculture, Institutional and Public Remaining: Agriculture	No change	
Zoning:	Agriculture (AG1)	Westerly 110m: Assembly (ASY) Remaining: Agriculture (AG1)	
Other Designations:	ESA (Old Fields and Shrublands) designation on the entire backlands and a portion of the proposed parking area	ESA DP required	

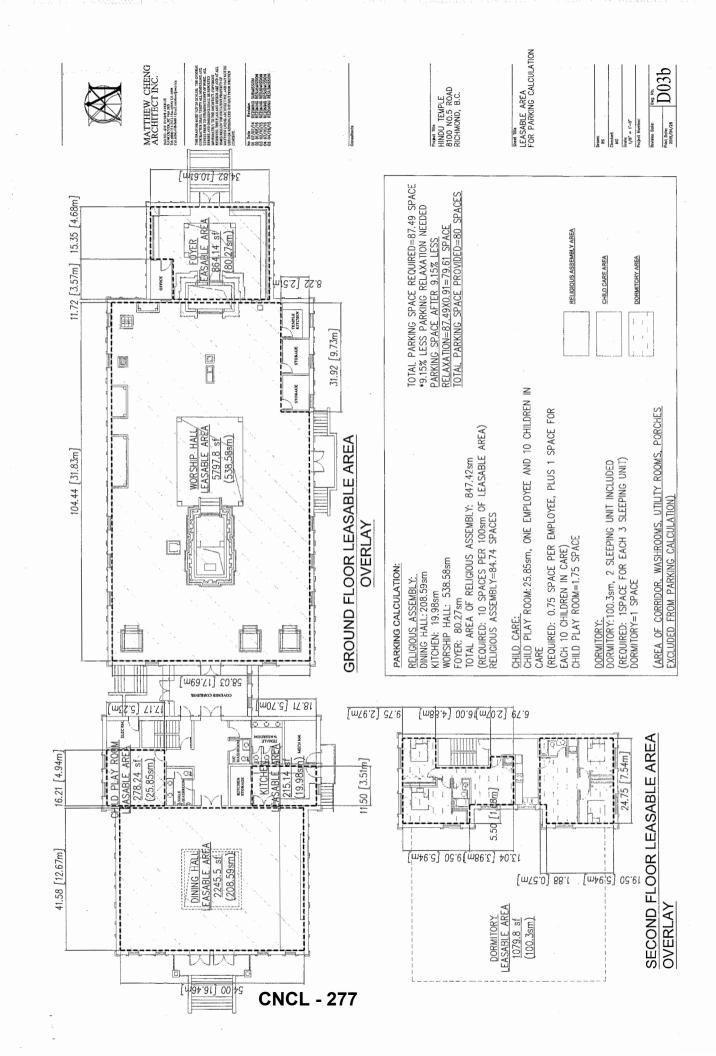
	ASY Zone Requirement	Proposed	Variance
Density (Floor Area Ratio):	Max. 0.5	0.117	none permitted
Lot Coverage – Building:	Max. 35%	10.4%	none
Setback – Front:	Min. 6.0 m	20.3 m	none
Setback – Interior (north):	Min. 7.5 m	14.4 m	none
Setback – Interior (south):	Min. 7.5 m	7.5 m	none
Setback – Rear:	Min. 7.5 m	171.8 m	none
Height - Building (m):	Max. 12.0 m	9.7 m	none
Height - Roof Sculpture:	Max. 12.0 m	16.2 m	Variance requested
Off-Street Parking Spaces – Total:	Min. 88	80 (less than 10% reduction as per Zoning Bylaw section 7.7.4)	none
Loading:	Min. 1	1	none
Bike Parking:	Min. 8	10	none

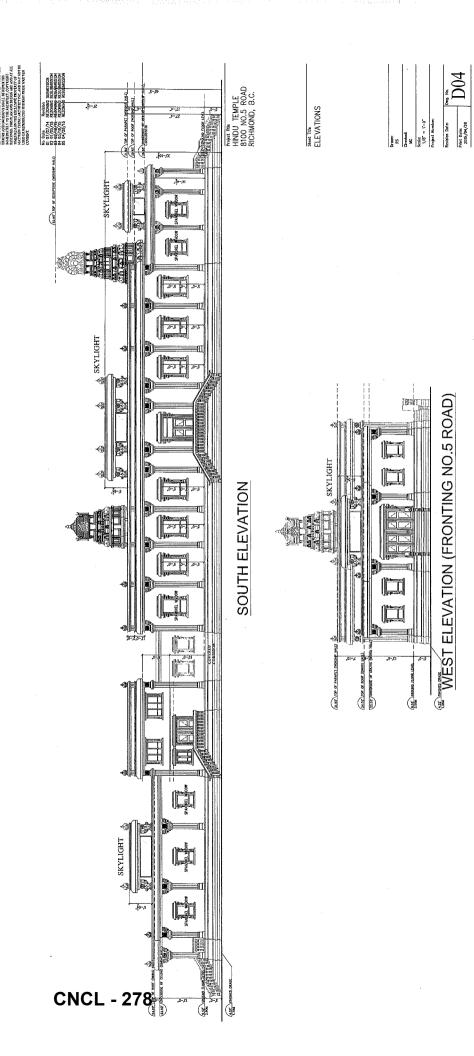












MATTHEW CHENG ARCHITECT INC.



MATTHEW CHENG ARCHITECT INC.

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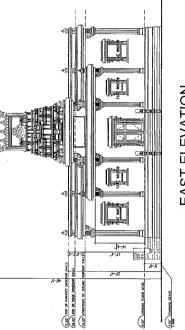
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Project TUB HINDU TEMPLE 8100 NO.5 ROAD RICHMOND, B.C.

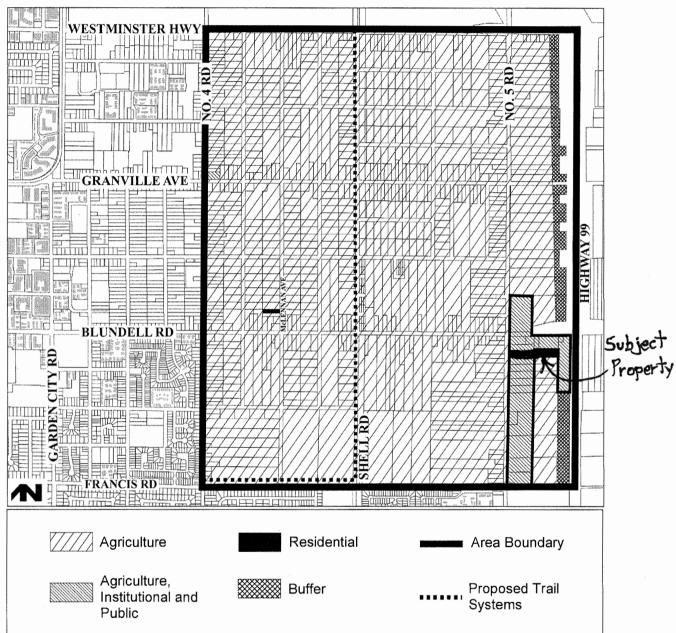
Sheet Title ELEVATIONS

EAST ELEVATION



NORTH ELEVATION

Land Use Map Bylaw 8791 2012/09/10







OBJECTIVE 5:

Find ways to recover food waste.

POLICIES:

- a) support the efforts of community groups and the private sector to establish initiatives that divert recoverable food from the pre-waste stream for redistribution to local food banks;
- b) develop strategies to encourage organic waste diversion from multifamily housing and commercial properties;
- c) support the recycling and re-use of organic waste;
- d) develop an educational program to promote awareness around food production, health, and impacts on the community.



Credit: Richmond Food Security Society

Bylaw 9506 2016/02/15

7.3 No. 5 Road Backlands Policy

OVERVIEW:

Since 1990, the City and the Agricultural Land Commission (ALC) have agreed that, within the Agricultural Land Reserve (ALR), there shall be a unique area called "No. 5 Road Backlands Policy Area" as shown on the attached No. 5 Road Backlands Policy Area Map.

The purpose of the Policy is to allow Community Institutional uses on the westerly 110m ("Frontlands") of the properties located on the east side of No. 5 Road between Blundell Road and Steveston Highway (the area outlined in bold lines on the No. 5 Road Backlands Policy Area Map), if the remaining portions ("Backlands") are actively farmed.



Bylaw 9506 2016/02/15

OBJECTIVE:

Community Institutional uses may be permitted in the Frontlands if the Backlands are actively farmed.

POLICIES:

- a) the types of uses which may be considered in the Frontlands are those consistent with the Community Institutional land use definition contained in the 2041 Official Community Plan (the "OCP") to be considered and approved by the City and the Agricultural Land Commission through the necessary land use approval process;
- b) in the Frontlands, clearly ancillary uses (e.g., dormitory) to the principal Community Institutional uses are allowed, but principal residential uses (e.g., congregate housing, community care facility, multi-family housing) are not allowed:
- c) property owners who do not intend to farm the Backlands themselves are encouraged to, either lease them to a farmer, dedicate their Backlands to the City or enter into legal agreements with the City to allow the City or the City's designate to access and farm the Backlands;
- d) the City will continue to strive for a partnership approach with property owners to achieve farming of the Backlands (e.g., based on the approved farm plans);
- e) in the Backlands, a limited infrastructure component (e.g., little or no regional and on-site drainage, irrigation or farm access roads) could be allowed, where a full infrastructure component is not practical;
- f) in the Frontlands, satisfactory sanitary sewage disposal is required as a condition of non-farm use or rezoning approval;
- g) applicants shall submit the necessary reports to the City to achieve farming with all costs to implement works associated with an approved farm plan to be paid by the applicant;

Development Application Procedure and Requirements

- a) all proposals for Community Institutional development are subject to City and ALC approval through the necessary development application process to be reviewed on a case-by-case basis and in accordance with the OCP;
- b) consideration of Community Institutional development in the Frontlands is generally subject to:
 - submission and approval of an ALR Non-Farm Use application that is required to be endorsed by the City prior to being considered by the ALC. If the City endorses the ALR Non-Farm Use application, it will be forwarded to the ALC for consideration;
 - ii) pending the outcome of the ALR Non-Farm Use application, a rezoning application will also be required and subject to the required statutory process;
 - iii) other Development Applications (i.e., Environmentally Sensitive Area Development Permit, Development Variance Permit) may also be required based on the proposal or site context;



Bylaw 9506 2016/02/15

- c) in certain cases, a rezoning application will not be required following approval of an ALR Non-Farm Use application. Under these circumstances, any specific requirements to be secured through the ALR non-farm use application are to be confirmed through the necessary resolution of Council upon consideration of the application;
- d) in considering development proposals (i.e., ALR Non-Farm Use applications or rezoning application) in the No. 5 Road Backlands Policy area, the City requires the applicants to:
 - i) prepare farm plans with access;
 - ii) explore farm consolidation;
 - iii) commit to do any necessary on-site infrastructure improvements;
 - iv) co-operate as necessary to remove constraints (e.g., required infrastructure) to farming the Backlands, in partnership with others;
 - commit to legal requirements as may be stipulated by Council to achieve acceptable land uses (e.g., farming the Backlands);
 - vi) provide financial security to ensure the approved farm plan is implemented;
 - vii) undertake active farming of the Backlands;
 - viii) register a statutory right-of-way on title for a future farm access road along the eastern edge of the property along the Backlands, to the satisfaction of the Director of Development;
 - ix) comply with such other considerations or requirements by Council;

Reporting Requirements

a) all property owners who are required to farm the Backlands must, in a form acceptable to the City, report to the City on a yearly basis regarding the current status of the farm by providing clear evidence (e.g., detailed description of the farming activities conducted in the Backlands, photos, farm tax records) that the Backlands are actively being farmed in accordance with the approved farm plans, to Council and the ALC's satisfaction:

Amendments to the Above Policies

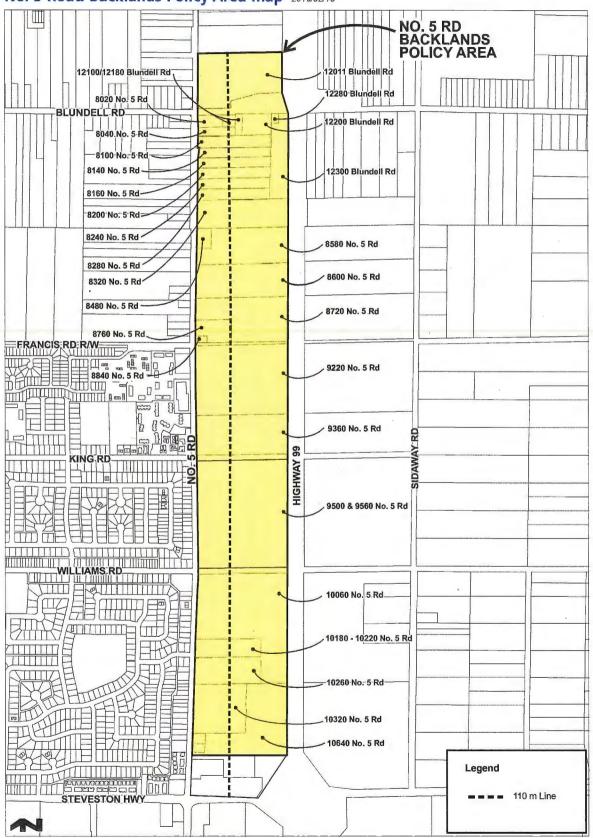
 a) amendments to these policies in the 2041 OCP is subject to the required statutory process, which will include consultation between the City, ALC and other stakeholders as deemed necessary;

Co-ordination of Review Process

a) the City and the ALC will co-ordinate efforts when reviewing applications for ALR non-farm use and subsequent rezoning applications, in order to ensure that the interests of each party are addressed. This co-ordinated effort will be done prior to granting any approvals.



No. 5 Road Backlands Policy Area Map Bylaw 9506 2016/02/15



Excerpt from the Minutes from The Agricultural Advisory Committee Meeting

Thursday, January 29, 2015 – 7:00 p.m. Anderson Room Richmond City Hall

3. Development Proposal - ALR Non-Farm Use

Staff outlined the non-farm use proposal to develop a new Hindu temple at 8100 No. 5 Road. Staff noted that the proposal is subject to the No. 5 Backlands Policy, which allows institutional uses on the westerly 110m when the remaining portion is strictly used for farming. Staff also indicated the proposal includes a height variance and will be subject to the ESA DP requirement.

Committee had the following questions and comments:

- In response to Committee's query about the maximum building height, Staff explained it is the requirement specified in the proposed "Assembly" zone.
- Committee asked how the properties along No. 5 had been monitored to ensure the
 property owners continue to farm the backlands and whether the restriction is
 enforceable. Staff explained as restrictive covenants are registered on titles of the
 most sites, it is enforceable. Staff also periodically check and receive complaints or
 information from neighbours.
- Discussion ensued with regard to fill issues in the ALR and Committee noted that any illegal activities should be carefully monitored.
- Committee also noted the importance of a "succession plan" to ensure that the backlands are continued to be farmed by future owners. Community members acknowledged that the agricultural plan is solid and provides a good amount of details. Committee noted that, if the plan is followed through, it will be successful and continuity over time is the key.
- Committee invited the applicants to the table. The project architect, Matthew Cheng, introduced himself and noted that other consultants, including the agrologist, was also in attendance.
- Committee requested further details of the proposed drainage tile and noted a 4" drainage tile is typical for blueberry farming and no sock to be attached as it is not good for organic soil.

- Committee expressed concerns about details of the proposed drainage plan. It was noted that, if the City does not permit the site to be connected to the City's storm sewer system it will likely become an issues for neighbouring sites.
- Committee was glad to see soil will be recaptured and reused on the site rather than brought from outside.
- In response to Committee's question about residential units in assembly buildings, Staff noted that the use is often included in institutional developments as an accessory use.
- Committee also asked if there would be any parking issues. Staff noted that the current proposal shows it meets the parking requirement. In reply to Committee's question about special event parking arrangement, the representative from the Hindu society noted that they had secured an agreement with neighbours; in case of special events, the neighbouring site could be used for additional parking.
- As the farm is proposed be used for non-commercial purposes, it was suggested that the congregation consider opportunities with other non-profit community group.

The following motion was passed:

That the non-farm use application for a new Hindu temple at 8100 No. 5 Road be supported subject to the following conditions:

- 1. Additional organic soil to be retained on the site as per the recommendations included in the agrologist report;
- 2. The drainage tile to be a minimum of 4" in size and not to have a sock; and
- 3. An alternative drainage plan to be brought forward for Committee's review and comments if the City does not allow the site to connect to the City's storm sewer system.

Carried Unanimously

Agricultural Plan

8100 No. 5 Road Richmond, BC



Prepared for:
Arul Migu Thurkadevi Hindu Society of BC
7468 Edmonds Street
Burnaby, BC
V3N 1B2

Prepared by:
Pottinger Gaherty Environmental Consultants Ltd.
#1200 – 1185 West Georgia Street
Vancouver, BC
V6E 4E6

PGL File: 3587-02.01

December 2014



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Blueberry Management Schedule

(After BC Ministry of Agriculture, Berry Production Guide, 2012)



List of Acronyms

AMT - Arul Migu Thurkadevi

ESA - Environmentally Sensitive Area

PGL - Pottinger Gaherty Environmental Consultants Ltd.

PID - Parcel Identification Number



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1.0 INTRODUCTION

Pottinger Gaherty Environmental Consultants Ltd. has been retained by the Arul Migu Thurkadevi (AMT) Hindu Society to develop an agricultural plan for the property located at 8100 No. 5 Road, Richmond, BC (the Site; Figure 1). Construction of the proposed temple and ancillary parking requires submission of a non-farm use application for the portion of the property fronting No 5 Road to the City of Richmond and Agricultural Land Reserve. The remaining portion of the property will be used for active agricultural purposes. This requires summarizing the capabilities and requirements to develop an agricultural use and farm implementation plan for submission to the City of Richmond and the Agricultural Land Commission.

Our report includes a description of the Site and Site soils, summarizes the Site's capabilities for farming, and provides an agricultural use and farm implementation plan. At this time, blueberry production has been planned for the Site and the farm implementation plan reflects soil requirements for blueberry production.

Specifically, the scope of our work includes a review of the following considerations and requirements:

- Topsoil: Develop a topsoil salvage and management plan;
- Drainage: Design a subsurface drainage plan for the agricultural portion of the property;
- Irrigation: Develop a crop irrigation system for the agricultural area; and
- Crop Alternatives: Suggest possible suitable agricultural uses for the agricultural portion of the property.

2.0 SITE DESCRIPTION

The Site is located on the east side of No. 5 Road, south of Blundell Road in Richmond, BC (Figure 1). The surrounding area is characterized by:

- North: institutional;
- West: institutional;
- South: agricultural and institutional; and
- East: agricultural.

2.1 Legal Description

The Site is comprised of one parcel. The legal description of the parcel is:

2 Sec 19 BLK4N RG5W PL 4090 Except Plan S115. The Parcel Identification Number (PID) is 003-413-110.

2.2 Zoning and Current Land Use

The Site is zoned by the City of Richmond as AG1 (traditional sites zoned for agriculture), and lies within the Agricultural Land Reserve. The Site is also designated as an Environmentally Sensitive Area (ESA) within the City of Richmond Official Community Plan. The ESA designation is Old Fields and Shrublands. The Official Community Plan has also identified the property as Agriculture and Community Institutional.



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The City of Richmond considers Old Fields and Shrublands to be old fields and shrublands temporarily (>2 years) or permanently abandoned as agricultural or cleared lands that support mixed grass, forb, and shrub vegetation. Grass and shrub vegetation is often intermixed with increasing shrub cover after 10 years without mowing. Old field and shrubland is a man-made habitat type associated with the changing pattern of farming in agricultural landscapes, particularly the abandonment of farms.

2.3 Soils

2.3.1 B.C. MOE Mapping

The 1:25,000 scale published soils mapping in the RAB Bulletin 18: Soils of the Langley-Vancouver Map Area indicate the Site as Triggs-Lumbum soil complex. Triggs-Lumbum soil complex consists of up to 2m of partially- to well-decomposed organic matter overlying fine textured mineral deposits. Richmond soil series consists of 0.4 to 1.6m of well-decomposed organic matter overlying fine-textured deltaic deposits. Triggs-Lumbum soil complex are poorly drained and acidic in nature.

2.3.2 Current Onsite Inspection

The subject property indicated evidence of surficial disturbance. The western portion had areas of gravel fill, including a driveway along the north property line and a footprint of a former structure near the south property line. A raised portion of the north side of the property has been covered in sawdust or hog fuel.

2.4 Land Use

2.4.1 Subject Property

The subject property is +/-1.1 hectare in area, and had a single-family residence, garage, shed and two metal shipping containers located on the western portion of the Site.

The property owners intend to redevelop a portion of the property in the western portion of the property extending 110m from the western property line.

2.5 Drainage Conditions

There was no drainage system on the property. The water table is at or near the surface in winter. There was no standing water on the Site at the time of the Site inspection. There are no ditches adjacent to the property.

3.0 PROPOSED LAND IMPROVEMENTS

3.1 Soil Conservation and Management

3.1.1 Soil Salvage and Use

Topsoil from the proposed building development area is proposed for salvage and use on the eastern agricultural portion of the property. The surface soil on the proposed assembly use area is poor quality. The underlying organic soils are assumed to be of good quality. Site preparation of the built area will require removal of the organic soils and preload of the underlying silts with sand.

The poor quality fill and gravel should be removed from the entire Site. The underlying organic soil should be excavated to the silt boundary and placed in an even layer over the agricultural portion of the Site.



Stumps located within the area that are intended for agricultural production should be removed to increase the farmable area.

3.1.2 Soil Management

In south-coastal BC, blueberries have traditionally been grown on highly organic soils with an organic matter content of 20 to 50%. They can also be grown successfully on mineral soils including silt or sandy loam. They, however, do not perform well in wet soils or heavy, poorly-structured clay soils. The Site's organic soils have a very high water-holding capacity, which will require attentive drainage management to ensure good plant growth and prevent soil decompression due to over-draining.

Maintaining soil cover with temporary cereal crops, permanent grass cover or other ground cover vegetation is very important in maintaining good surface infiltration and soil capacity.

Soil fertility amendments should be implemented based on soil test results, and fertilizers should be applied at the recommended rates for the specific vegetation.

Blueberries do best in acid soil with a pH range of 4.5 to 5.2. A pH outside this range can result in poor growth and low yields. A soil test should be used to determine the nutrient status and soil pH before conducting the first planting, at least six months before planting so that any amendments can be added as the field is prepared. Sampling will be conducted based on direction from an agricultural consultant or soil laboratory (for laboratory listings, refer to the BCAGRI publication, "Resources for Berry Growers").

Prior to planning, soils will be tilled to depth between 6 to 10 inches to prepare a suitable seedbed using either cultivators, harrows or rotovators. Due to the fine textured nature of the soils, tilling will only be conducted when moisture content is ideal.

3.2 Drainage

3,2.1 Drainage Rationale

Plants cannot tolerate extended periods of flooding especially when they are actively growing. Poorly drained soil can result in poor plant growth, poor yield, root rot, and plant death. A water table maintained at least 60cm (24in) below the soil surface is best for blueberry production. A subsurface drainage system is recommended for this Site to supply water table control.

3.2.2 Design Parameters

The proposed subsurface drainage system design was based on Site-specific information, crop requirements and climate data for Richmond, BC.

The guidelines in the BC Agricultural Drainage Manual (1997) were used for general reference, in addition to local experience and Site-specific information, to develop the drainage system installation design.

Lateral drain spacing was set at 10.0m with an average drain depth of 1.1m ranging between 1.0-1.2m to accommodate the required drain slope of 0.1% to the mainline collector.



3.2.3 Drain Lateral Lines

Drainage lines will be installed using a trenchless plow or backhoe. Perforated polyethylene corrugated drain pipes (Big O) fitted with a nylon sock will be used for the lateral drains. The drain slope would be 0.1% to the mainline connector.

The City of Richmond does not permit mechanical lift of drainage water into the municipal storm drain system; therefore, a gravity connection between the collector catch basin and the parking lot storm water collection system will be required. If the City of Richmond refuses to allow discharge of drainage from farmed development areas into the municipal storm sewer system on No. 5 Road, the drainage system will be designed to discharge the subsurface drainage water into the eastern portion of the ESA area and infiltrate naturally into the ground.

4.0 IRRIGATION

4.1 Irrigation Water Sources

In the south coast region of BC, rainfall is generally inadequate in July and August and supplemental irrigation is necessary. Municipal water is available from the City of Richmond municipal water system to supplement irrigation. The small size of the Site and portion intended for agriculture makes use of municipal water the most practical source of irrigation water.

Irrigation should be provided by a 2" service-fitted line with a double check valve meeting the local code for irrigation supply. This should be installed as part of the new water service for the Site during redevelopment. A 2" buried PVC Schedule 40 mainline should be installed. Standpipes with quick-connect valves installed at 30m intervals along the line are recommended to facilitate the connection of surface irrigation equipment.

Drip irrigation is recommended to maximize water efficiency as water is delivered directly to the root zone providing more consistent and even soil moisture. Fertilizers can also be injected into the irrigation water. The drainage system should be drained following harvest to prevent winter frost damage.

5.0 CROP ALTERNATIVES

5.1 Suitable Crops

Site soils are mapped as a Triggs-Lumbum complex whose dominant soil limitations include very poorly-drained, infertile and acidic soils. A selection of suitable crops can be successfully produced on the property following appropriate management inputs in addition to the proposed soil salvage and improved irrigation. Management inputs required to increase the agricultural capability include a water-management system to improve drainage, and lime and/or fertilizer application to manage the soil pH and naturally low fertile conditions associated with these soils.

Suitable crops identified for these soils by Bertrand et al. (1991)¹ includes: annual legumes, blueberries, cereals, cole crops, corn, perennial forage crops, root crops, and shallow rooted annual vegetables.

¹ Bertrand, R.A., Hughes-Games, G.A. and Nikkel, D.C. 1991. Soil Management Handbook for the Lower Fraser Valley. BC Ministry of Agriculture, Fisheries and Food.



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The AMT Hindu Society intends to grow a selection of vegetables and flowers on a portion of the agricultural lands that will be used as part of the Temple services. After assessing potential crop options for the remainder of the agricultural land. Based on an assessment of agricultural suitability including consideration of adjacent land use, parcel size, and activities which would be compatible with the temple use, AMT Hindu Society identified blueberry production as the intended land use. AMT Hindu Society has identified a third party who will be responsible for blueberry production including planting and harvest.

Existing trees outside of the Temple development area will be protected as required by the ESA.

5.1.1 Proposed Agricultural Operator

Arul Migu Thurkadevi (AMT) Hindu Society and PGL have consulted with a number of agricultural operators in the Lower Mainland to identify a suitable operator to manage the proposed blueberry operation. After inspecting the site all of the commercial operators decided not to move forward with the lands as they consider the parcel to be too small and not commercially viable. AMT Hindu Society however is not interested in commercializing the operation and intends to produce farm products for charity and community purposes as well as self-consumption.

To support the intended agricultural operation, AMT Hindu Society intends to utilize members of their organization who are established active farmers and labourers who reside in Richmond and are willing to assist with the farm operation. Additional labour will be provided by community elders and retirees who will do voluntary work under the guidance of the established farmer.

Daily and seasonal operations following planting will be based on the BC Ministry of Agriculture's blueberry management schedule, developed as part of the Berry Production Guide, a general guide to blueberry management based upon plant and pest development. Timing and associated actions are provided in Appendix 2.

5.1.2 Proposed Planting Plan

The property owner has identified blueberry production as the intended agricultural crop for the Site. The plant spacing is based on feedback received from local farmers while additional recommendations are based on the BC Ministry of Agricultures Berries Production Guide. Recommendations are summarized below.



- In-row spacing between blueberry bushes is 1.5m.
- Distance between rows 3m.
- Fall planting will be conducted if warranted as it allows quicker plant establishment in coastal regions.
- Two-year old nursery-grown plants will be used to establish a planting. Fertilize plants set out
 in the spring three to four weeks after planting. Two or more applications may be required
 through the first growing season.
- Plants will be set at the same depth as they were in the pot or nursery.
- Cover crops may include permanent grass covers between the rows, which will suppress
 weeds, provide support for farm machinery, improve soil structure and water infiltration and
 reduce soil erosion. Grasses that work best are low-growing perennials that are easy to
 establish and do not creep. Mixtures should contain no more than 25% perennial ryegrass to
 minimize mowing. Pure stands of sheep fescue or hard fescue establish slowly but withstand
 traffic well and require less mowing.
- If grass is selected for a cover crop, seeding is recommended to occur in spring or early fall (September). Seed mixtures at 30 to 55kg/ha (12 to 22kg/acre) and fescues at 30 to 45kg/ha (12 to 18 kg/acre).

Based on the planting plan, AMT Hindu Society intends to plant approximately 815 blueberry bushes.

Access to the agricultural lands will be provided through establishment of a gravel farm access road along the north property boundary.

Vegetated buffers including a variety of edible and ornamental plants will be established between the ALR lands and the adjacent property and the proposed temple. A planting plan is provided in AMT Hindu Society's submission.



6.0 AGRICULTURAL IMPROVEMENT COST ESTIMATE

Topsoil Salvage	
Strip and load topsoil from development area 3250m³ @ \$5.00	\$16,250
Place and grade on agricultural area, 1,500m³ @ \$2.00	\$3,000
Subtotal Topsoil Salvage	\$19,250
Drainage System	
Supply and install lateral drains 450m @ \$7.00	\$3,150
Supply and install buried mainline 110m @ \$30.00	\$3,300
Connections to built area storm system (if approved)	\$3,000
Subtotal Drainage System	\$9,450
Irrigation System	
Municipal services connection	\$4,000
Irrigation piping	\$3,000
Irrigation equipment	\$4,000
Subtotal Irrigation System	\$11,000
Planting	
Blueberry bush purchase 815 bushes @ \$15	\$12,225
Labour for planting 400 hrs @ \$15/hr	\$6,000
Soil preparation (machinery and amendments)	\$2,000
Subtotal Planting	\$20,225
Total Estimated Cost	\$59,925

7.0 SUMMARY AND CONCLUSIONS

The Site's agricultural capability is primarily limited by poorly-drained, naturally infertile and acidic soil. Poor-quality fill on the western portion of the Site intended for development of the Temple also limits the Site's agricultural production potential. The proposed agricultural management inputs, including soil amendments and improved drainage, will dramatically improve the agricultural capability and increase the range of crops that can be produced on the Site.

PGL proposes segregation of topsoil during construction of the Temple. Soil suitable for segregation will be spread across the eastern portion of the Site to improve the soil's agricultural capability and ensure the conservation of topsoil.



Respectfully submitted,

POTTINGER GAHERTY ENVIRONMENTAL CONSULTANTS LTD.

Per:

Aribera

Ashleigh Gilbert; M.Sc., A.Ag. Environmental Scientist

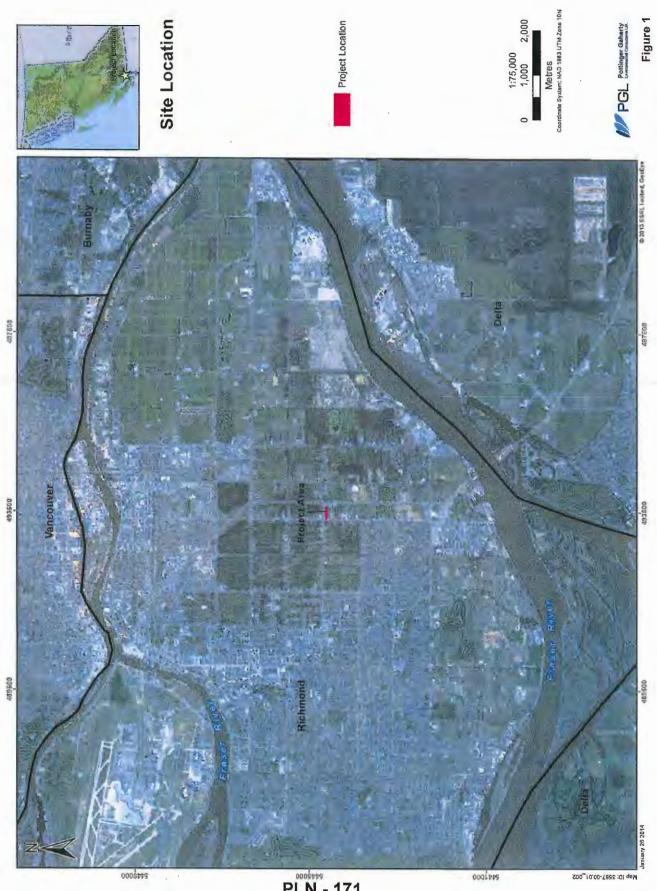
Stewart Brown, M.Sc., P.Ag., R.P.Bio. Senior Environmental Scientist

AAG/CSB/mtl/slr X:\3500-3599\3587 - A.M.T. Hindu Society of BC\02-01\Client Docs\r-3587-02-01-AgriculturePlan-Dec14-Rev2.docx



Figures





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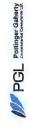




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Appendix 1
Site Photographs





Photograph 1:

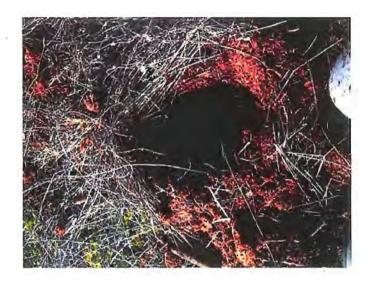
Looking west from the eastern end of the Site



Photograph 2:

Eastern portion of the Site. Land use to the south and north is consistent with the proposed development.





Photograph 3:

Organic soils in the eastern portion of the property



Photograph 4:

Coarse fill in the proposed development area which will be segregated from organic soils



Agricultural Plan Arul Migu Thurkadevi Hindu Society PGL File: 3587-02.01



Photograph 5:

Coarse fill that will require segregation



Photograph 6:

Topsoil which will be salvaged and applied to the agricultural portion of the Site



Appendix 2:

Blueberry Management Schedule (After BC Ministry of Agriculture, Berry Production Guide, 2012)



Timing	Type of Action	Action
JANUARY / FEBRUARY Plants dormant	Plant Care	 Prune beginning after leaf drop. Be sure to remove diseased and dead wood.
	Disease Control	 Apply copper oxychloride or Bordeaux mixture for bacterial blight. For mummy berry control, watch for development stage when leaf buds show 5 mm of green tissue. Also check for open mummyberry cups. Prepare to spray fungicide, as required. (February/March)
	Insect Control	• Check for scale and apply dormant oil and/or lime sulfur spray by mid-February (before bud break), if required. Also helps to control leafroller, spanworm, wintermoth eggs and larvae.
	Weed Control	 Apply pre-emergent herbicides before weed growth starts.
	Other	Ensure sprayers are tuned-up and calibrated.
MARCH Buds start to swell	Plant Care	 New plantings. Begin land preparation for spring plantings.
	Disease Control	• Continue to check growth of leaf buds and mummy berry cups. Apply fungicide to protect developing buds from mummy berry as necessary at critical growth stage. Apply Ridomil for root rot control, if required.
		 Apply copper oxychloride for bacterial blight, as necessary.
	Soil Care	 Seed grasses for permanent cover between rows when soil can be worked. Apply sawdust mulch to beds, if needed.
	Weed Control	 Apply pre-emergent herbicides before weed growth starts if not applied earlier.
	Food Safety	Ensure a food safety plan is in place including a record keeping system.



LATE MARCH TO LATE APRIL Leaf and flower bud break	Plant Care	 Make first fertilizer application (mid April). New plantings. Set out new plants as conditions permit (up to mid May).
	Disease Control	 Continue to apply fungicide for primary mummyberry control, as required. Apply copper oxychloride for bacterial blight, if necessary. If not done earlier, apply Ridomil for root rot control, if required.
	Insect Control	Apply recommended prebloom insecticides to control aphids and minimize spread of blueberry scorch virus. Start weekly checks of swelling blossom buds for hatching spanworm, winter moth (late March), and caterpillars blown to fields from outside areas. Apply controls as needed. Start weekly checks for leafrollers, looking at blossom clusters and rolled leaves.
	Weed Control	Control weeds by cultivation and/or herbicides. Apply herbicides for quackgrass and other perennial weed control.
	Other Pests	Watch for snails and slugs - control as required.
	Soil Care	 Seed grasses for permanent cover between rows if not done earlier. Apply sawdust mulch, if needed and not done earlier.
	Plant Care	• Place bee hives in field when 10% of blossoms are open. Protect hives from bears where necessary. Remove hives from fields when blossoming is over.
LATE APRIL/MAY Blossoming	Disease Control	 Monitor all fields for symptoms of blueberry scorch and blueberry shock. Watch for mummy berry infections on flowers and shoots and apply fungicides if needed. Apply fungicides for Botrytis blight and/or Anthracnose (fruit rots) if wet weather is anticipated.
	Insect Control	 Continue to watch for leafrollers and control as needed. Monitor for aphids. Control aphids after bloom is finished and bees have been removed from the field. Apply sprays only if predator numbers are low and aphids are increasing.



	Weed Control Soil Care	 Cultivate for weed control in row middles or mow cover crop, as appropriate. Apply directed treatments of non-residual herbicides, if needed, observing days to harvest interval. Watch for poorly drained areas in fields. Plan fall drainage improvements.
(29a)	Food Safety	Test irrigation and spray water for E. coli and fecal coliforms. Order toilets, hand washing units and other sanitary supplies.
	Plant Care	Make second fertilizer applications up to mid- June. Irrigate as necessary.
	Disease Control	 Apply fungicides for Botrytis (fruit rot) and Anthracnose (ripe rot) if weather is wet during the fruit development period. Monitor for root rot symptoms and mark affected areas. Apply Aliette if necessary.
JUNE Fruit development	Insect Control	 Continue to watch for leafrollers and spanworms to late June, control as needed. Continue to monitor for aphids especially in scorch infected fields. Control as required. Prune out and destroy branches with tent caterpillars before end of June when caterpillars leave the nest.
	Weed Control	 Cultivate for weed control in row middles or mow cover crop, as appropriate. Apply directed treatments of non-residual herbicides, if needed. Observe pre-harvest intervals.
	Other Pests	 Prepare bird predation management plan. Install bird control devices or erect bird netting.
	Soil Care	 New plantings. Start to prepare land for new fall plantings.
	Food Safety	 Place portable toilets and hand washing units. Ensure workers are trained in good hygiene and harvesting practices.



JULY	Plant Care	Monitor soil moisture and irrigate as necessary.
Fruit development and ripening	Disease Control	Sample berries from each field and store at room temperature to assess fruit rot levels. Monitor for root rot symptoms and mark affected areas. Apply Aliette if necessary.
	Insect Control	Continue to monitor insect pests, control only if needed. • Monitor for spotted wing Drosophila (SWD) and apply protective sprays after fruit ripens.
	Other Pests	 Install bird control devices, or erect bird netting if not done earlier.
JULY - SEPTEMBER Harvesting	Plant Care	 Harvest and market fruit. Collect plant tissue samples (mid July to mid August) for nutrient analysis. Irrigate as needed.
	Disease Control	 Continue to apply fungicides for Botrytis, Anthracnose, and other fruit rot diseases, if weather is wet. Observe days to harvest interval. Prune out branches killed by Godronia canker (red flagging) or bacterial blight and destroy.
	Insect Control	• Continue to apply protective sprays to control spotted wing Drosophila. Apply insecticides to control aphids and young scale if required. Observe pre- harvest intervals. Prune out and destroy branches with tent caterpillars (from mid July). Watch for scale "crawlers" from late July to August and control if needed.
	Other Pests	Control birds following approved guidelines.
	Soil Care	 Continue to mow cover crop as needed. New plantings. Install drainage, if needed. Monitor soil pH and adjust as necessary. Incorporate sawdust or compost in planting beds as required.
SEPTEMBER Post harvest growth	Plant Care	Irrigate as necessary.
	Disease Control	Apply copper spray for bacterial blight before fall rains start. Prune out diseased wood.



	Insect Control	 Prune out and destroy caterpillar tents before mid September when caterpillars drop to the ground for the winter.
	Other Pests	Remove bird control devices and netting after harvest.
	Soil Care	 Take soil samples for analysis, if needed. Check pH of soil. Apply calcium and magnesium in form of dolomite or sulphur if required. Subsoil between rows when soil is dry, if necessary. Seed grasses for permanent cover between rows. New plantings. Install drainage, if required and not done earlier.
OCTOBER Post harvest growth	Plant Care	 Continue to prune out and remove diseased wood. New plantings. Set out new plants. Best time to plant container stock in coastal areas.
	Disease Control	 Apply copper spray or Bordeaux Mixture for bacterial blight (total 2 sprays in fall).
	Other Pests	 Check for field mice activity and apply bait, if required.
	Soil Care	 Check pH of soil and apply lime or sulfur, if required. Subsoil between rows when soil is dry, if necessary. Install or improve drainage, as required. Mow cover crop, if required.
	Weed Control	 Monitor weeds. Apply herbicides for grass control, according to label directions.
	Other	 Flush irrigation systems and sprayers to protect against winter damage.
NOVEMBER / DECEMBER Plants dormant	Plant Care	 Apply sawdust mulch, if necessary. Order bees for the coming season.
	Weed Control	Apply Roundup for grass control if not done earlier.
	Other Pests	 Watch for field mice activity and apply bait if needed.





Pottinger Gaherty Environmental Consultants Ltd. 1200 - 1185 West Georgia Street T 604 682 3707 F 604,682.3497 Vancouver, BC Canada V6E 4E6 www.pggroup.com

Memo

PGL File #:

3587-02.01

DATE: March 30, 2015

TO: Arul Migu Thurkadevi Hindu Society

FROM: Stewart Brown

Re: Agricultural Plan - 8100 No. 5 Road, Richmond, BC

Please find following an addendum to Pottinger Gaherty Environmental Consultants December 2014 Agricultural Plan. Changes have been incorporated in the Arul Migu Thurkadevi Hindu Society's application. Changes are based on feedback provide by the City of Richmond and the City of Richmond Agricultural Advisory Committee and include additional detail on the Soil Salvage and Use and Drainage plan.

Soil Salvage and Use

As indicated in our December 2014 Agricultural Plan, topsoil from the proposed building development area is proposed for salvage and use on the eastern agricultural portion of the property. The surface soil on the proposed assembly use area is poor quality. The underlying organic soils are assumed to be of good quality.

PGL has estimated that up to 1,500m3 of suitable soil will be salvaged form the development area which will be spread uniformly across the agricultural portion of the property to a depth of approximately 0.25m to maintain the existing level grade. If more than 1,500m³ of soil is salvaged it will be spread evenly across the agricultural area.

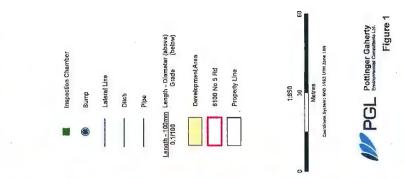
The site drainage plan has been revised since the December 2014 Agricultural Plan to permit discharge of soil water to the municipal storm sewer. Lateral drainage lines (100mm) will now run in a north-south orientation and discharge into a drainage ditch that will run along the south property line before discharging into a sump and into a buried 250mm solid line that will connect to the existing municipal storm sewer. The drainage ditch will also intercept any surface flow originating from the adjacent property to the south.

The previous drainage plan included fitting perforated polyethylene corrugated drain pipes (Big O) with a nylon sock. At the request of the Agricultural Advisory Committee, the nylon sock will no longer be included in our design.

To ensure that the drainage lines do not actively dewater the site, pipes will be positioned above the sites water table and provide approximately 0.20 of freeboard.



Drainage Plan







Rezoning Considerations

Development Applications Department 6911 No. 3 Road, Richmond, BC V6Y 2C1

Address: 8100 No. 5 Road

File No.: RZ 14-667707

Prior to final adoption of Richmond Zoning Bylaw 8500, Amendment Bylaw 9586, the developer is required to complete the following:

- 1. The applicant is required to demonstrate to the City that approval from the Agricultural Land Commission (ALC) has been granted in writing for the following terms, as articulated by the ALC Resolution #164/2016:
 - a) Submission, acceptance and implementation of a farm plan that specifically addresses surface and internal drainage on the property; and
 - b) Registration of a restrictive covenant on the agricultural Backlands specifying its use as agricultural and restricting any non-farm related services or uses.
- 2. An estimated 4.0 m wide road dedication along No. 5 Road along the site frontage to accommodate the cross section established by a road functional plan to the satisfaction of the Director of Transportation.
- 3. The applicant is required to submit a parking study and register a legal agreement on title to ensure that end-of-trip cycling facilities (e.g., lockers, showers and changing rooms) are provided to the satisfaction of the Director of Transportation.
- 4. Registration of a legal agreement on title that prohibits issuance of a Building Permit until a statutory right-of-way to secure a north/south farm access road is registered on the site, or an alternative agreement that complies with the City's Backlands Policy in place at the time of the issuance of the Building Permit. Conditions for the farm access road may include:
 - Permission to use the farm access road statutory right-of-way is to be granted to the City and its designates.
 - A structure(s) to control access is permitted.
 - The farm access road must be designed and constructed for farm use only and is intended to facilitate only the movement of farm vehicles and machinery to fields.
 - The statutory right-of-way for the farm access road is a minimum of 4 m wide.
 - The farm access road location and driving surface is to be determined by a certified professional registered with the B.C. Institute of Agrologists, subject to review and approval of the City's Transportation staff. Design details are to be presented as an addendum to the Farm Plan and an associated bond is to be determined and secured.
 - A functional farm road base is to be determined by a certified professional registered with the B.C. Institute of Agrologists. If identified as necessary, drainage is required to be provided. Works are subject to review and approval by the City's Engineering staff.
 - Construction and maintenance of the farm access road and statutory right-of-way is the responsibility of the property owner.
 - Proposed road design and fill materials must be reviewed and approved by the City's Engineering and Transportation Department staff. Suitable material includes sod, gravel and crushed limestone. Blacktop, asphalt, hog fuel and ground-up asphalt is not permitted.
 - Placement of the farm access road should consider designated Riparian Management Areas related to riparian setbacks.
- 5. Registration of a flood plain covenant on title identifying a minimum habitable elevation of 2.9 m GSC.

- 6. Receipt of a Letter of Credit (LOC) or bond for implementation of the farm plan in the amount of \$59,925.00.
- 7. Processing of an Environmentally Sensitive Area Development Permit to the satisfaction of the Director of Development.
- 8. Enter into a Servicing Agreement* for the design and construction of the following works, which include but may not be limited to:

Storm Sewer:

At the Developer's cost, the City will:

- Cut and cap the existing storm connections at IC (3 locations north, south and middle of frontage), and leave one connection off the middle IC for site service.
- No upgrade is required to the existing storm sewer.

Water Works:

- Using the OCP Model, there is 497 L/s of water available at a 20 psi residual at the No. 5 Rd frontage. Based on the proposed development, the site requires a minimum fire flow of 250 L/s. Once the building design is confirmed at the Building Permit stage, the Developer must submit fire flow calculations signed and sealed by a professional engineer based on the Fire Underwriter Survey (FUS) or International Organization for Standardization (ISO) to confirm that there is adequate available flow.
- No upgrade is required to the existing water main.
- City to disconnect the existing 20mm water connection, and install a new water connection complete with meter box at the new PL. Size of the new connection to be confirmed by the developer.

Sanitary works:

• At the Developer's cost, extend the existing 200mm diameter sanitary sewer approximately 34m north from the existing MH at 8140 No. 5 Rd to the property frontage, and install a new IC and service connection at the new PL. Details to be finalized in Servicing Agreement designs.

Frontage Improvements:

Provide road dedication and other frontage improvements as per Transportation's requirements.

General Items:

- Additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering may be required, including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.
- The Developer is required to coordinate with BC Hydro, if required, to relocate the existing BC Hydro poles along the proposed site's No 5 Road frontage as they may conflict with the new sidewalk. Alterations and relocation of any private utilities will be at the developer's cost.

Prior to a Development Permit* being forwarded to the Development Permit Panel for consideration, the developer is required to:

1. Provide confirmation by a registered professional of the existing vegetation and determine appropriate mitigation and compensation measures for impacts on the Environmentally Sensitive Area; detailed landscape plans; details of the landscape buffer between the proposed non-farm use and farm use and secure a legal agreement to be registered on title that identifies that the on-site

agricultural landscape buffer to be implemented; and details of a tree retention plan and determine appropriate replacement planting.

Prior to Building Permit Issuance, the developer must complete the following requirements:

- Submission of a Construction Parking and Traffic Management Plan to the Transportation
 Department. Management Plan shall include location for parking for services, deliveries, workers,
 loading, application for any lane closures, and proper construction traffic controls as per Traffic
 Control Manual for works on Roadways (by Ministry of Transportation) and MMCD Traffic
 Regulation Section 01570.
- 2. Incorporation of accessibility measures in Building Permit (BP) plans as determined via the Rezoning and/or Development Permit processes.
- 3. Obtain a Building Permit (BP) for any construction hoarding. If construction hoarding is required to temporarily occupy a public street, the air space above a public street, or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. For additional information, contact the Building Approvals Department at 604-276-4285.
- 4. Installation of appropriate tree protection fencing around all trees to be retained as part of the development prior to any construction activities, including building demolition, occurring on-site.

Note:

- * This requires a separate application.
- Where the Director of Development deems appropriate, the preceding agreements are to be drawn not only
 as personal covenants of the property owner but also as covenants pursuant to Section 219 of the Land Title
 Act.

All agreements to be registered in the Land Title Office shall have priority over all such liens, charges and encumbrances as is considered advisable by the Director of Development. All agreements to be registered in the Land Title Office shall, unless the Director of Development determines otherwise, be fully registered in the Land Title Office prior to enactment of the appropriate bylaw.

The preceding agreements shall provide security to the City including indemnities, warranties, equitable/rent charges, letters of credit and withholding permits, as deemed necessary or advisable by the Director of Development. All agreements shall be in a form and content satisfactory to the Director of Development.

- Additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering may be required including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.
- Applicants for all City Permits are required to comply at all times with the conditions of the Provincial Wildlife Act and Federal Migratory Birds Convention Act, which contain prohibitions on the removal or disturbance of both birds and their nests. Issuance of Municipal permits does not give an individual authority to contravene these legislations. The City of Richmond recommends that where significant trees or vegetation exists on site, the services of a Qualified Environmental Professional (QEP) be secured to perform a survey and ensure that development activities are in compliance with all relevant legislation.

Signed original on file	Date	



Richmond Zoning Bylaw 8500 Amendment Bylaw 9586 (RZ 2014-667707) 8100 No. 5 Road

The Council of the City of Richmond, in open meeting assembled, enacts as follows:

1. The Zoning Map of the City of Richmond, which accompanies and forms part of Richmond Zoning Bylaw 8500, is amended by repealing the existing zoning designation for the westerly 110 m from No. 5 Road of the following area and by designating it "ASSEMBLY (ASY)":

P.I.D. 003-413-110

Lot 2 Except: The South 115 Feet; Block "A" of Section 19, Block 4 North, Range 5 West, New Westminster District Plan 4090.

2. This Bylaw may be cited as "Richmond Zoning Bylaw 8500, Amendment Bylaw 9586".

FIRST READING	CITY OF RICHMOND
A PUBLIC HEARING WAS HELD ON	APPROVED by
SECOND READING	APPROVED by Director or Solicitor
THIRD READING	- or soligion
OTHER CONDITIONS SATISFIED	
ADOPTED	
MAYOR	CORPORATE OFFICER