



City Council

Council Chambers, City Hall 6911 No. 3 Road

Tuesday, May 25, 2021 7:00 p.m.

Pg. # ITEM

MINUTES

- 1. Motion to:
- CNCL-12 (1) adopt the minutes of the Regular Council meeting held on May 10, 2021;
- CNCL-25 (2) adopt the minutes of the Special Council meeting held on May 17, 2021; and
- CNCL-28 (3) adopt the minutes of the Regular Council meeting for Public Hearings held on May 17, 2021.

AGENDA ADDITIONS & DELETIONS

COMMITTEE OF THE WHOLE

2. Motion to resolve into Committee of the Whole to hear delegations on agenda items.

3. Delegations from the floor on Agenda items.

PLEASE NOTE THAT FOR LEGAL REASONS, DELEGATIONS ARE NOT PERMITTED ON ZONING OR OCP AMENDMENT BYLAWS WHICH ARE TO BE ADOPTED OR ON DEVELOPMENT PERMITS/DEVELOPMENT VARIANCE PERMITS – ITEM NO. 20.

4. *Motion to rise and report.*

RATIFICATION OF COMMITTEE ACTION

CONSENT AGENDA

PLEASE NOTE THAT ITEMS APPEARING ON THE CONSENT AGENDA WHICH PRESENT A CONFLICT OF INTEREST FOR COUNCIL MEMBERS MUST BE REMOVED FROM THE CONSENT AGENDA AND CONSIDERED SEPARATELY.

CONSENT AGENDA HIGHLIGHTS

- Receipt of Committee minutes
- 7036Q Supply and Delivery of Microsoft Licensing
- Oracle RAC Enterprise and Solaris SPARC Server Upgrades
- Application for a New Liquor Primary Liquor Licence Zodiac Karaoke & Pub Inc., at 8191 Alexandra Road, Richmond, BC.
- Richmond Hospital Acute Care Tower Replacement Project
- Cycling Network Plan Update Proposed Phase 1 Engagement
- TransLink 2021 Cost-Share Programs Supplemental Application
- Sidewalk Width Standards for Major and Minor Arterial Roads
- Multi-Family Water Meter Program and Water Conservation Initiatives Update
- Land use application for first reading (to be further considered at the Public Hearing on June 21, 2021):
 - 10340, 10360, 10380, 10400 and 10420 No. 4 Road Rezone from RS1/E to RTM2 (Kadium No. 4 Development Ltd – applicant)
- Housekeeping Request Abandonment of Unadopted Bylaws
- UBCM Grant Application Local Government Development Approvals program

			Council Agenda – Tuesda	iy, May 25, 2021
	Pg. #	ITEM		
		5.	tion to adopt Items No. 6 throu	gh No. 17 by general consent.
			-	
Consent Agenda		6.	OMMITTEE MINUTES	
Item			at the minutes of:	
	CNCL-72		the Community Safety Com	<mark>mittee</mark> meeting held on May 11, 2021;
	CNCL-77		the General Purposes Comm	nittee meeting held on May 17, 2021;
	CNCL-82		the <mark>Public Works and Tra</mark> May 18, 2021;	nsportation Committee meeting held on
	CNCL-88		the Special Planning Comm	<mark>ittee</mark> meeting held on May 19, 2021;
			received for information.	
Consent Agenda Item		7.	B6Q – SUPPLY AND DELIVE e Ref. No. 04-1300-01) (REDMS No. 6588	RY OF MICROSOFT LICENSING ³⁴⁸⁾
	CNCL-92		See Page CN	CL-92 for full report
			NERAL PURPOSES COMMIT	TEE RECOMMENDATION
			That contract 7036Q – Supp awarded to Dell Technold \$807,882.34, exclusive of ta.	oly and Delivery of Microsoft Licensing be ogies with three-year cost estimated at xes.
			That a contingency amo accommodate any unforesed	ount of \$181,935.66 be approved to en license true up requirements.
Consent Agenda Item		8.	ACLE RAC ENTERPRISE GRADES Ref. No. 04-1370-01) (REDMS No. 6659	E AND SOLARIS SPARC SERVER
	CNCL-97		See Page CN	CL-97 for full report
			NERAL PURPOSES COMMIT	TEE RECOMMENDATION
			That 7191NOITC -Oracle Purchase be awarded to E \$850,000 as part of the 2021	Database Software and Solaris Hardware clipsys Solutions Inc., in the amount of capital plan; and

(2) That the Chief Administrative Officer and Acting General Manager, Finance and Corporate Services be authorized to execute the contract and all related documentation with Eclipsys Solutions Inc.

Consent Agenda Item 9. APPLICATION FOR A NEW LIQUOR PRIMARY LIQUOR LICENCE - ZODIAC KARAOKE & PUB INC., AT 8191 ALEXANDRA ROAD, RICHMOND, BC.

(File Ref. No. 12-8275-30-001) (REDMS No. 6664317)

CNCL-104

See Page CNCL-104 for full report

GENERAL PURPOSES COMMITTEE RECOMMENDATION

- (1) That the application from Zodiac Karaoke & Pub Inc., for a new Liquor Primary Liquor Licence to operate a new Karaoke Lounge at the premises located at 8191 Alexandra Road, with liquor service, be supported for:
 - (a) A new Liquor Primary Liquor Licence with total person capacity of 240 occupants;
 - (b) Proposed hours of liquor sales from Monday to Sunday, from 9:00 AM to 2:00 AM; and
- (2) That a letter be sent to Liquor and Cannabis Regulation Branch, which includes the information attached as Appendix A, advising that Council recommends the approval of the liquor licence application for the reasons that this new application for a Liquor Primary Liquor Licence has been determined, following public consultation, to be acceptable in the area and community.

Consent	
Agenda	
Item	

CNCL-116 CNCL-121 10. RICHMOND HOSPITAL ACUTE CARE TOWER REPLACEMENT PROJECT

(File Ref. No.)

See Page CNCL-116 for additional information See Page CNCL-121 for materials

GENERAL PURPOSES COMMITTEE RECOMMENDATION

- (1) That Council write to the Premier, Minister of Health and the Minister of Finance and ask for Treasury Board approval of the Business Plan and confirmation of the funding and commencement of construction for the new Acute Care Tower in Richmond;
- (2) That copies of the letter be sent to the Richmond MLAs, Vancouver Coastal Health Board and the Richmond Hospital Foundation; and
- (3) That Council invite the Richmond MLAs to a meeting to discuss the funding and timeline for the Richmond Hospital upgrade.

Consent Agenda Item

11. CYCLING NETWORK PLAN UPDATE - PROPOSED PHASE 1 ENGAGEMENT

(File Ref. No. 02-0775-50-6708) (REDMS No. 6614460)

CNCL-125

See Page CNCL-125 for full report

PUBLIC WORKS AND TRANSPORTATION COMMITTEE RECOMMENDATION

- (1) That the proposed Phase 1 engagement activities to support the update of the Cycling Network Plan, as described in the report titled "Cycling Network Plan Update – Proposed Phase 1 Engagement," dated April 1, 2021 from the Director, Transportation, be endorsed for implementation; and
- (2) That staff be directed to report back on the results of the Phase 1 engagement.

Consent Agenda Item

Consent

Agenda

Item

CNCL-137

12. TRANSLINK 2021 COST-SHARE PROGRAMS - SUPPLEMENTAL APPLICATION

(File Ref. No. 01-0154-04) (REDMS No. 6643926)

See Page CNCL-137 for full report

PUBLIC WORKS AND TRANSPORTATION COMMITTEE RECOMMENDATION

That as described in the report titled "TransLink 2021 Cost-Share Programs – Supplemental Application" dated April 1, 2021 from the Director, Transportation:

- (a) the cycling-related project recommended for cost-sharing as part of the TransLink 2021BICCS Recovery Program be endorsed;
- (b) should the above project receive final approval from TransLink, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the funding agreements and the Consolidated 5 Year Financial Plan (2021-2025) be updated accordingly; and
- (c) staff be directed to implement the project approved by TransLink and report back as part of the City's proposed applications to TransLink's 2022 Cost-Share Programs.
- 13. SIDEWALK WIDTH STANDARDS FOR MAJOR AND MINOR ARTERIAL ROADS

(File Ref. No. 10-6360-03-01) (REDMS No. 6641372)

CNCL-143

See Page CNCL-143 for full report

PUBLIC WORKS AND TRANSPORTATION COMMITTEE RECOMMENDATION

That staff be directed to update the City of Richmond's Engineering Design Specifications to increase the sidewalk width from 1.5m to 2.0m on arterial roadways, as described in the report titled "Sidewalk Width Standards for Major and Minor Arterial Roads" dated April 6, 2021 from the Director, Transportation.

Council Agenda – Tuesday, May 25, 2021 Pg. # ITEM Consent 14. MULTI-FAMILY WATER METER PROGRAM AND WATER **CONSERVATION INITIATIVES UPDATE** Item (File Ref. No. 10-6060-02-01) (REDMS No. 6664046) **CNCL-149** PUBLIC WORKS AND RECOMMENDATION Utility Budgets and Rates report. APPLICATION BY KADIUM NO. 4 DEVELOPMENT LTD. FOR Consent 15. Agenda REZONING AT 10340, 10360, 10380, 10400 AND 10420 NO. 4 ROAD Item FROM THE "SINGLE DETACHED (RS1/E)" ZONE TO THE "MEDIUM DENSITY TOWNHOUSES (RTM2)" ZONE (File Ref. No. RZ 18-831725) (REDMS No. 6629251) **CNCL-153** See Page CNCL-153 for full report PLANNING COMMITTEE RECOMMENDATION

That Richmond Zoning Bylaw 8500, Amendment Bylaw 10261, for the rezoning of the site at 10340, 10360, 10380, 10400 and 10420 No. 4 Road from the "Single Detached (RSI/E)" Zone to the "Medium Density Townhouses (RTM2)" Zone, be introduced and given first reading.

Consent Agenda Item

HOUSEKEEPING REQUEST - ABANDONMENT OF UNADOPTED 16. **BYLAWS**

(File Ref. No. 12-8060-01) (REDMS No. 6667666)

CNCL-195

See Page CNCL-195 for full report

PLANNING COMMITTEE RECOMMENDATION

That the unadopted Zoning and OCP Amendment Bylaws, as outlined in Attachment 1, of the staff report titled "Housekeeping Request -Abandonment of Unadopted Bylaws" dated April 19, 2021 from the Director, City Clerk's Office, be abandoned.

Agenda

See Page CNCL-149 for full report

TRANSPORTATION COMMITTEE

That staff bring forward options and recommendations for a mandatory Multi-Family Water Meter Program for consideration as part of the 2022

Consent Agenda Item

CNCL-200

17. UBCM GRANT APPLICATION - LOCAL GOVERNMENT DEVELOPMENT APPROVALS PROGRAM (File Ref. No. 08-4105-01) (REDMS No. 6664560)

See Page CNCL-200 for full report

PLANNING COMMITTEE RECOMMENDATION

- (1) That the application to the Union of British Columbia Municipalities (UBCM) Local Government Development Approvals Program for \$500,000 be endorsed;
- (2) Should the application be successful, that the Chief Administrative Officer and the General Manager, Planning and Development be authorized on behalf of the City to enter into an agreement with UBCM for the above mentioned project; and,
- (3) That a capital submission of \$740,000 for the Digitization of Development Approvals system (AMANDA) be approved with \$740,000 funded from Rate Stabilization Account, and that the Consolidated 5-Year Financial Plan (2021-2025) be amended accordingly.

CONSIDERATION OF MATTERS REMOVED FROM THE CONSENT AGENDA

NON-CONSENT AGENDA ITEMS

GENERAL PURPOSES COMMITTEE Mayor Malcolm D. Brodie, Chair

18. SOIL USE FOR THE PLACEMENT OF FILL APPLICATION FOR THE PROPERTY LOCATED AT 8511 NO. 6 ROAD (JIANG) (File Ref. No. 12-8080-12-01) (REDMS No. 6506278)

CNCL-212

See Page CNCL-212 for full report

GENERAL PURPOSES COMMITTEE RECOMMENDATION

Opposed: Cllr. Wolfe

That the 'Soil Use for the Placement of Fill' application, submitted by Bohan Jiang (the ''Applicant''), proposing to deposit soil on the property located at 8511 No. 6 Road for the purpose of remediating the property to develop a blueberry farm, be authorized for referral to the Agricultural Land Commission (ALC) for the ALC to review and determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements.

19. TRAFFIC INTERSECTION CAMERAS (File Ref. No.)

CNCL-355

See Page CNCL-355 for full materials

GENERAL PURPOSES COMMITTEE RECOMMENDATION

Opposed: Cllr. Wolfe

- (1) That a letter be written to the Solicitor General for the Province of BC with copies to Richmond MLAs and the Premier seeking a meeting, as soon as possible, to address the issue of undue regulation on the use of intersection cameras in public places and the images generated including:
 - (a) Appropriate use of high resolution images on such devices including for the purposes of criminal investigation and prosecution; and
 - (b) Judicial or other oversight on the use of the images to prevent misuse.

PUBLIC ANNOUNCEMENTS AND EVENTS

NEW BUSINESS

Pg. #	ITEM			
		BYLAWS FOR ADOPTION		
CNCL-356	,	Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 9788 (1011 Seacote Road, RZ 17-778570) Opposed at 1 st Reading – None. Opposed at 2 nd /3 rd Readings – None.		
CNCL-358	:	Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 9981 (5660 Parkwood Way, ZT 18-818614) Opposed at 1 st Reading – None. Opposed at 2 nd /3 rd Readings – None.		
CNCL-360	1	Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 10082 (9571, 9591, 9611, 9671 Steveston Highway and 10831 Southdale Road, 17-763712) Opposed at 1 st Reading – Cllr. Wolfe. Opposed at 2 nd /3 rd Readings – None.	RZ	

DEVELOPMENT PERMIT PANEL

20. RECOMMENDATION

See DPP Plan Package (distributed separately) for full hardcopy plans

- (1) That the minutes of the Development Permit Panel meeting held on May 12, 2021, and the Chair's report for the Development Permit Panel meetings held on January 15, 2020 and January 13, 2021, be received for information; and
 - (2) That the recommendations of the Panel to authorize the issuance of:
 - (a) a Development Permit (DP 18-818161) for the property located at 5660 Parkwood Way; and
 - (b) a Development Permit (DP 20-896138) for the property located at 9571, 9591, 9611, 9671 Steveston Highway and 10831 Southdale Road;

be endorsed, and the Permits so issued.

CNCL-362

CNCL-367

ADJOURNMENT



Regular Council

Monday, May 10, 2021

Place:		Council Chambers Richmond City Hall		
Present:		Mayor Malcolm D. Brodie Councillor Chak Au Councillor Carol Day (by teleconference) Councillor Alexa Loo (by teleconference) Councillor Bill McNulty (by teleconference) Councillor Linda McPhail (by teleconference) Councillor Harold Steves (by teleconference) Councillor Michael Wolfe (by teleconference) Corporate Officer – Claudia Jesson		
Call to Ord	er:	Mayor Brodie called the meeting to order at 7:00 p.m.		
RES NO.	ITEM			
		MINUTES		
R21/9-1	1.	It was moved and seconded <i>That:</i>		
		(1) the minutes of the Regular Council meeting held on April 26, 2021, be adopted as circulated: and		

(2) the Metro Vancouver 'Board in Brief' dated April 30, 2021, be received for information.

CARRIED



Regular Council Monday, May 10, 2021

AGENDA ADDITIONS & DELETIONS

The following agenda revisions were noted:

- The recommendation for Item No. 7 Proposed 2021 Operating Hours For Steveston Outdoor Pool, were updated as follows:
 - (1) That a hybrid model for 2021, based on Options 3 and 4 as detailed in Attachments 3 and 4 of the memo titled "Response to Referral Proposed 2021 Operating Hours for Steveston Outdoor Pool," dated April 23, 2021, from the Manager, Aquatic and Arena Services, with the following modifications:
 - (a) Kigoos Swim Club have evening swim times of 5:00 p.m. to 10:00 p.m., Monday to Friday and retain their 10 hour combined weekday morning swim times from July 2, 2021, to September 6, 2021; and
 - (b) The 5:00 p.m. to 5:30 p.m. weekday public time slot totalling two and half weekly hours from July 2, 2021, to September 6, 2021, as outlined in Option 4, to be removed and be added to the weekday morning length swim times to ensure length swimming five (5) mornings per week;

be approved for the operation of Steveston Outdoor Pool for the summer of 2021 and that the source of funding be from the Council Community Initiatives Fund in the amount of \$19,245; and

- (2) That the Consolidated 5-Year Financial Plan (2021-2025) be amended accordingly.
- Development Cost Charges Imposition Bylaw No. 9499, Amendment Bylaw No. 10161, was noted as the correct bylaw number.
- Works and Services Cost Recovery Bylaw No. 8752, Amendment Bylaw No. 10215, was noted as the correct bylaw number.





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• The additional recommendation in Item No. 9 - Options for Imperial Landing and Britannia Shipyards Dock Operations, from the Parks, Recreation and Cultural Services Committee, as noted below, was removed.

That the City take necessary steps to remove an unauthorized boat that is docked at the Imperial Landing Dock.

R21/9-2It was moved and secondedThat the Council Agenda, with the noted revisions, be adopted.

CARRIED

PRESENTATION

Liesl Jauk, Manager Arts Services, presented the 2020 Arts Services Year in Review video, highlighting Arts Services activities. (copy on-file, City Clerk's Office).

COMMITTEE OF THE WHOLE

R21/9-3 2. It was moved and seconded *That Council resolve into Committee of the Whole to hear delegations on agenda items (7:17 p.m.).*

CARRIED

3. Delegations from the floor on Agenda items

<u>Item No. 14 – Application for a Permit to Allow for the Discharge of Firearms at 7340 Sidaway Road, Richmond</u>

Dennis Zentner, President, Vancouver Rod and Gun Club, spoke on the process of acquiring gun range approval, noting that the Club sought support from the City on compliance matters.



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<u>Item No. 14 – Application for a Permit to Allow for the Discharge of Firearms</u> <u>at 7340 Sidaway Road, Richmond</u>

Marshall Wirawan, volunteer for Vancouver Rod and Gun Club, noted that he was available to respond to queries regarding the application.

R21/9-4 4. It was moved and seconded *That Committee rise and report (7:19 p.m.).*

CARRIED

CONSENT AGENDA

R21/9-5 5. It was moved and seconded That Item No. 6 and Items No. 8 through No. 14 and Item No. 16 be adopted by general consent.

The question on the motion was not called as Mayor Brodie noted that following additional information provided by staff, Item No. 7 - Proposed 2021 Operating Hours for Steveston Outdoor Pool, can be placed back in the Consent Agenda, as the related provisions related to the *Consolidated 5-Year Financial Plan (2021-2025)* can be amended at a future date and as such, those provisions were removed from the proposed resolution. As a result, the following **motion** was introduced:

R21/9-6 It was moved and seconded *That Items No. 6 through No. 14 and Item No. 16 be adopted by general consent.*

CARRIED

6. **COMMITTEE MINUTES**

That the minutes of:

- (1) the Parks, Recreation and Cultural Services Committee meeting held on April 27, 2021;
- (2) the General Purposes Committee meeting held on May 3, 2021;

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Regular Council Monday, May 10, 2021

- (3) the Finance Committee meeting held on May 3, 2021; and
- (4) the Planning Committee meeting held on May 4, 2021;

be received for information.

ADOPTED ON CONSENT

7. PROPOSED 2021 OPERATING HOURS FOR STEVESTON OUTDOOR POOL

(File Ref. No. 11-7143-01) (REDMS No. 6436380; 6657270; 6647573; 6436380; 6669217) *That a hybrid model for 2021, based on Options 3 and 4 as detailed in Attachments 3 and 4 of the memo titled "Response to Referral Proposed 2021 Operating Hours for Steveston Outdoor Pool," dated April 23, 2021, from the Manager, Aquatic and Arena Services, with the following modifications:*

- (1) Kigoos Swim Club have evening swim times of 5:00 p.m. to 10:00 p.m., Monday to Friday and retain their 10 hour combined weekday morning swim times from July 2, 2021, to September 6, 2021; and
- (2) The 5:00 p.m. to 5:30 p.m. weekday public time slot totalling two and half weekly hours from July 2, 2021, to September 6, 2021, as outlined in Option 4, to be removed and be added to the weekday morning length swim times to ensure length swimming five (5) mornings per week;

be approved for the operation of Steveston Outdoor Pool for the summer of 2021 and that the source of funding be from the Council Community Initiatives Fund in the amount of \$19,245.

ADOPTED ON CONSENT

8. MINORU LAKES RENEWAL DETAILED DESIGN PLAN AND NEXT STEPS

(File Ref. No. 06-2345-20-MINO1) (REDMS No. 6612925 v. 6; 6675566)

That the Minoru Park Renewal Detailed Design Plan be received for information and that the Minoru Lakes Renewal project proceed to contract award and construction, as detailed in the staff report titled "Minoru Lakes Renewal Detailed Design Plan and Next Steps," dated March 30, 2021, from the Director, Parks Services.



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9. OPTIONS FOR IMPERIAL LANDING AND BRITANNIA SHIPYARDS DOCK OPERATIONS

(File Ref. No. 11-7200-01; 06-2345-20-ILAN1; 06-2345-20-BRIT1) (REDMS No. 6649086)

That option 1 "Britannia Shipyards National Historic Site Society Pilot" be endorsed as the preferred option for the future operations of the docks at Imperial Landing and Britannia Shipyards as detailed in the staff report titled "Options for Imperial Landing and Britannia Shipyards Dock Operations," dated April 8, 2021, from the Director, Parks Services and Director, Arts, Cultural and Heritage Services.

ADOPTED ON CONSENT

Please see page 3 for action on the additional recommendation from the Parks, Recreation and Cultural Services Committee.

BOWLING GREEN COMMUNITY ACTIVITY CENTRE TERMS OF REFERENCE FOR PUBLIC ART PROJECT (File Ref. No. 11-7000-09-20-283) (REDMS No. 6402985; 6391577)

That the Terms of Reference for the Bowling Green Community Activity Centre public artwork, as presented in the report titled "Bowling Green Community Activity Centre Terms of Reference for Public Art Project" from the Director, Arts, Culture and Heritage Services, dated March 22, 2021, be endorsed.

ADOPTED ON CONSENT

11. **ARTS SERVICES YEAR IN REVIEW 2020** (File Ref. No. 11-7375-01) (REDMS No. 6643650)

That the Arts Services Year in Review 2020 as presented in the staff report titled, "Arts Services Year in Review 2020," dated March 16, 2021, from the Director, Arts, Culture and Heritage Services, be circulated to Community Partners and Funders for their information.



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12. CITY APPOINTEES TO THE RICHMOND GATEWAY THEATRE SOCIETY BOARD OF DIRECTORS

(File Ref. No. 01-0060-20-RGTH1-01) (REDMS No. 6628585; 6652125)

That the Richmond Gateway Theatre Society be advised that, in response to its letter, three City appointments will be made to its Board of Directors in 2022.

ADOPTED ON CONSENT

13. PARKS AFLOAT AT GARRY POINT

(File Ref. No. 11-7000-01; 06-2345-20-GARR2) (REDMS No. 6673462)

- (1) That staff prepare a revised plan for the Garry Point Legacy Pier, similar to the No. 3 Rd. Pier, (or a transition float) containing it entirely on City owned land and water lot, with the potential for, 1, 2, or 3 floats from Imperial Landing, in front and to the west of the pier only.
- (2) That the City immediately invite a ship, or ships, for a tall ship event in 2022, if possible.

ADOPTED ON CONSENT

14. APPLICATION FOR A PERMIT TO ALLOW FOR THE DISCHARGE OF FIREARMS AT 7340 SIDAWAY ROAD, RICHMOND

(File Ref. No. 12-8360-11-01; 01-0060-20-VGUN1; 11-7025-01) (REDMS No. 6654726 v. 12)

- (1) That the application by the Vancouver Gun Club for a permit to allow for the discharge of firearms under the City of Richmond's Regulating the Discharge of Firearms Bylaw No. 4183 for the property at 7340 Sidaway Road, Richmond be approved in the form and on the terms and conditions set out in APPENDIX "A" of this report, and that said permit be issued; and
- (2) That the General Manager, Community Services be authorized to sign and issue the permit.



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15. 2020 CONSOLIDATED FINANCIAL STATEMENTS (File Ref. No. 03-1200-02) (REDMS No. 6662721; 6662728)

Please see Page 9 for action on this item.

16. REFERRAL ON RENTAL AND AGE RESTRICTIONS IN FUTURE DEVELOPMENT

(File Ref. No. 08-4105-00; 12-8060-20-010257; 08-4057-01) (REDMS No. 6641008 v. 4; 6650881)

- (1) That Richmond Official Community Plan Bylaw 9000, Amendment Bylaw 10257, which would restrict a strata corporation from imposing rental and age restrictions in future rezoning applications for multiple family residential developments, be introduced and given first reading;
- (2) That Richmond Official Community Plan Bylaw 9000, Amendment Bylaw 10257, having been considered in conjunction with:
 - (a) the City's Financial Plan and Capital Program; and
 - (b) the Greater Vancouver Regional District Solid Waste and Liquid Waste Management Plans;

is hereby found to be consistent with said Program and Plans, in accordance with Section 477(3)(a) of the Local Government Act; and

(3) That Richmond Official Community Plan Bylaw 9000, Amendment Bylaw 10257, having been considered in accordance with Section 475 of the Local Government Act and the City's Official Community Plan Bylaw Preparation Consultation Policy 5043, is found not to require further consultation.



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CONSIDERATION OF MATTERS REMOVED FROM THE CONSENT AGENDA

15. 2020 CONSOLIDATED FINANCIAL STATEMENTS

(File Ref. No. 03-1200-02) (REDMS No. 6662721; 6662728)

In accordance with Section 100 of the *Community Charter*, Cllr. Au declared to be in a conflict of interest as his son is a member of Richmond Fire-Rescue, and Cllr. Au left the meeting -8:01 p.m.

R21/9-7 It was moved and seconded

- (1) That the staff report titled, "2020 Consolidated Financial Statements", dated April 16, 2021 from the Acting Director, Finance be received for information; and
- (2) That the 2020 City of Richmond Consolidated Financial Statements as presented in Attachment 2 be approved.

CARRIED

Cllr. Au returned to the meeting – 8:03p.m.

NON-CONSENT AGENDA ITEMS

GENERAL PURPOSES COMMITTEE Mayor Malcolm D. Brodie, Chair

17. PROPOSED TIDALLY INFLUENCED TERRA NOVA SLOUGH UPDATE

(File Ref. No. 06-2345-20-TNOV4) (REDMS No. 6656916 v. 8; 6651007; 6647527)



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R21/9-8 It was moved and seconded

That, as described in the report titled "Proposed Tidally Influenced Terra Nova Slough Update" dated April 13, 2021, from the Director, Parks Services, Option 1 (Floodbox with Self-Regulating Tide Gate) be endorsed for the purposes of design, costing and evaluation of habitat compensation benefit and be submitted for consideration in the 2022 budget process.

The question on the motion was not called as discussion ensued with regard to (i) researching options to minimize impact to salmon habitat and maximize flood protection, (ii) reviewing Federal grant funding available for the proposed project, (iii) reviewing the previous historical development of sloughs in the city, and (iv) reviewing the costs and the budget process to incorporate the proposed project.

As a result of the discussion, the following **referral motion** was introduced:

R21/9-9 It was moved and seconded That the report titled "Proposed Tidally Influenced Terra Nova Slough Update" dated April 13, 2021, from the Director, Parks Services, be referred back to staff.

> DEFEATED Opposed: Mayor Brodie Cllrs. Au Loo McNulty McPhail Steves

The question on the main motion was then called, and it was **CARRIED** with Cllr. Wolfe opposed.

PUBLIC DELEGATIONS ON NON-AGENDA ITEMS

R21/9-10 18. It was moved and seconded *That Council resolve into Committee of the Whole to hear delegations on non-agenda items (8:22 p.m.).*

CARRIED



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Raj Singh Toor, Vice President and Spokesperson, The Descendants of the Komagata Maru Society, briefed Council on the history of the Komagata Maru and encouraged the City examine memorial options to recognize the historical event in the city.

Discussion ensued with regard potential locations in the city for a memorial and consultation with appropriate community groups.

As a result of the discussion, the following **referral motion** was introduced:

R21/9-11 It was moved and seconded That the presentation from the The Descendants of the Komagata Maru Society be referred to staff to examine options to recognize the historical event in the city, in consultation with appropriate community groups, and report back.

CARRIED

R21/9-12 19. It was moved and seconded *That Committee rise and report (8:32 p.m.).*

CARRIED

PUBLIC ANNOUNCEMENTS AND EVENTS

Mayor Brodie noted the upcoming By-Election on May 29, 2021. He added that electors may choose to cast their ballots by mail and that more information is available on the City's website.

BYLAWS FOR ADOPTION

R21/9-13 It was moved and seconded *That the following bylaws be adopted:*

Development Cost Charges Imposition Bylaw No. 9499, Amendment Bylaw No. 10161

Works and Services Cost Recovery Bylaw No. 8752, Amendment Bylaw No. 10215



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Consolidated Fees Bylaw No. 8636, Amendment Bylaw No. 10262

Development Permit, Development Variance Permit and Temporary Commercial and Industrial Use Permit Procedure Bylaw No. 7273, Amendment Bylaw No. 10264

Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 9532 Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 9532

CARRIED

DEVELOPMENT PERMIT PANEL

R21/9-14 20. It was moved and seconded

- (1) That the minutes of the Development Permit Panel meeting held on April 28, 2021, and the Chair's report for the Development Permit Panel meetings held on July 26, 2017 and May 13, 2020, be received for information; and
- (2) That the recommendations of the Panel to authorize the issuance of:
 - (a) a Development Permit (DP 16-750045) for the property at 18399 Blundell Road; and
 - (b) a Development Permit (DP 19-853070) for the property at 9091 and 9111 No. 2 Road;

be endorsed, and the Permits so issued.

CARRIED

ADJOURNMENT

R21/9-15 It was moved and seconded *That the meeting adjourn (8:38 p.m.).*

CARRIED



Regular Council Monday, May 10, 2021

Certified a true and correct copy of the Minutes of the Regular meeting of the Council of the City of Richmond held on Monday, May 10, 2021.

Mayor (Malcolm D. Brodie)

Corporate Officer (Claudia Jesson)



Special Council Monday, May 17, 2021

Place:	Council Chambers Richmond City Hall
Present:	Mayor Malcolm D. Brodie Councillor Chak Au Councillor Carol Day (by teleconference) Councillor Alexa Loo (by teleconference) Councillor Bill McNulty (by teleconference) Councillor Linda McPhail (by teleconference) Councillor Harold Steves (by teleconference) Councillor Michael Wolfe (by teleconference) Councillor Michael Wolfe (by teleconference)
Call to Order:	Mayor Brodie called the meeting to order at 4:00 p.m.
RES NO. ITEM	

LAW AND LEGISLATIVE SERVICES DIVISION

1. CANCELLATION OF BUSINESS LICENCE ISSUED TO SHAMELESS BUNS INC. (DOING BUSINESS AS SHAMELESS BUNS)

(File Ref. No.: 12-8275-12) (REDMS No. 6662386 v. 2)

Matt Brennan and Corvette Romero, Shameless Buns, noted the following information:

- there are many letters of support and social media posts regarding food trucks in Steveston;
- the food truck brings in a large influx of traffic into Steveston;
- the current business licence was obtained legally and through proper channels;



Special Council Monday, May 17, 2021

RES NO. ITEM

- the food truck business supports the Steveston Hub;
- many Steveston merchants want and need the Shameless Buns food truck to increase business;
- Shameless Buns is looking to simply finish out the season at the current location and then move on; and
- if the only choice is a business licence cancellation than they are open to explore alternative locations.

In response to queries from Council, staff advised that (i) cancellation of their licence would be mean all locations in Richmond, (ii) Shameless Buns was offered alternative locations and they declined, (iii) should Shameless Buns wish to operate at an another location they can submit an application for a new business licence, (iv) two locations were offered to Shameless Buns and Salty's, Branscombe House and the Britannia Shipyards National Historic Site, (v) a cancellation of a business licence will be for all locations under that licence, and (vi) the fee for a new business licence is \$87 and an additional fee for amendments.

In reply to queries from Council, Mr. Brennan and Ms. Romero advised that Britannia Shipyards National Historic Site was not suitable as there was not sufficient traffic in the area.

In response to further queries from Council, staff noted that only the two sites were offered as they met all the criteria, such as sufficient parking, and close to washrooms.

- SP21/3-1 It was moved and seconded
 - (1) That Council, pursuant to s.60(3) of the Community Charter, cancel the business licence issued to Shameless Buns Inc. (doing business as Shameless Buns) for conducting or carrying on business at the private property locations of 3971 Bayview Street, City of Richmond, 3551 Moncton Street, City of Richmond, and 13575 Commerce Pkwy, City of Richmond.



Special Council Monday, May 17, 2021

RES NO. ITEM

(2) That Council adopt as its own the Reasons attached as APPENDIX "A" to the report titled "Cancellation of Business Licence Issued to Shameless Buns Inc. (doing business as Shameless Buns)", dated April 29, 2021, from the General Manager Community Safety, as Council's written reasons for the cancellation of the business licence contemplated by Recommendation 1 of this report.

The question on the motion was not called as discussion took place on examining other locations in Richmond, and as a result the following referral motion was introduced:

SP21/3-2 It was moved and seconded That the business licence cancellation for Shameless Buns be referred back to staff to further examine and consult with the proponents other locations in Richmond, such as Terra Nova and report back at a Special Council meeting on May 25, 2021.

> The question on the referral motion was not called as discussion took place on ensuring that the proponents have been offered more relocation options,

The question on the referral motion was then called and it was CARRIED.

ADJOURNMENT

SP21/3-3 It was moved and seconded *That the meeting adjourn (4:41 p.m.).*

CARRIED

Certified a true and correct copy of the Minutes of the Special meeting of the Council of the City of Richmond held on Monday, May 17, 2021.

Mayor (Malcolm D. Brodie)

Corporate Officer (Claudia Jesson)



Regular Council meeting for Public Hearings Monday, May 17, 2021

Place:Council Chambers
Richmond City HallPresent:Mayor Malcolm D. Brodie, Chair
Councillor Chak Au
Councillor Carol Day (by teleconference)
Councillor Alexa Loo (by teleconference)
Councillor Bill McNulty (by teleconference)
Councillor Linda McPhail (by teleconference)
Councillor Harold Steves (by teleconference)
Councillor Michael Wolfe (by teleconference)

Matthew O'Halloran, Acting Corporate Officer

Call to Order: Mayor Brodie opened the proceedings at 7:00 p.m.

1. TEMPORARY COMMERCIAL USE PERMIT (TU 20-905119)

(Location: 8351 River Road and Duck Island (Lot 87 Section 21 Block 5 North Range 6 West Plan 34592); Applicant: Firework Productions Ltd.)

Applicant's Comments:

In response to questions from Council, Raymond Cheung, Applicant, commented on:

- challenges consulting with neighbouring businesses due to COVID-19 closures;
- the schedule for the operation of the Night Market will be dependent upon the timing of the approval to open from the Ministry of Health; and
- discussions underway with Vancouver Coastal Health Authority to create guidelines and protocols for the event.

In response to questions from Council, staff provided the following information:



Regular Council meeting for Public Hearings Monday, May 17, 2021

- a temporary use permit of a three-year duration has historically been issued for the event;
- the noise management plan will address concerns raised by area residents;
- neighbouring businesses may liaise directly with the event organizer regarding traffic concerns; and
- the City will assist in facilitating the resolution of traffic concerns raised by neighbouring businesses.

Written Submissions:

Norman Kwan (Schedule 1)

Kathy Tung (Schedule 2)

Submissions from the floor: None.

PH21/5-1 It was moved and seconded That a Temporary Commercial Use Permit be issued to Firework Productions Ltd. for properties at 8351 River Road and Duck Island (Lot 87, Section 21 Block 5 North Range 6 West Plan 34592) for the purposes of permitting the following:

- (a) Night market event between May 21, 2021 to December 31, 2021 (inclusive) to allow for a maximum of 80 event operational days in accordance with identified dates and hours as outlined in Schedule C attached to the Temporary Commercial Use Permit;
- (b) Night market event between April 29, 2022 to October 16, 2022 (inclusive) for a maximum of 80 event operational days in accordance with identified dates and hours as outlined in Schedule C attached to the Temporary Commercial Use Permit;
- (c) Night market event between April 28, 2023 to October 15, 2023 (inclusive) for a maximum of 79 event operational days in accordance with identified dates and hours as outlined in Schedule C attached to the Temporary Commercial Use Permit; and



Regular Council meeting for Public Hearings Monday, May 17, 2021

(d) The night market event as outlined in the report dated March 17, 2021 from the Director of Development be subject to the fulfillment of all terms, conditions and requirements outlined in the Temporary Commercial Use Permit and attached Schedules.

CARRIED

Opposed: Cllrs. Day and Wolfe

2. RICHMOND ZONING BYLAW 8500, AMENDMENT BYLAW 10248 (RZ 19-873781)

(Location: 11240 Williams Road; Applicant: Benn Panesar)

Applicant's Comments:

The applicant was available to respond to queries.

Written Submissions:

None.

Submissions from the floor:

None.

In response to a question from Council, staff advised that no further improvements to the laneway are required for the development.

PH21/5-2 It was moved and seconded That Richmond Zoning Bylaw 8500, Amendment Bylaw 10248 be given second and third readings.

> CARRIED Opposed: Cllr. Wolfe

> > 3.

3. OFFICIAL COMMUNITY PLAN BYLAW 7100 AND 9000, AMENDMENT BYLAW 10258 AND RICHMOND ZONING BYLAW 8500, AMENDMENT BYLAW 10259

(Location: City-wide; Applicant: City of Richmond)

Applicant's Comments:

The applicant was available to respond to queries.

Written Submissions:

Balwant Sanghera, Indian Cultural Centre of Canada (Schedule 3)

Shannon Lambie, Agricultural Land Commission (Schedule 4)



Regular Council meeting for Public Hearings Monday, May 17, 2021

Shaun Driver, Pythagoras Academy Society (Schedule 5)

Mahmood Jaffer, Az-Zahraa Islamic Centre (Schedule 6)

Submissions from the floor:

Mahmood Jaffer, Director of Public Relations and Communications, Az-Zahraa Islamic Centre, provided the following comments:

- concern regarding the potential impact of the OCP amendment to the planned expansion of the Az-Zahraa Islamic Academy; and
- request that Council consider a site-specific allowance to permit the existing school expansion or any new educational development on the properties at 8320 and 8580 No. 5 Road be granted to the Shia Muslim Community of BC if the OCP amendment is approved.

Oscar Pozzolo, Principal, Az-Zahraa Islamic Academy, requested that Council reject the proposal and allow the work of the Highway to Heaven community to contribute to the success of the City.

Azmat Ali, Chair, School Board of Az-Zahraa Islamic Academy, provided the following comments:

- the OCP amendment will prevent the expansion that will allow the Az-Zahraa Islamic Academy to provide education through to Grade 12;
- the on-site Sunday School is at capacity and has a waitlist; and
- request that Council grandfather organizations that have invested significant resources in planning for future expansions.

The following information was provided in response to questions from Council:

- the proposed expansion will accommodate an additional 300 students; and
- the proposed expansion would not require the use of farmland.

Murtaza Bachoo, Board Member, Az-Zahraa Islamic Academy, provided the following comments:

- concern that the Az-Zahraa Islamic Academy will be unable to grow as a religious institution without the ability to grow the educational institution;
- the importance of educational institutions in building a sense of community; and
- request that a site-specific exemption be granted for properties at 8320 and 8580 No. 5 Road.

Chris Wilson, Church on Five, expressed his support for the comments provided by the preceding delegations.



Regular Council meeting for Public Hearings Monday, May 17, 2021

Shaun Driver, Broughton Law for Pythagoras Academy Society, suggested that the Agricultural Land Commission (ALC) has not provided all relevant information to the City of Richmond and requested the matter be adjourned until the public is afforded the opportunity to review all relevant information when it is provided.

Eric Chu, Richmond Christian School, expressed concern that the OCP amendment will hinder the ability to expand to accommodate growing demand and to build its community. Mr. Chu requested a site-specific allowance be provided for the future expansion of the Richmond Christian School.

Michael Lipton, Board Chair, Richmond Jewish Day School, expressed concerns with the OCP amendment and its impact on the facilities in the area to continue to serve their community members and grow as institutions.

Mr. Jaffer further commented that the requirement to seek an OCP exception, in addition to the regular development permit process, will result in an additional hurdle for the Shia Muslim Community of BC.

In response to questions from Council, staff provided the following information:

- the bylaw amendment is consistent with the recently communicated ALC decision;
- facilities have an option to apply for an exemption to the ALC policy;
- the requested site-specific allowances are premature as any development proposals would be subject to the ALC application and approval process;
- The existence of City policies that do not align with ALC regulations may result in the Backlands Policy being rescinded; and
- educational activity is not a permitted use in industrial zones.

Discussion ensued on:

- alignment of the ALC policy with the original designation for the properties;
- schools are not a permitted use in the Agricultural Land Reserve (ALR) and would require an application for non-farm use to the ALC; and
- the benefit of educational institutions exploring satellite facilities and distance learning.

6672778

Regular Council meeting for Public Hearings Monday, May 17, 2021

PH21/5-3	It was moved and seconded <i>That Richmond Official Community Plan Bylaw 7100 and 9000,</i> <i>Amendment Bylaw 10258 be given second and third readings.</i>
	CARRIED
	Opposed: Cllr Au
PH21/5-4	It was moved and seconded That Richmond Zoning Bylaw 8500, Amendment Bylaw 10259 be given second and third readings.
	CARRIED
PH21/5-5	It was moved and seconded <i>That Richmond Official Community Plan Bylaw 7100 and 9000,</i> <i>Amendment Bylaw 10258 be adopted.</i> CARRIED
PH21/5-6	It was moved and seconded That Richmond Zoning Bylaw 8500, Amendment Bylaw 10259 be adopted. CARRIED
	ADJOURNMENT
DU21/5 7	It was moved and seconded

PH21/5-7 It was moved and seconded *That the meeting adjourn (8:56 p.m.).*

CARRIED



Minutes

CADDIED



Regular Council meeting for Public Hearings Monday, May 17, 2021

Certified a true and correct copy of the Minutes of the Regular meeting for Public Hearings of the City of Richmond held on Monday, May 17, 2021.

Mayor (Malcolm D. Brodie)

Acting Corporate Officer (Matthew O'Halloran)

CityClerk

From: Sent: To: Subject: Schedule 1 to the Minutes of the Public Hearing meeting of Richmond City Council held on Monday, May 17, 2021.

kathy tung <kathytung328@gmail.com> May 4, 2021 10:23 PM CityClerk Public hearing of temporary commercial use permit TU 20-905119

City of Richmond Security Warning: This email was sent from an external source outside the City. Please do not click or open attachments unless you recognize the source of this email and the content is safe.

To whom it may concern,

My name is Norman Kwan. I'm the president of 1083512 BC Ltd which owns 2780 No.3 Road.

I highly object to the permit of allowing a night market event at <u>8351 River Road</u> between <u>May 21st to December 31,</u> <u>2021</u>.

1) It allows huge amount of people gathering and eating in a venue even it's open space. It pose high risk of COVID 19 to the community around. Patrons would not be wearing mask while eating. From past experience, it is not possible to maintain the proper social distancing and there are way too many food stalls and kiosks in the venue and I do not trust the organizer is able to maintain proper hygiene and enforce public health requirement as from what I observed from night market before. It's always messy, chaotic and dirty.

2) The congestion of traffic on No.3 Road and Bridgeport on Fridays, Saturdays & Sundays <u>starting 6pm to 10pm</u>did tremendous impact to businesses on No.3 Road and the area close to night market from last few years. Instead of enjoying busy weekend with venues full of customers like most other businesses in summer, the restaurants in the area were empty as the congestion in traffic turned customers away. There's parking allowed on No.3 Road & streets around so how would customers come to the businesses at all. The economic damage to businesses around is unfair as they are tax payers contributing the city as well. The only party largely benefits from the night market is the organizer who obviously is making huge amount of money but is it fair to others at all? So the business owners around it have to be treated unfairly because they are small business owners? They have to absorb the entire financial burden again! Businesses have suffered badly due to COVID and a summer without enough customers would kill all of them.

3. It doesn't make sense to have night market until December at all. If the city is still ignoring the risk of spreading COVID & not complying with public health and ignoring the tremendous damage to at least 50% of revenue for businesses around, it should only grant them to operate until Labour Day as people have to go back to regular routines after summer any way and it's only fair to businesses around to resume their regular business to survive!!!

4. Parking should be allowed on No.3 Road, Beckwith road, Sexsmith Road, Douglas street during night market as customers of businesses around have to park too! Night market should not open before <u>8pm</u> to allow businesses around serving enough customers to survive before the traffic gets worse. Night market should detour their patrons not to use <u>No.3 Road and Bridgeport street</u>to enter and exit the market. Instead they should only use Great Canadian Way and River Road which can help to ease the damages to businesses around the area.

5. Number of food stalls and booths should be reduced to 50% capacity just like all other businesses in province to minimize the risk of spreading COVID according to public health. They have to limit number of patrons to 50% as well by only selling that number of tickets. No one should be allowed walk in without pre purchasing tickets. COVID protocols must be strictly enforced. Every patron must maintain 6 feet social distancing. There should not be congregation allowed at the night market at all. I am not sure how this can be enforced as people all seemed to gather together to eat from past experience.

Thank you for your attention.

Norman Kwan

CityClerk

From: Sent: To: Subject: Schedule 2 to the Minutes of the Public Hearing meeting of Richmond City Council held on Monday, May 17, 2021.

KATHY tung <kathytung@yahoo.com> May 4, 2021 10:19 PM CityClerk Public hearing for temporary commercial use permit (TU 20-905119)

City of Richmond Security Warning: This email was sent from an external source outside the City. Please do not click or open attachments unless you recognize the source of this email and the content is safe.

To whom it may concern,

My name is Kathy Tung. I'm CEO of HKY Investment Inc. which owns 8820 Beckwith Road, Richmond, BC.

I object to the permit of allowing a night market event at 8351 River Road between May 21st to December 31, 2021.

1) It allows huge amount of people gathering and eating in a venue even it's open space. It pose high risk of COVID 19 to the community around. Patrons would not be wearing mask while eating. From past experience, it is not possible to maintain the proper social distancing and there are way too many food stalls and kiosks in the venue and I do not trust the organizer is able to maintain proper hygiene and enforce public health requirement as from what I observed from night market before. It's always messy, chaotic and dirty.

2) The congestion of traffic on No.3 Road and Bridgeport on Fridays, Saturdays & Sundays starting 6pm to 10pm did tremendous impact to businesses on No.3 Road and the area close to night market from last few years. Instead of enjoying busy weekend with venues full of customers like most other businesses in summer, the restaurants in the area were empty as the congestion in traffic turned customers away. There's parking allowed on No.3 Road & streets around so how would customers come to the businesses at all. The economic damage to businesses around is unfair as they are tax payers contributing the city as well. The only party largely benefits from the night market is the organizer who obviously is making huge amount of money but is it fair to others at all? So the business owners around it have to be treated unfairly because they are small business owners? They have to absorb the entire financial burden again! Businesses have suffered badly due to COVID and a summer without enough customers would kill all of them.

3. It doesn't make sense to have night market until December at all. If the city is still ignoring the risk of spreading COVID & not complying with public health and ignoring the tremendous damage to at least 50% of revenue for businesses around, it should only grant them to operate until Labour Day as people have to go back to regular routines after summer any way and it's only fair to businesses around to resume their regular business to survive!!!

4. Parking should be allowed on No.3 Road, Beckwith road, Sexsmith Road, Douglas street during night market as customers of businesses around have to park too! Night market should not open before 8pm to allow businesses around serving enough customers to survive before the traffic gets worse. Night market should detour their patrons not to use No.3 Road and Bridgeport street to enter and exit the market. Instead they should only use Great Canadian Way and River Road which can help to ease the damages to businesses around the area.

5. Number of food stalls and booths should be reduced to 50% capacity just like all other businesses in province to minimize the risk of spreading COVID according to public health. They have to limit number of patrons to 50% as well by only selling that number of tickets. No one should be allowed walk in without pre purchasing tickets. COVID protocols must be strictly enforced. Every patron must maintain 6 feet social distancing. There should not be congregation allowed at the night market at all. I am not sure how this can be enforced as people all seemed to gather together to eat from past experience.

Thank you for your attention.

Kathy Tung
Schedule 3 to the Minutes of the Public Hearing meeting of Richmond City Council held on Monday, May 17, 2021.

TO: MAYOR & EACH COUNCILLOR FROM: CITY CLERK'S OFFICE

CityClerk

From: Sent: To: Cc: Subject: Balwant Sanghera <b_sanghera@yahoo.com> May 12, 2021 5:53 PM CityClerk Fred Sidhu Notice of Public Hearing

City of Richmond Security Warning: This email was sent from an external source outside the City. Please do not click or open attachments unless you recognize the source of this email and the content is safe.

Hello. On behalf of India Cultural Centre of Canada Gurdwara Nanak Niwas,8600 Number 5 Road, Richmond, I would like to submit that we are fine with the status quo and are in favour of the proposed amendments. Balwant Sanghera, General Secretary, India Cultural Centre of Canada Gurdwara Nanak Niwas, 8600 Number 5 Road, Richmond.

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MAY 17 2021 RC.

Schedule 4 to the Minutes of the Public Hearing meeting of Richmond City Council held on Monday, May 17, 2021.

May 17 Public Hearing (Bylaws 10258 & 10259) - ALC Correspondence



To: Cc: Subject: **Attachments:**

From:

Sent:

- TO: MAYOR & EACH COUNCILLOR / FROM: CITY CLERK'S OFFICE **Categories:**

46633m2 - ALC Response.pdf

Hello,

Please see attached correspondence from the ALC in regards to Bylaws 10258 & 10259 for the May 17 Public Hearing.

Regards, Kevin Eng Planner 2, Policy Planning Department, City of Richmond 604-247-4626; keng@richmond.ca; www.richmond.ca

Eng,Kevin



PHOTOCOPED





Agricultural Land Commission 201 – 4940 Canada Way Burnaby, British Columbia V5G 4K6 Tel: 604 660-7000 | Fax: 604 660-7033 www.alc.gov.bc.ca

May 12, 2021

Reply to the attention of Shannon Lambie ALC Planning Review: 46633

Kevin Eng Planner 2, Policy Planning Department, City of Richmond <u>keng@richmond.ca</u>

DELIVERED ELECTRONICALLY

Re: Official Community Plan Bylaw 9000, Amendment Bylaw 10258 and Bylaw 10259 No 5 Road Backlands Policy

Thank you for forwarding a draft copy of the Richmond Official Community Plan (the "OCP") Bylaw 7100 and 9000, Amendment Bylaw 10258 (the "Amendment Bylaw 10258") and the Richmond Zoning Bylaw 8500, Amendment Bylaw 10259 (the "Amendment Bylaw 10259") for review and comment by the Agricultural Land Commission (ALC). The following comments are provided to help ensure that the Amendments are consistent with the purposes of the *ALC Act*, the Agricultural Land Reserve (ALR) General Regulation, the ALR Use Regulation, and any decisions of the ALC.

The Amendment Bylaws are proposed by the City in response to ALC Resolution #078N/2020, which requested revisions to the City's Number 5 Road Backlands Policy. These requested revisions were communicated in a January 21, 2021 letter to the City's Mayor and Council.

Amendment Bylaw 10258 proposes to revise Schedule 1 of the City of Richmond's (the "City") OCP (Bylaw 9000; Section 7.3), the *No. 5 Road Backlands Policy* and Schedule 2.13A of the City's OCP (Bylaw 7100), the *East Richmond Area McLennan Sub-Area Plan* in order to clarify permitted uses and related policies for religious assembly use.

ALC staff note the following changes to Schedule 2.13A of the City's OCP (Bylaw 9000), the No. 5 Road Backlands Policy

a) The second paragraph in the overview subsection in Section 7.3 (No. 5 Road Backlands Policy) has been deleted and replaced with:

"The purpose of the Policy is to allow Religious Assembly uses on the westerly 110 m ("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.

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020.

b) The Objective subsection contained in Section 7.3 has been deleted and replaced with:

"Religious Assembly uses may be permitted in the Frontlands if the Backlands are actively farmed."

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020.

- c) Clauses a), b), c), and g) under the Policies subsection in Section 7.3 have been deleted and replaced as follows:
 - a. in the Frontlands, Religious Assembly uses may be considered subject to the agricultural development of the Backlands, which is to be considered and approved by the City and the Agricultural Land Commission through the necessary land use approval process;

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020.

 b. in the Frontlands, uses that are clearly ancillary to a Religious Assembly use may be considered and approved by the City and the Agricultural Land Commission through the necessary land use approval process;

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020. The intent of the Policy is to permit Religious Assembly uses, subject to farming being undertaken on the property. ALC staff acknowledge that uses that are clearly ancillary, i.e., limited in scope, scale, and duration as compared to the religious worship, may also be considered in conjunction with Religious Assembly uses.

 residential uses (e.g., congregate housing, community care facility, multiplefamily housing, housing for older adults) are not permitted in the Frontlands or the Backlands;

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020. Restricting residential uses in the Policy area is an important step in strengthening the Policy.

- g. all applicants proposing to develop new Religious Assembly facilities on the Frontlands or expand an existing Religious Assembly facility must either:
 - provide evidence of Farm Status under the BC Assessment Act to demonstrate that the subject parcel has been farmed for the five consecutive years preceding the ALC's consideration of an application, or (if no ALC approval is required) the City's processing of a rezoning application; or
 - provide evidence that the Backlands portion of the subject parcel is currently available for farming via a lease registered on title between the property owner and a legitimate farming enterprise for a term of at least five years, and either:
 - o provide evidence that the parcel is currently being farmed; or

o provide a plan for how it will be farmed;

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020.

d) adding the following new clause h) under the Policies subsection contained in Section 7.3 after clause g):

" h) applicants shall submit the necessary reports to the City to achieve and maintain farming with all costs to implement works associated with an approved farm plan to be paid by the applicant;"

ALC staff do not object to this change.

,

e) deleting clause a) in the Development Application Procedure and Requirements subsection contained in Section 7.3 and replacing it with the following:

"a) all proposals for Religious Assembly 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;"

ALC staff do not object to this change.

 f) deleting the words "Community Institutional" in the first line of clause b) in the Development Application Procedure and Requirements subsection contained in Section 7.3 and replacing them with the words "Religious Assembly";

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020.

ALC staff note the following changes to Schedule 2.13A of the City's OCP (Bylaw 7100), the *East Richmond Area McLennan Sub-Area Plan:*

 a) deleting the second paragraph in the Issue subsection contained in Section 6.0 (Community Facilities and Services) of the East Richmond Area McLennan Sub-Area Plan (Schedule 2.13A) and replacing it with the following:

"The 110 m (361 ft.) strip along the east side of No. 5 Road, from the first lot on the north side of Blundell Road south to Francis Road, and the lots fronting the south side of Blundell Road, between No. 5 Road and Highway 99, lends itself to agriculture and religious assembly uses."

ALC staff do not object to this change.

 b) deleting clause a) in the Policies subsection contained in Section 6.0 of the East Richmond Area McLennan Sub-Area Plan (Schedule 2.13A) and replacing it with the following:

> "a) Require that land use and development in Agriculture and Religious Assembly designated areas in the accompanying Land Use Map are consistent with the provisions of the No. 5 Road Backlands Policy contained in Official Community Plan Bylaw 9000 (Section 7.3);"

ALC staff do not object to this change.

 amending the Land Use Map legend in the East Richmond Area McLennan Sub-Area Plan (Schedule 2.13A) to retitle the Agriculture, Institutional and Public designation as "Agriculture and Religious Assembly"

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020.

 d) deleting the definition of "Agriculture, Institutional and Public" contained in Appendix I in the *East Richmond Area McLennan Sub-Area Plan* (Schedule 2.13A) and replacing it with the following:

"Agriculture and Religious Assembly: Land uses that are consistent with the provisions of the No. 5 Road Backlands Policy contained in Official Community Plan Bylaw 9000 (Section 7.3)".

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020.

Amendment Bylaw 10259 proposes to revise the *Assembly* (ASI) zoning district to restrict the permitted and secondary uses for areas within the No. 5 Road Backlands Policy area located in the ALR and revise the *Religious Assembly No. 5 Road* (ZJS7) zoning district to restrict permitted and secondary uses in this zone, and finally to revise the "religious assembly use definition". ALC staff note the following changes to the Richmond Zoning Bylaw 8500:

a) deleting "private club" in Section 13.3.3 (Secondary Uses) of the Assembly (ASY) zoning district (13.3), and replacing it with "child care";

ALC staff do not object to this change.

b) deleting Section 13.3.11.3 of the Assembly (ASY) zoning district (13.3), and replacing it with the following:

"3. Within the area bounded by the bold black line shown in Diagram 1:

religious assembly shall be the only permitted principal use;

child care shall only be permitted as a secondary use; and

education and private club are not permitted;

4. Notwithstanding Section 13.3.11.3.c), education shall be permitted on the following site only and subject to the applicable approval granted by the Agricultural Land Commission, in accordance with the Agricultural Land Commission Act (as amended), prior to the date of adoption of Amendment Bylaw 10259:

12011 Blundell Road

PID: 002-555-310

5. For any site that is located in the Agricultural Land Reserve, any a) change in the principal use or secondary use on the site; or b) increase in the scale, extent or degree of a permitted principal use or secondary use of land on the site;

after the date of adoption of Bylaw 10259, must be approved by the Agricultural Land Commission in accordance with the Agricultural Land Commission Act (as amended)."

ALC staff do not object to these changes. The ALC approved the development of church and school facilities on the westerly 2.4 ha section of the Property identified as PID: 002-555-310 (ALC Resolution #45/88).

c) deleting "child care" and "education" in Section 24.7.2 (Permitted Uses) of the Religious Assembly (ZIS7)- No. 5 Road Zoning District (24.7);

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020.

d) adding "child care" as a new bullet in Section 24.7.3 (Secondary Uses) of the Religious Assembly (ZIS7) - No. 5 Road Zoning District (24.7); and

ALC staff do not object to this change.

e) deleting the definition of "religious assembly" in Section 3.4 (Use and Term Definitions), and replacing it with the following:

"Religious assembly means a building wherein people regularly assemble for religious worship and related activities which may include churches, chapels, mosques, temples, synagogues, convents and monasteries, and as an accessory use, a rectory or a manse and religious educational activities. This use does not include education nor any other uses defined separately."

ALC staff do not object to this change. It is consistent with ALC Resolution #078N/2020.

The ALC strives to provide a detailed response to all referrals affecting the ALR; however, you are advised that the lack of a specific response by the ALC to any draft provisions cannot in any way be construed as confirmation regarding the consistency of the submission with the ALCA, the Regulations, or any decisions of the Commission.

This response does not relieve the owner or occupier of the responsibility to comply with applicable Acts, regulations, bylaws of the local government, and decisions and orders of any person or body having jurisdiction over the land under an enactment.

If you have any questions about the above comments, please contact the undersigned at 236-468-2026 or by e-mail (<u>shannon.lambie@gov.bc.ca</u>).

Yours truly,

PROVINCIAL AGRICULTURAL LAND COMMISSION

S'Lambie

Shannon Lambie, Regional Planner

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Schedule 5 to the Minutes of the Public Hearing meeting of Richmond City Council held on Monday, May 17, 2021.

TO: MAYOR & EACH COUNCILLOR FROM: CITY CLERK'S OFFICE



Thank you for your email and letter. Please note that copies will be provided to the Mayor and each Councillor in advance of the Public Hearing on May 17. In addition, your comments will be received by John Hopkins, Director, Policy Planning.

Sincerely

Matt O'Halloran | Manager, Legislative Services City of Richmond | 6911 No.3 Road, Richmond, BC V6Y 2C1 Phone: 604-276-4098 | Fax: 604-278-5139 Email: <u>mohalloran@richmond.ca</u>

Richmond

From: Kelly McCaffrey <kmccaffrey@boughtonlaw.com> Sent: May 14, 2021 10:04 AM To: MayorandCouncillors <MayorandCouncillors@richmond.ca>; shannon.lambie@gov.bc.ca Cc: Shaun Driver <sdriver@boughtonlaw.com> Subject: Pythagoras Academy Society - Richmond Zoning Bylaw 8500, Amendment Bylaw 10259 [BLC-ACTIVE.FID1781705]

City of Richmond Security Warning: This email was sent from an external source outside the City. Please do not click or open attachments unless you recognize the source of this email and the content is safe.

Good morning,

We are legal counsel for Pythagoras Academy Society who own property at 9500 No. 5 Road.

Please see attached our letter with respect to the above noted matter.

We look forward to hearing from you.

Regards,

Kelly McCaffrey, Legal Administrative Assistant P 604 647 4110

Boughton Law Corporation 700 - 595 Burrard Street | Vancouver, BC V7X 1S8 | P 604 687 6789 | F 604 683 5317 Blog | Member of Meritas 17年1月1月21年月截至1





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May 14, 2020

File #: 93201.1 Direct: 604 647 4154 Email: sdriver@boughtonlaw.com

EMAIL (mayorandcouncillors@richmond.ca)

City of Richmond 6911 No. 3 Road Richmond, British Columbia V6Y 2C1

Attention: City of Richmond Mayor and Council

Dear Sirs and Mesdames:

EMAIL (shannon.lambie@gov.bc.ca)

Agricultural Land Commission 201-4940 Canada Way Burnaby, BC 5G 4K6

Attention: Shannon Lambie

Re: Richmond Zoning Bylaw 8500, Amendment Bylaw 10259

We write with respect to Amendment Bylaw 10258 being a Bylaw to amend Bylaws 7100 and 9000 to revise permitted uses and related policies for religious assembly use in the No. 5 Road Backlands Policy Area (Schedule 1) (the "**Backlands Policy**") and the East Richmond Area McLennan Sub-Area Plan (Schedule 2.13A) (the "**Proposed Bylaw**"). We are legal counsel for Pythagoras Academy Society who own property at 9500 No. 5 Road.

SUMMARY

The Agricultural Land Commission ("ALC") have provided a letter that contains contradicting statements. The ALC purports to rely on a previous resolution to justify limiting land-use to "Religious Assembly". However, review of the resolution shows the resolution specifically allows land-use beyond "Religious Assembly", namely Assembly District, School, and Public Uses (ie. public park, public recreation facility, municipal works, health and safety measures, and community use). The obvious and apparent disconnect has not been explained.

The public cannot be anticipated to reconcile or understand how the decision was reached to approve the Proposed Bylaw which results in a substantial change to the Official Community Plan, a seminal planning document for the City of Richmond. The result is an significant altering to the visioning document of the city without adequate and thoughtful deliberation.

The duty of procedural fairness demands that clear and meaningful reasons for decisions be provided. Decision makers must transparently demonstrate the rationale behind decisions. This has not been done.

The City of Richmond and ALC have an obligation to provide full information and to rectify and explain the inconsistency. To do otherwise, is a breach of their duty and, in these circumstances, subject to judicial review if the Proposed Bylaw is passed as currently presented.

The appropriate action is to adjourn the public hearing, provide the particulars to the public of how the decision of the ALC was developed such that the public may make an informed decision.

TH MERITAS" LAW FIRMS WORLDWIDE

CNCL – 47

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REVIEW

Inconsistency in ALC Communication

On January 21, 2021, Jennifer Dyson, Chair of the ALC authored a letter to Mayor and Council (the "ALC Letter"). The ALC Letter identifies months of discussion regarding the Backlands Policy and issues arising following a 2017 review and on learning that an OCP bylaw amendment occurred in Richmond without review and endorsement of the ALC.

The ALC Letter discusses policy concerns related to its mandate to protect farmland and encourage farming, and in particular, whether the Policy had been effective in encouraging agricultural activity on the Backlands. The ALC Letter's focus is, appropriately, agricultural with one exception. That exception cannot be reconciled with the source for which the statement relies.

On page 3, the ALC Letter asserts that it wishes to re-affirm the ALC's support for its Resolution #147/2000 titled the "Amended No. 5 Road Backlands Policy (Endorsed by Planning Committee on March 21, 2000)" (the "2000 Resolution"). The undersigned has confirmed the 2000 Resolution is actually #174/2000 with Shannon Lambie of the ALC. Irrespective of the typographical error, the issue is that the 2000 Resolution is not included in the materials considered by City Council or the public within the City of Richmond Agenda or the Report to Committee of John Hopkins dated April 8, 2021 that was provided to City Council prior to First Reading of the Proposed Bylaw and included in the package to the public.

More concerning, the ALC Letter intimates in subparagraph (e) on page 3 that the 2000 Resolution limits use to "existing Religious Assembly use on the Frontlands" and specifically:

"The City of Richmond is asked to update their Assembly and Institutional Zoning Bylaw to limit the uses permitted in the Backlands Policy area. The intent of the original policy was to support religious assembly uses (i.e. places of worship) – not to permit residential or educational activities that are adjacent to religious assembly." (emphasis added)

The dilemma is that the conclusion in the ALC Letter is antithetical to the language of #174/2000. Specifically, the 2000 Resolution states:

1. The area outlined in bold lines as "Area Proposed for Public and Institutional Use" on the accompanying plan dated 01/24/00 may be considered for non-farm use.

2. The types of non-farm use which may be considered are:

- > "Assembly District" uses, and
- Certain "School / Public Use District" uses (i.e. public park, public recreation facility, municipal works, health and safety measures, community use). (emphasis added)

The disconnect is obvious and apparent. The ALC purports to limit uses to Religious Assembly while reaffirming a resolution that allows uses other than Religious Assembly.

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Significance of the OCP

The OCP is a "statement of objectives and policies to guide decisions on planning and land use management, within the area covered by the plan, respecting the purposes of local government¹ (s. 471 of the *Local Government Act*, R.S.B.C. 2015, c. 1). The City of Richmond appropriately describes the OCP as a "... statement of its long-term future community planning vision by describing the kind of community into which the City wishes to evolve.¹² It is ultimately a statement of objectives and policies to guide decisions on planning and land use management, respecting the purposes of local government.³ In short, the OCP is a fundamental as is represented by three major rounds of community consultation and over 30 Open Houses over a 2 ½ year period.⁴

Duty of Fairness

At the heart of municipal governance is the obligation of fairness. As described by the Office of the Ombudsperson, fairness allows people to be heard. It also requires decisions to be based on relevant information. The Ombudsperson states:

"[Fairness] is also about making decisions that are considerate of the individual's needs and circumstances and based on relevant information. Fairness is also about providing clear and meaningful reasons for decisions so the person affected can understand what process your organization followed and how it came to the decision it did.

By following a fair process, members of the public can better understand the reasons for decisions being made by those in positions of authority. It helps to build public trust in public services if decision makers can clearly demonstrate and explain how and why decisions are made. We find in our work that when public bodies deliver their services in a fair and transparent manner, people are more likely to accept a decision or outcome, even when they don't agree with the decision itself." (emphasis added)

In the circumstances, there is an obvious and apparent incongruity in the statements of the ALC. The reasons for the decision are not clear and meaningful. The public is not in a position to understand the reason for decisions being made by those in a position of authority, to approve the Proposed Bylaw as presented or to assess the legality of the purported change.

To approve the Proposed Bylaw as presented would be patently unfair and would breach the City of Richmond's duties of procedural fairness and natural justice especially considering the Proposed Bylaw serves to impart substantive changes to a fundamentally important document,

The requirements of procedural fairness and natural justice equally apply to the ALC. Further, the ALC is additionally obligated to satisfy purposes pursuant to section 6 of the *Agricultural Land Commission Act*.⁵

The issue is this – the public is left in no position to review, understand, or appreciate the context as to how the ALC came to decide that the Backlands Policy should be restricted to "Religious Assembly," irrespective of

¹ Local Government Act, R.S.B.C. 2015, c. 1, s. 471 ("LGA")

² Official Community Plan (OCP) Schedule 1 of Bylaw 9000: 2041 OCP – Moving Towards Sustainability, City of Richmond, November 19, 2012 at pg. 1-1 ("OCP")

³ LGA, supra, s. 474(1)

⁴ OCP, *supra*, at pg. 1-2

⁵ Agricultural Land Commission Act, SBC 2002, c. 36

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whether it was in their mandate to do so. The ALC Letter conflicts with the stated policy it explicitly states that it relies on. It is incumbent on the City of Richmond to allow the public an opportunity to understand the reasons for a decision being made by providing the public with the information necessary to make a knowledgeable decision.

The appropriate action is to adjourn the public hearing, provide the particulars to the public of how the decision of the ALC was developed such that the public may make an informed decision.

Yours truly,

BOUGHTON LAW CORPORATION

Per: Shaun C, Driver

SCD/km

Encl: Amended No. 5 Road Backlands Policy - Resolution #174/2000

ALRA - Minutes

Resolution #174/2000 Application #19621

MINUTES OF THE LAND RESERVE COMMISSION

Minutes of a meeting by the Land Reserve Commission (the "Commission") held on August 24, 2000 at the Commission's offices at 4940 Canada Way, Burnaby, B.C.

Present:

G. Horn C. Hunt R. Veiner Commissioner Commissioner Commissioner

Staff Present: Bruce Gunn, Planning Officer and Sherry Sumpton, Regional Research Officer

Consideration of LRC File #19621 regarding the No. 5 Road Back Lands Policy submitted by the City of Richmond.

Staff Report

Planning Officer Bruce Gunn presented his report dated July 25, 2000.

Discussion

The Commission acknowledged that the current Policy represents the final stage of a consultation process with the City. The Commission has reviewed and commented on previous drafts of the Policy. The Commission concluded that the March 21/2000 version of the Policy incorporates the Commission's previous comments. As a result, the Commission agreed to endorse the Policy as presented. Therefore;

IT WAS

MOVED BY: Commissioner C. Hunt SECONDED BY: Commissioner R. Veiner

THAT the Staff Report be received and that the Commission endorse the March 21/2000 "Amended No. 5 Road Back Lands Policy" as presented and communicate same to the City of Richmond.

Carried.

September 8, 2000

Reply to the attention of Bruce Gunn.

J. Richard McKenna City Clerk City of Richmond 6911 No. 3 Road Richmond, B.C. V6Y 2C1

Dear Sir:

RE: No. 5 Road Back Lands Policy Our File: #50-O-RICH-85-19621

Thank you for forwarding to the Commission a copy of the March 21, 2000 No. 5 Road Back Lands Policy. The Commission acknowledges, with the appreciation, the work undertaken by the City in the development of this Policy. We note that the Policy includes the comments and suggestions made by the Commission as per our review of previous drafts of the Policy. Based on the co-operative and collaborative approach established between the City and the Commission we view the March 21, 2000 Policy as the final document in this process. By **Resolution #174/2000** the Commission is pleased to endorse the March 21, 2000 No. 5 Road Back Lands Policy as presented by the City and will use this Policy as a basis for dealing with Agricultural Land Reserve applications in this area of Richmond. If you have any questions please contact Bruce Gunn, Planning Officer at 660-7019.

Yours truly,

LAND RESERVE COMMISSION

As Per:

Alan Chambers, Chair

BG/I:19621d5.doc

March 22, 2000

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AMENDED NO. 5 ROAD BACKLANDS POLICY (Endorsed by Planning Committee on March 21, 2000)

CITY POLICIES

- 1. The area outlined in bold lines as "Area Proposed for Public and Institutional Use" on the accompanying plan dated 01/24/00 may be considered for non-farm use.
- 2. The types of non-farm use which may be considered are:
 - *Assembly District* uses, and
 - Certain "School / Public Use District" uses (i.e., public park, public recreation facility, municipal works, health and safety measures, community use).
- 3. The amount of land on each property which may be developed for approved non-farm uses is limited to the westerly 110 m (360,892 ft) for properties fronting onto No. 5 Road.
 - The remaining back land portion of each property shall be retained for farm use only.
- Satisfactory sanitary sewage disposal is required as a condition of Development Permit approval.

5. Continue to strive for a partnership approach, with back land owner prepared farm plans to achieve farming, but allow for a limited infrastructure component (e.g., little or no regional and on-site drainage, irrigation or access roads), where a full infrastructure component is not practical.

- The current moratorium on non-farm use approvals (initiated by the Land Commission and adopted by Council in February, 1996) should be retained and may be lifted on an individual lot basis for owners who:
 - a) prepare farm plans;
 - b) explore farm consolidation;
 - c) commit to do any necessary on-site infrastructure improvements;
 - d) co-operate as necessary to remove constraints (e.g., required infrastructure) to farming the back lands, in partnership with others; and
 - e) commit to legal requirements as may be stipulated by Council to achieve acceptable \sim land uses (e.g., farming the back lands).
 - f) undertake active farming of the back lands.
- 7. The following procedure will apply when considering applications for non-farm use and Assembly District rezoning.

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CNCL – 53

March 22, 2000

Approvals Procedure
Proponent applies to City and Commission for non-farm use approval.
Commission reviews proposal and may give approval in principle for non-farm use based
on the proponent:
preparing an acceptable farm plan;
entering into a restrictive covenant;
 providing a financial guarantee to farm; and
agreeing to undertake active farming first
Proponent undertakes active farming based on the approved farm plan.
Commission gives final approval for non-farm use.
Proponent applies to City for rezoning of site to Assembly District (ASY).
City approves rezoning application after proponent meets all City requirements.

Amendments to the above policies

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If either the City or the Land Commission intends to amend any of the above procedures, the initiating party will advise the other party of this intent and seek comment on the proposed amendments prior to concluding any approvals.

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Co-ordination of review process

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

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CNCL – 54

LAND COMMISSION POLICIES (for information)

In addition to the City policies described above, the Land Commission policies also apply to the No. 5 Road back lands.

The Commission's policies may change from time to time.

Currently (i.e., February, 2000), the Commission's policies are as follows:

- 1. Proponents must prepare farm plans that:
 - describe how the proponent intends to bring the back land portion of the subject site into commercial scale agricultural production (i.e., type and method of farming)¹, and
 - describe the net agricultural benefits that will be created.

Indicators of net agricultural benefits include:

- consolidation of parcels,
- Improved road access to the subject and adjacent sites,
- Iong term agricultural lease options,
- non-farm infrastructure improvements (including fencing and buffering) and/or improvements to adjacent sites,
- > options for more intensive farm use than is currently occurring on site, and
- > commitment by an experienced farm operator to farm the site as per the farm plan.

2. Proponents must enter into a Restrictive Covenant with the Commission to ensure that:

- Farming is established.
 - Farming is maintained, and
 - The back land portion of the subject site is not used for any other purpose than farming.
- 3. Where required, proponents must provide a financial guarantee in a form determined by the Commission².

In addition, any farmer who combines farming activity outside the back lands area with farming activity within the back lands area, would be defined as undertaking "commercial scale agriculture".

The Commission's intent in specifying commercial scale agriculture is to encourage the assembly of larger parcels for farming and the installation of the necessary infrastructure (e.g., drainage, imgation, access roads). However, the Commission does not rule out the possibility of smaller agricultural activities being approved for the back lands (e.g., community gardens).

² Acceptable forms of financial guarantees include:

- cash (acceptable but not preferred)
- letter of credit
- safekeeping agreement (whereby an acceptable security is deposited with a financial institution for safekeeping)

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¹ Commercial scale agriculture means:

production carried on by a full time farmer, and

who derives all or most of his/her income from farming activity.

4. The Commission will not give final non-farm use approval to the proponent until the back land portion of the subject site is brought into active farm production in accordance with the farm plan.

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5. The Commission will evaluate each proposal on its own merits, in order to determine what will constitute an acceptable farm plan and acceptable list of farm activities.

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APPENDIX 4

Land Commission requirements for approved non-farm (Assembly District) uses along No. 5 Road

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132017/4105-04-04

January 31, 2000

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TABLE SHOWING LAND COMMISSION REQUIREMENTS FOR NON-FARM USE (ASSEMBLY DISTRICT) APPROVAL FOR SITES LARGER THAN 0.8 ha (2 ac)

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APRELIGANITE RECORDER TY AND RECOURSEMENTS APROPERTY AND A THE RECOURSE APPROVED			
A. Sites approved for non-farm use and are developed and occupied			
Vedic Cultural Centre	8200 No. 5 Road	farm plan	⊯ yes
		 restrictive 	r yes
(AG 89-001)		covenant	
	• •	access to back	= yes
· .		land	1
		water supply	🖷 yes
	· · ·	 lease for farmers 	1
·	· · · · ·	 faming 	none apparent
India Cultural Centre	8600 No. 5 Road	 no farm plan 	= n/a
		required	i . I
(LCA 85-145 & LCA		 no other 	¤ n/a
85-192)	· ·	requirements	
		stipulated	
 Lutfer Rahman 	8760 No. 5 Road	no farm plan	≊ n/a ,
 (Richmond Jewish) 		required.	
Day School)		garden and	none apparent
		orchard along	
• (AG 96-147)		east boundary.	
		participation in	≖ yes '
		No, 5 Road back	
		lands owners	
		group	
 Lingyen Mountain 	 10060 No. 5 Road 	 farm plan 	≭ yes
Temple	1 1	 restrictive 	≖ yes
		covenant	
• (AG 93-210)		• soil re-	¤ yes
		conditioning	
		program.	•
		 water 	not known
		management	
		program.	
		 faming 	 yes (some limited
			activity)

132017/4105-04-04

315

10 / A.P. 1	APPLICANT	PROPERTY		REQUIREMENTS	Ci.	COMPLIANCE
В.	Sites approved for	r non-farm use and dev	elo	pment has started		
×	Vancouver	 8580 No. 5 Road 	pr.	farm plan	×	no
	Christian			restrictive	a l	no
×	Centre (now Shia		1	covenant	1	
	Muslim)		×	financial		no
.	,	1		guarantee to farm	[
A	(AG 89-412)	{		copy of lease	N	no
	(between applicant		,
		1	1	and free nursery		
{			1	onerator	ł	
{		-		famina		no (site heing pro-
			1-	ian mg		loaded only)
	•				1	loaded offiy)
-	Olling augustical for	water former und hard date	1	mant nat wit starte	L	
<u>C.</u>	Sites approved for	non-farm use but deve	310p	iment not yet staned	a '.	
Ħ	Yao Yu Cheuh	8240 No. 5 Road	-	tarm plan	F	no
				restrictive	•	on
M	(AG 91-239)			covenant		
,	•			farming	-	no (site not yet
						redeveloped)
	349678 BC Ltd.	8320, 8340, 8380	#	consolidate 3 lots	11	no
	•	No. 5 Road	=	farm plan		yes
N	(AG 91-226)			restrictive	×	no
	,		1	covenant		(
			ж	farming	н	no (site not vet
						redeveloped)
10	Limerick	9360 No. 5 Road	#	farm plan		no
_	Enternises			fence between		ho
	(Catholic School)			school and back		
-	(Callolic Solicol)			land	·	
-	(40.01.017)			rand		
-	(AG 91-017)		-	resulcuve	-	10
				covenant	_	na fatta naturat
			<u>м</u>	taming	PA .	no (site not yet
						occupied or
						developed)

e.,

132017/4105-04-04

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APPLICANT	PROPERTY	REQUIREMENTS	COMPLIANCE
 Richmond 	 10260 No. 5 Road 	 no farm plan 	n/a
Christian School		required,	* Ves
 (AG 98-144171) 	۰.	covenant	,
		 fence and 	not known
· ·		 notification of any changes to lease 	× n/a yet
• •		agreement	· .
		vendor.	
	,	 financial security 	yes (by ALC)
•		 withholding final rezoning until 	■ yes
		covenant and.	· ,
		arranged.	
		• farming	 yes (by previous owner)

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132017/4105-04-04



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CityClerk	Schedule 6 to the Minutes of the Public Hearing meeting of Richmond City Council held on Monday, May 17, 2021.	TO: MAYOR & EACH COUNCILLOR FROM: CITY CLERK'S OFFICE			
From	Mahmood laffor Director of DP & Comm	unications enublic relations@az			
From.	zahraa.org>				
Sent:	May 17, 2021 8:03 AM	May 17, 2021 8:03 AM			
То:	CityClerk				
Cc:	Eng,Kevin; Shaykh Murtaza Bachoo Reside	nt-Alim. Az-Zahraa Islamic Centre; Principal -			
	Az-Zahraa Islamic Academy; Azmat Ali				
Subject:	Re: SMCBC Representation at May 17, 2021 Public Hearing				
Attachments:	Revised Plans 2016 10 18 .compressed (1).pdf; Letter to ALC - May 17 2021.pdf; Letter				
	to Mayor & Richmond City Council - May	17 2021 Public Hearing.pdf			

City of Richmond Security Warning: This email was sent from an external source outside the City. Please do not click or open attachments unless you recognize the source of this email and the content is safe.

Good morning,

Thank you for the email confirmation of the Shia Muslim Community of BC (SMCBC) delegation at this evening's public hearing along with the connection information to participate. Per my conversation with Riyaz from your office on May 13, I am confirming the following participants, copied on this email, will be delegating on behalf of the community and school. All of us will be connecting via the Zoom Link you have provided and will speak in the following order:

- 1. Mahmood Jaffer, 604-786-2545 Director of PR & Communications, SMCBC
- 2. Oscar Pozzolo, 604-805-7925 Principal, Az-Zahraa Islamic Academy
- 3. Azmat Ali, 604-562-8133 Chairman, Az-Zahraa Islamic Academy (AZIA) School Board
- 4. Murtaza Bachoo, 604-719-7864 Religious Consultant SMCBC & Board Member AZIA

Furthermore, please accept the letter and attachments as part of our formal submission as part of the public hearing process. Please share these with Mayor and Councillors ASAP and in advance of this evening's hearing. Please let me know if you have any questions about any of the above.

Regards, Mahmood

Mahmood Jaffer Director of PR & Communications Az-Zahraa Islamic Centre email: <u>public-relations@az-zahraa.org</u> phone: 604-786-2545 www.az-zahraa.org 1410TOCC14ED

MAY 1 7 2021 R.C.





Az-Zahraa ISLAMIC CENTRE

8580 RS ROAD RICHMOND BC CANADA VGY 2V4 TEL: 604.274.7869 www.az-rahran.org

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May 17, 2021

Mayor & Councillors Office City of Richmond 6911 No. 3 Road Richmond, British Columbia V6Y 2C1 Canada

Delivered Electronically

Re: Official Community Plan Bylaw 7100 And 9000, Amendment Bylaw 10258 And Richmond Zoning Bylaw 8500, Amendment Bylaw 10259

Dear Mayor Brodie & Honourable Richmond City Councillors,

Following our participation at the March 3, 2020 Planning committee meeting, the Shia Muslim Community of BC (SMCBC), established in the City of Richmond since 1978, welcomes the opportunity to provide a formal submission as part of the May 17 2021 Public hearing for the proposed Bylaw amendments. We were encouraged when the Planning Committee referred the proposed by-law changes to staff in order to review and provide further information and options including the exemption of existing schools and religious institutions from the proposed bylaws in March 2020. We are however concerned of the serious implications that the proposed bylaw amendments will have to our community's education future expansion plans.

In September 2003, one year after the official opening of the Az-Zahraa Islamic Centre at 8580 No 5 Road, the community launched the Az-Zahraa Islamic Academy (AZIA) as a full-time Group 1 independent elementary school under the BC Ministry of Education. Beginning operations with 20 students in KG/Grade 1, it has grown to a current student population of over 200 students (pre-KG to Grade 8) with 50% of the growth taking place over the past five years. In September 2020, AZIA extended our offering to grade 8 and plans are in place to offer a grade 9 program beginning in September 2021. The expressed long-term goal of AZIA is to provide a full-time elementary and a full-time high school at our premises.

The Az-Zahraa Islamic Academy is an integral part of SMCBC's identity as a religious community in the City of Richmond. As Muslims we take responsibility for the education of our children and that of the community. In addition, students are nurtured from a young age in the traditions and the practices of the Shia Muslim faith. Furthermore, alumni of AZIA have gone on to make a positive impact within the Richmond community and part of society at large. As part of

the city's consultation process, SMCBC identified the proposed expansion of the community's educational facilities to accommodate the increasing demand of our full-time independent school as well as our Sunday school programs.

With recent renovations to create additional space for the middle school program, our existing full-time school facilities at 8580 No 5 Road are at capacity. Prior to the pandemic and shifting to online programming, our Sunday school was already above capacity. In 2016, with the anticipation of the increased demand for additional educational space, SMCBC purchased the property at 8320 No 5 Road, immediately to the north of our existing facility. Preliminary plans were drawn up to develop a new school and community centre facility (see attached). In 2017, discussions began with city planning staff to explore property development requirements and options, as well as the potential consolidation of the two properties. As a community, we have always been compliant with the ALC requirement of farming the backlands as part of that policy. Furthermore, with any development of the new property, we have already started exploring an environmentally friendly building which would increase the city's green footprint in addition to continuing to meet the agricultural requirements. We have also included a correspondence of our communication with the ALC on this subject.

In conclusion, as we have demonstrated, the education of children is a fundamental aspect of our faith and therefore the SMCBC has some philosophical concerns with differentiating "religious assembly" from "education" as part of the proposed bylaw changes. However, should council have the need to proceed with amending in the OCP and Backlands Zoning bylaws, we formally request that a site specific allowance to permit existing school expansion or new school development, on the properties at 8320 No 5 Road & 8580 No 5 Road, be granted to SMCBC as part of a grandfathering clause in adoption of this policy.

Thank you for your time and consideration to review this matter. Should you have any questions or require any further information, please do contact myself as the official spokesperson for the community.

Sincerely,

Mal II

Mahmood Jaffer

Mahmood Jaffer Director of PR & Communications Az-Zahraa Islamic Centre email: public-relations@az-zahraa.org phone: ຈົບ4-7ຈຽ-2545 www.az-zahraa.org



Az-Zahraa ISLAMIC CENTRE

SHIA MUSLIM COMMUNITY OF BRITISH COLUMBIA 8580 #5 ROAD RICHMOND BC CANADA VGY 2V4 TEL: 604.274.7869 www.az-zahraa.org

May 17, 2021

Ms. Shannon Lambie Agricultural Land Commission 201 - 4940 Canada Way Burnaby, British Columbia V56 4K6 Canada

Delivered Electronically

Re: Proposed Changes to the Agricultural Land Commission's No 5 Road Backlands Policy

Dear Ms Lambie,

Thank you for your letter of April 19, 2021 alerting the Shia Muslim Community of BC (SMCBC) to the background and rationale of the proposed policy changes that have been requested by the ALC to the City of Richmond.

As property owners of 8580 No 5 Road, we have operated our existing facility as a place of worship since opening in 2002, as well as the Az-Zahraa Islamic Academy (AZIA), a full-time independent community school and integral part of our faith and community, since 2003. During this time the SMCBC has worked diligently with the city to ensure our obligations to agricultural activity on the backlands have been met.

As a community which has identified a definite need for expansion of our existing educational facilities, in 2016 we purchased the adjacent property at 8320 No 5 Road, for this purpose. It is therefore with serious concern that we review the proposed bylaw changes being put forth by city staff to council for consideration at the Public Hearing on May 17, 2021. SMCBC and AZIA representatives will be present at the hearing this evening and provide you a copy of our correspondence with the city in advance of that delegation.

We thank you for your time and consideration to understand the position of the SMCBC on this important matter. We look forward to working together with the ALC and the City of Richmond to ensure that the existing and future use of our two properties on No 5 Road continue to meet the agricultural activity on the backlands as part of the policy. In the meantime, should you have any questions or require any further information, please do contact myself as the official spokesperson for the community.

Sincerely,

Mahmood Jaffer

Mahmood Jaffer Director of PR & Communications Az-Zahraa Islamic Centre email: public-relations@az-zahraa.org phone: 604-786-2545 www.az-zahraa.org













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Community Safety Committee

Date:	Tuesday, May 11, 2021
Place:	Council Chambers Richmond City Hall
Present:	Councillor Bill McNulty, Chair Councillor Carol Day (by teleconference) Councillor Alexa Loo (by teleconference) Councillor Harold Steves (by teleconference) Councillor Michael Wolfe (by teleconference)
Also Present:	Councillor Linda McPhail (by teleconference) Councillor Chak Au (by teleconference)
Call to Order:	The Chair called the meeting to order at 4:02 p.m.

MINUTES

It was moved and seconded That the minutes of the meeting of the Community Safety Committee held on April 13, 2021, be adopted.

CARRIED

NEXT COMMITTEE MEETING DATE

June 15, 2021, (tentative date) at 4:00 p.m. in the Council Chambers.

Minutes
COMMUNITY SAFETY DIVISION

1. **PROPERTY USE MONTHLY ACTIVITY REPORT - MARCH 2021** (File Ref. No. 12-8375-02) (REDMS No. 6656873)

In response to queries from Committee, staff advised that (i) exterior residential lighting complaints are being tracked, and (ii) an outstanding referral will include information surrounding jurisdiction of exterior residential lighting.

It was moved and seconded

That the staff report titled "Property Use Monthly Activity Report – March 2021", dated April 12, 2021, from the General Manager, Community Safety, be received for information.

CARRIED

2. COMMUNITY BYLAWS PARKING ENFORCEMENT AND ANIMAL SERVICES MONTHLY ACTIVITY REPORT – MARCH 2021 (File Ref. No. 12-8060-01) (REDMS No. 6656746)

In response to queries from Committee, staff advised that (i) current parking enforcement practices are complaint-driven, (ii) warning tickets are issued if the offense is not a safety matter, (iii) an educational parking enforcement approach is being taken, (iv) each bylaw officer is assigned a zone which rotates, and (v) BC SPCA will attend to injured waterfowl calls.

It was moved and seconded

That the staff report titled "Community Bylaws Parking Enforcement and Animal Services Monthly Activity Report – March 2021", dated April 16, 2021, from the General Manager, Community Safety, be received for information.

CARRIED

3. BUSINESS LICENCES QUARTERLY REPORT – FIRST QUARTER 2021

(File Ref. No. 12-8375-03) (REDMS No. 6656950)

It was moved and seconded

That the staff report titled "Business Licences Quarterly Report – First Quarter 2021", dated April 12, 2021, from the General Manager Community Safety be received for information.

CARRIED

4. **EMERGENCY PROGRAMS ACTIVITY REPORT - FIRST OUARTER** 2021

(File Ref. No. 09-5140-01) (REDMS No. 6658427)

In response to queries from Committee, staff advised that (i) a public awareness campaign regarding the Emergency Notification System will begin soon and is aimed at the entire Richmond community, and (ii) Emergency Programs liaises with the Richmond School District to maintain the emergency supply containers provided to schools.

It was moved and seconded

That the report titled "Emergency Programs Activity Report – First Quarter 2021", dated April 15, 2021, from the Deputy Fire Chief be received for information.

CARRIED

RICHMOND FIRE-RESCUE MONTHLY ACTIVITY REPORT -5. MARCH 2021

(File Ref. No. 99-Fire Rescue) (REDMS No. 6652949)

In response to queries from Committee, staff advised that (i) the City's fire hydrant water system is well maintained, (ii) backflow preventers are used to maintain the potable water in fire hydrants, (iii) the City Waterworks Department issues permits to allow businesses to use water from fire hydrants, (iv) Richmond Fire-Rescue staff are trained to contain hazardous materials, and (v) the map indicating fire hall locations will be corrected.

It was moved and seconded

That the staff report titled "Richmond Fire-Rescue Monthly Activity Report - March 2021", dated April 13, 2021, from the Fire Chief, be received for information.

CARRIED

6. FIRE CHIEF BRIEFING

(Verbal Report)

Item for discussion:

New Staff Announcements *(i)*

> Staff provided an update on the recruitment of firefighters and noted that administrative staff have been recently hired.

7. **RCMP MONTHLY ACTIVITY REPORT - MARCH 2021**

(File Ref. No. 09-5000-01) (REDMS No. 6647053)

In response to queries from Committee, staff advised that (i) Richmond RCMP recently received approval to fill their complement of officers, (ii) Richmond RCMP is working with their media relations officer to educate the community on hate crimes, hate incidents, and diversity, (iii) the City is trying to gain a permanent Hamilton community police station through development, (iv) increased police patrolling in Hamilton has been positively received by the community, and (v) the City has been proactively lobbying to the province's director of police services to have its own auxiliary police program.

Discussion ensued with regard to the need for a permanent community police station in Hamilton as soon as possible. As a result of the discussion, the following referral motion was introduced:

It was moved and seconded That staff investigate the feasibility of including a community police station in Hamilton, and add it to the 2020-2025 Capital program.

CARRIED

It was moved and seconded

That the staff report titled "RCMP Monthly Activity Report - March 2021 ", dated April 9, 2021, from the Officer in Charge, Richmond RCMP Detachment, be received for information.

CARRIED

RCMP/OIC BRIEFING 8. (Verbal Report)

Item for discussion:

Introduction of New Superintendent *(i)*

Staff provided an update on the hiring of a Superintendent, noting this newest officer to join Richmond RCMP comes with over 28 years of experience with the RCMP.

9. MANAGER'S REPORT

Garry Point Park

In response to queries from Committee, staff advised that (i) safety signage was reviewed following the rogue wave incident on April 30, 2021, (ii) hardening measures along the foreshore would have significant implications with approval processes through provincial and federal regulatory bodies, (iii) the Vancouver Fraser Port Authority is conducting a discovery on the cause of the incident, and (iv) there is signage in place restricting fires and open fire barbecues at Garry Point Park.

ADJOURNMENT

It was moved and seconded *That the meeting adjourn (4:54 p.m.).*

CARRIED

Certified a true and correct copy of the Minutes of the meeting of the Community Safety Committee of the Council of the City of Richmond held on Tuesday, May 11, 2021.

Councillor Bill McNulty Chair Shannon Unrau Legislative Services Associate



Minutes

General Purposes Committee

Date:Monday, May 17, 2021Place:Council Chambers
Richmond City HallPresent:Mayor Malcolm D. Brodie, Chair
Councillor Chak Au
Councillor Carol Day (by teleconference)

- Councillor Alexa Loo (by teleconference) Councillor Bill McNulty (by teleconference) Councillor Linda McPhail (by teleconference) Councillor Harold Steves (by teleconference) Councillor Michael Wolfe (by teleconference)
- Call to Order: The Chair called the meeting to order at 4:42 p.m.

AGENDA ADDITION

It was moved and seconded *That Traffic Intersection Camera's be added to the agenda as Item No. 6.*

CARRIED

MINUTES

It was moved and seconded That the minutes of the meeting of the General Purposes Committee held on May 3, 2021, be adopted as circulated.

CARRIED

NEXT COMMITTEE MEETING DATE

June 7, 2021, (tentative date) at 4:00 p.m. in Council Chambers

FINANCE AND CORPORATE SERVICES DIVISION

1. **7036Q – SUPPLY AND DELIVERY OF MICROSOFT LICENSING** (File Ref. No. 04-1300-01) (REDMS No. 6588348)

It was moved and seconded

- (1) That contract 7036Q Supply and Delivery of Microsoft Licensing be awarded to Dell Technologies with three-year cost estimated at \$807,882.34, exclusive of taxes.
- (2) That a contingency amount of \$181,935.66 be approved to accommodate any unforeseen license true up requirements.

The question on the motion was not called as in reply to a query from Committee, staff advised that a perpetual licence model means that the City owns the licence in perpetuity.

The question on the motion was then called and it was **CARRIED**.

2. ORACLE RAC ENTERPRISE AND SOLARIS SPARC SERVER UPGRADES

(File Ref. No. 04-1370-01) (REDMS No. 6659409)

It was moved and seconded

- (1) That 7191NOITC -Oracle Database Software and Solaris Hardware Purchase be awarded to Eclipsys Solutions Inc., in the amount of \$850,000 as part of the 2021 capital plan; and
- (2) That the Chief Administrative Officer and Acting General Manager, Finance and Corporate Services be authorized to execute the contract and all related documentation with Eclipsys Solutions Inc.

CARRIED

COMMUNITY SAFETY DIVISION

3. APPLICATION FOR A NEW LIQUOR PRIMARY LIQUOR LICENCE - ZODIAC KARAOKE & PUB INC., AT 8191 ALEXANDRA ROAD, RICHMOND, BC.

(File Ref. No. 12-8275-30-001) (REDMS No. 6664317)

Staff advised that after finalizing the report the applicant changed consultant companies.

It was moved and seconded

- (1) That the application from Zodiac Karaoke & Pub Inc., for a new Liquor Primary Liquor Licence to operate a new Karaoke Lounge at the premises located at 8191 Alexandra Road, with liquor service, be supported for:
 - (a) A new Liquor Primary Liquor Licence with total person capacity of 240 occupants;
 - (b) Proposed hours of liquor sales from Monday to Sunday, from 9:00 AM to 2:00 AM; and
- (2) That a letter be sent to Liquor and Cannabis Regulation Branch, which includes the information attached as Appendix A, advising that Council recommends the approval of the liquor licence application for the reasons that this new application for a Liquor Primary Liquor Licence has been determined, following public consultation, to be acceptable in the area and community.

The question on the motion was not called as in reply to queries from Committee, staff noted that all infractions from the previous business will form part of their history should the new business have any issues.

The question on the motion was then called and it was CARRIED.

4. SOIL USE FOR THE PLACEMENT OF FILL APPLICATION FOR THE PROPERTY LOCATED AT 8511 NO. 6 ROAD (JIANG) (Eile Bef No. 12 8080 12 01) (REDMS No. 6506278)

(File Ref. No. 12-8080-12-01) (REDMS No. 6506278)

In reply to queries from Committee, staff noted that (i) the Province did change the legislation with regard to wood waste, (ii) when the previous owner put the wood waste on the land it was not a prohibited activity, (iii) pursuing legal action on the previous owners, could result in considerable time and expenses for the current owners, (iv) if wood waste is left in its current state, there will be no impacts, (v) raising the land will not have any impacts to surrounding properties as the neighbouring property has already raised the land, (vi) the City is following the Kavanaugh guidelines, and (vii) there is no restriction on where the soil must come from as the requirement for a volume fee in the Soil Bylaw ensures that its more beneficial to obtain soils from Richmond. It was moved and seconded

That the 'Soil Use for the Placement of Fill' application, submitted by Bohan Jiang (the ''Applicant''), proposing to deposit soil on the property located at 8511 No. 6 Road for the purpose of remediating the property to develop a blueberry farm, be authorized for referral to the Agricultural Land Commission (ALC) for the ALC to review and determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements.

The question on the motion was then called and it was **CARRIED** with Cllr. Wolfe opposed.

COUNCILLORS ALEXA LOO AND LINDA MCPHAIL

5. RICHMOND HOSPITAL ACUTE CARE TOWER REPLACEMENT PROJECT

(File Ref. No.)

It was moved and seconded

- (1) That Council write to the Premier, Minister of Health and the Minister of Finance and ask for Treasury Board approval of the Business Plan and confirmation of the funding and commencement of construction for the new Acute Care Tower in Richmond;
- (2) That copies of the letter be sent to the Richmond MLAs, Vancouver Coastal Health Board and the Richmond Hospital Foundation; and
- (3) That Council invite the Richmond MLAs to a meeting to discuss the funding and timeline for the Richmond Hospital upgrade.

The question on the motion was not called as discussion took place on the urgent need for a new acute care tower and the timeline for construction.

The question on the motion was then called and it was **CARRIED**.

6. TRAFFIC INTERSECTION CAMERA'S

(File Ref. No.)

Discussion took place on the need for higher resolution to keep the City safe as a result of the recent gang activity and potential procedures for judicial review for use of the higher resolution footage to aid in RCMP investigations.

It was moved and seconded

(1) That a letter be written to the Solicitor General for the Province of BC with copies to Richmond MLAs and the Premier seeking a meeting, as soon as possible, to address the issue of undue regulation on the use of intersection cameras in public places and the images generated including:

- (a) Appropriate use of high resolution images on such devices including for the purposes of criminal investigation and prosecution; and
- (b) Judicial or other oversight on the use of the images to prevent misuse.

The question on the motion was not called as in reply to queries from Committee, staff noted that Richmond and Surrey are the only municipalities with CCTV cameras under strict regulations.

Discussion further took place on better quality footage is available from cellphones cameras than the CCTV cameras.

The question on the motion was then called and it was **CARRIED** with Cllr. Wolfe opposed.

ADJOURNMENT

It was moved and seconded *That the meeting adjourn (5:22 p.m.).*

CARRIED

Certified a true and correct copy of the Minutes of the meeting of the General Purposes Committee of the Council of the City of Richmond held on Monday, May 17, 2021.

Mayor Malcolm D. Brodie Chair Sarah Goddard Legislative Services Associate



Minutes

Public Works and Transportation Committee

- Place: Council Chambers Richmond City Hall
- Present: Councillor Chak Au, Chair Councillor Alexa Loo (by teleconference) Councillor Linda McPhail (by teleconference) Councillor Michael Wolfe (by teleconference)
- Call to Order: The Chair called the meeting to order at 4:00 p.m.

MINUTES

It was moved and seconded That the minutes of the meeting of the Public Works and Transportation Committee held on April 20, 2021, be adopted as circulated.

CARRIED

NEXT COMMITTEE MEETING DATE

June 22, 2021, (tentative date) at 4:00 p.m. in Council Chambers

AGENDA ADDITIONS & DELETIONS

The Chair noted that Item No. 5 - 2020 Climate Action Revenue Incentive Program and Corporate Carbon Neutral Progress Report, was pulled from the agenda.

It was moved and seconded

That:

- Hamilton Traffic Calming be added to the agenda as item No. 6A;
- Light Fixtures on Roads be added to the agenda as item No. 6B;

- Road Improvements at Shell Road and Williams Road be added to the agenda as item No. 6C; and
- Garbage Pickup Around the City be added to the agenda as item No.
 6D.

CARRIED

PLANNING AND DEVELOPMENT DIVISION

1. CYCLING NETWORK PLAN UPDATE - PROPOSED PHASE 1 ENGAGEMENT

(File Ref. No. 02-0775-50-6708) (REDMS No. 6669210)

In reply to queries from Committee, staff noted that (i) images of new bike path designs can be provided, (ii) a survey will be made available to students in all grades, (iii) the survey captures changes in cycling trends during the pandemic, (iv) bike facility designs include various materials, and (v) the proposed public engagement activities will coincide with Bike Month in June.

It was moved and seconded

- (1) That the proposed Phase 1 engagement activities to support the update of the Cycling Network Plan, as described in the report titled "Cycling Network Plan Update – Proposed Phase 1 Engagement," dated April 1, 2021 from the Director, Transportation, be endorsed for implementation; and
- (2) That staff be directed to report back on the results of the Phase 1 engagement.

CARRIED

2. TRANSLINK 2021 COST-SHARE PROGRAMS - SUPPLEMENTAL APPLICATION

(File Ref. No. 01-0154-04) (REDMS No. 6643926)

It was moved and seconded

That as described in the report titled "TransLink 2021 Cost-Share Programs – Supplemental Application" dated April 1, 2021 from the Director, Transportation:

- (a) the cycling-related project recommended for cost-sharing as part of the TransLink 2021 BICCS Recovery Program be endorsed;
- (b) should the above project receive final approval from TransLink, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the funding agreements and the Consolidated 5 Year Financial Plan (2021-2025) be updated accordingly; and

(c) staff be directed to implement the project approved by TransLink and report back as part of the City's proposed applications to TransLink's 2022 Cost-Share Programs.

CARRIED

3. SIDEWALK WIDTH STANDARDS FOR MAJOR AND MINOR ARTERIAL ROADS

(File Ref. No. 10-6360-03-01) (REDMS No. 6641372)

In reply to queries from Committee, staff noted that (i) various treatments, depending on site conditions are used when completing sidewalks, (ii) the City's proposed recommendations are in range of other municipal requirements, (iii) the development industry will be informed of changes pending Council approval, and (iv) public consultation is not recommended.

It was moved and seconded

That staff be directed to update the City of Richmond's Engineering Design Specifications to increase the sidewalk width from 1.5m to 2.0m on arterial roadways, as described in the report titled ''Sidewalk Width Standards for Major and Minor Arterial Roads'' dated April 6, 2021 from the Director, Transportation.

CARRIED

ENGINEERING AND PUBLIC WORKS DIVISION

4. MULTI-FAMILY WATER METER PROGRAM AND WATER CONSERVATION INITIATIVES UPDATE

(File Ref. No. 10-6060-02-01) (REDMS No. 6664046)

In reply to queries from Committee, staff noted that (i) statistics on leak detection is tracked and communicated to property owners in a timely manner, (ii) there is no trend in strata complexes that have not saved money, and (iii) there is no noticeable difference between strata complexes with pools versus without.

It was moved and seconded

That staff bring forward options and recommendations for a mandatory Multi-Family Water Meter Program for consideration as part of the 2022 Utility Budgets and Rates report.

5. 2020 CLIMATE ACTION REVENUE INCENTIVE PROGRAM AND CORPORATE CARBON NEUTRAL PROGRESS REPORT (File Ref. No. 10-6125-05-01) (REDMS No. 6657682)

Please see page 1 for action on this item.

6A HAMILTON TRAFFIC CALMING

(File Ref. No.)

In reply to queries from Committee, staff noted that information on past traffic calming surveys conducted in the area can be provided.

6B LIGHT FIXTURES ON ROADS

(File Ref. No.)

In reply to queries from Committee, staff noted that (i) discussions are taking place with BC Hydro regarding options for less bright lights, (ii) back shades can be installed on lights to prevent light trespassing, (iii) the City follows standards set by the Illuminating Engineering Society and American Medical Association, (iv) generally lights on power poles are BC Hydro owned and aluminum lamp posts are City-owned, and (v) a memo will be provided to Council outlining more detailed lighting options.

6C ROAD IMPROVEMENTS AT SHELL ROAD AND WILLIAMS ROAD (File Ref. No.)

In reply to queries from Committee, staff noted that the construction of traffic signals is expected to begin in summer 2021, with an expected completion date of March 2022.

6D GARBAGE PICKUP AROUND THE CITY

(File Ref. No.)

In reply to queries from Committee, staff noted that (i) there has been an increase in park use and litter creation in the past year, (ii) the City has taken measures to adjust to the increased litter volume, and (iii) the City is adapting its service and standards to keep up with increase in park use due to the pandemic.

6. MANAGER'S REPORT

(i) Peak Freshet Season

Staff noted that (i) snow pack levels in the Fraser Basin as of May 1, 2021 were at 109% of normal for this time of year, (ii) current stream flows are normal, (iii) current peak flow forecast is 9000 cubic metres per second, and (iv) staff will continue to monitor and provide committee with a summary report at the end of the freshet season.

In response to queries from Committee, staff noted that the City's flood protection systems handled the May 17, 2021 heavy rainfall event well, with no known significant issues arising.

(ii) Closure of George Massey Tunnel

Staff noted that the Province plans to close the George Massey Tunnel in both directions for two nights from 10:00 p.m. to 4:00 a.m. on Friday, May 28, 2021, and Saturday, May 29, 2021 for scheduled maintenance. Staff advised that signage will be set up in advance to notify drivers of the closure.

In response to queries from Committee, staff noted that the purpose of the closure is to test the tunnel's fire suppression system and overhead lane control signals.

In response to further queries from Committee, staff noted that (i) there is no update on the George Massey Tunnel replacement project, and (ii) regular updates have not been provided by the Ministry of Transportation.

Discussion ensued with regard to an update on the status of the tunnel replacement project, and as a result of the discussion, the following **referral motion** was introduced:

It was moved and seconded

That staff provide an update on the George Massey Tunnel replacement project at the June 22, 2021 Public Works and Transportation Committee meeting.

CARRIED

(iii) Intersection Cameras Update

Staff highlighted that as of May 18, 2021, the City has activated all 110 traffic intersection cameras as part of the approved phase 1 and 2 of the Intersection Traffic Camera Program.

ADJOURNMENT

It was moved and seconded *That the meeting adjourn (4:46 p.m.).*

CARRIED

Certified a true and correct copy of the Minutes of the meeting of the Public Works and Transportation Committee of the Council of the City of Richmond held on Tuesday, May 18, 2021.

Councillor Chak Au Chair Shannon Unrau Legislative Services Associate



Special Planning Committee

Date:	Wednesday, May 19, 2021
Place:	Council Chambers Richmond City Hall
Present:	Councillor Linda McPhail, Chair (by teleconference) Councillor Alexa Loo (by teleconference) Councillor Carol Day (by teleconference) Councillor Bill McNulty Councillor Harold Steves (by teleconference)
Also Present:	Councillor Michael Wolfe (by teleconference)
Call to Order:	The Chair called the meeting to order at 4:00 p.m.

MINUTES

It was moved and seconded That the minutes of the meeting of the Planning Committee held on May 4, 2021, be adopted as circulated.

CARRIED

NEXT COMMITTEE MEETING DATE

June 8, 2021, (tentative date) at 4:00 p.m. in Council Chambers

PLANNING AND DEVELOPMENT DIVISION

1. APPLICATION BY KADIUM NO. 4 DEVELOPMENT LTD. FOR REZONING AT 10340, 10360, 10380, 10400 AND 10420 NO. 4 ROAD FROM THE "SINGLE DETACHED (RS1/E)" ZONE TO THE "MEDIUM DENSITY TOWNHOUSES (RTM2)" ZONE (File Ref. No. RZ 18-831725) (REDMS No. 6629251) Staff reviewed the application, highlighting that the proposed development includes four units with secondary suites and two convertible units with accessible parking.

Discussion ensued with regard to (i) the location of the Statutory Right-of-Way to accommodate the sewer line on-site, (ii) the allowance required for the bike path and sidewalk, and (iii) options for rooftop green space or installation of solar panels.

In reply to queries from Committee, Matthew Cheng, representing the applicant, noted that there are rough-in provisions for rooftop solar heating and the applicant can review the feasibility of including options for installing rooftop photovoltaic solar panels. It was further noted that Sustainability staff can update Council on a referral on rooftop solar panels on new developments.

It was moved and seconded

That Richmond Zoning Bylaw 8500, Amendment Bylaw 10261, for the rezoning of the site at 10340, 10360, 10380, 10400 and 10420 No. 4 Road from the "Single Detached (RSI/E)" Zone to the "Medium Density Townhouses (RTM2)" Zone, be introduced and given first reading.

CARRIED

2. HOUSEKEEPING REQUEST - ABANDONMENT OF UNADOPTED BYLAWS

(File Ref. No. 12-8060-01) (REDMS No. 6667666)

It was moved and seconded

That the unadopted Zoning and OCP Amendment Bylaws, as outlined in Attachment 1, of the staff report titled "Housekeeping Request – Abandonment of Unadopted Bylaws" dated April 19, 2021 from the Director, City Clerk's Office, be abandoned.

The question on the motion was not called as discussion ensued with regard to the timeline to abandon unadopted bylaws and close inactive development applications. Staff noted that after an extended period of inactivity (typically following one year), staff initiate the process to close the file and the applicants are notified.

The question on the motion was then called and it was CARRIED.

3. UBCM GRANT APPLICATION - LOCAL GOVERNMENT DEVELOPMENT APPROVALS PROGRAM (File Ref. No. 08-4105-01) (REDMS No. 6664560)

It was moved and seconded

- (1) That the application to the Union of British Columbia Municipalities (UBCM) Local Government Development Approvals Program for \$500,000 be endorsed;
- (2) Should the application be successful, that the Chief Administrative Officer and the General Manager, Planning and Development be authorized on behalf of the City to enter into an agreement with UBCM for the above mentioned project; and,
- (3) That a capital submission of \$740,000 for the Digitization of Development Approvals system (AMANDA) be approved with \$740,000 funded from Rate Stabilization Account, and that the Consolidated 5-Year Financial Plan (2021-2025) be amended accordingly.

CARRIED

4. SUITABLE TREES FOR REPLANTING LIST, TREE PLANTING INFORMATION ON THE CITY'S WEBSITE, AND THE REVIEW OF PROCEDURES TO DETERMINE THE MAXIMUM NUMBER OF TREES IN A RESIDENTIAL LOT

(File Ref. No. 12-8060-20-010246) (REDMS No. 6668594)

Discussion ensued with regard to (i) options for the City to host annual tree sales, (ii) removal of certain species from the tree list, (iii) limiting the required number of trees from being planted on the farming portion of agricultural land, and (iv) maintaining the hedges on private property adjacent to City boulevards.

In reply to queries from Committee, staff noted that (i) the number of trees for replacement on a single family site is dependent on the required ration and species chosen. (ii) staff can work with applicants on the species, and placement of the trees on-site, (iii) there are bylaws in place that require property owners to trim hedges and other plants that pose safety issues or obstruct City boulevards, and (iv) line of sight safety requirements to prevent planting from obscuring vehicles at corner lots are imposed at time of building construction.

As a result of the discussion, it was suggested that options for annual tree sales and hedge trimming and maintenance can be discussed at an upcoming Parks, Recreation and Cultural Services Committee meeting.

It was moved and seconded

That the report, "Suitable Trees for Replanting List, Tree Planting Information on the City's website, and the Review of Procedures to Determine the Maximum Number of Trees in a Residential Lot," dated April 29, 2021 from the Director, Building Approvals, be received for information.

CARRIED

5. MANAGER'S REPORT

Special Planning Committee in July 2021

As a result of upcoming agenda items, staff is recommending a special Planning Committee meeting to be tentatively scheduled for July 21, 2021.

ADJOURNMENT

It was moved and seconded *That the meeting adjourn (4:37 p.m.).*

CARRIED

Certified a true and correct copy of the Minutes of the meeting of the Special Planning Committee of the Council of the City of Richmond held on Wednesday, May 19, 2021.

Councillor Linda McPhail Chair Evangel Biason Legislative Services Associate



Report to Committee

Re:	7036Q – Supply and Delivery of Microsoft Licensing		
From:	Grant Fengstad Director, Information Technology	File:	04-1300-01/2020-Vol 01
To:	General Purposes Committee	Date:	April 16, 2021

Staff Recommendation

- 1. That contract 7036Q Supply and Delivery of Microsoft Licensing be awarded to Dell Technologies with three-year cost estimated at \$807,882.34, exclusive of taxes.
- 2. That a contingency amount of \$181,935.66 be approved to accommodate any unforeseen license true up requirements and any remaining funding would be returned to the software provision fund.

Grant Fengstad Director, Information Technology (604-276-4096)

REPORT CONCURRENCE				
Routed To:	CONCURRENCI	CONCURRENCE OF GENERAL MANAGER		
Finance Department	\boxtimes	Acting GM, F&CS		
SENIOR STAFF REPORT REVIEW	INITIALS	APPROVED BY CAO		

Staff Report

Origin

The Information Technology (IT) Department budgets, governs and ensures compliance for software licensing requirements. IT assesses the number of users (seats) in use annually and ensures compliance through a "true-up" process, which is a process that compares the number of licenses currently owned against the number of seats in use.

The City has chosen to license using a perpetual license model for our Corporate software. This provides the City with the right to use the software product at the version purchased perpetually, without additional cost. Software vendors have also introduced a "subscription model" where organizations pay for the use of software annually. Based on analysis conducted by City staff, the subscription model only begins to benefit the City financially when software versions are updated within 30 to 36 months. Our Corporate software is upgraded every five to seven years thus the perpetual model provides a better financial outcome for the City.

Microsoft ended support and security patching for Windows 7 Operating System on January 14, 2020 and ended its support and security patching for Office 2010 suite on October 13, 2020. Plans to move to recent software versions (Windows 10 Operating System and Office 2016 suite) are in progress.

With the migration to Windows 10 Operating System, Microsoft software licensing must be purchased to ensure licensing compliancy and to proactively prepare for Microsoft licensing noncompliancy audits. Violation of licensing compliancy agreements can lead to unplanned licensing costs, or reputational damage.

In April 2020, a software true-up, to ensure product usage compliance of a newer version, confirmed that the City would need to maintain the current license quantities for Office Suite, Visio, Project and Exchange Server Client Access but would require more Windows Server Client Access and Office 365 subscription licenses. The required purchase quantities are outlined as following:

- 1500 Microsoft Office licenses
- 40 Microsoft Visio Standard licenses
- 16 Microsoft Project Standard licenses
- 50 Microsoft Office 365 licenses
- 400 Windows Server Client Access Licenses
- 1500 Exchange Server Client Access Licenses

This report supports Council's Strategic Plan 2018-2022 Strategy #5 Sound Financial Management:

Accountable, transparent, and responsible financial management that supports the needs of the community into the future.

5.1 Maintain a strong and robust financial position.

5.4 Work cooperatively and respectfully with all levels of government and stakeholders while advocating for the best interests of Richmond.

RFQ Process

A Request for Quotation (RFQ) public bid was posted to BC Bid on November 24, 2020 and closed for bidding on December 22, 2020.

The RFQ outlined the City's requirements for Microsoft Licensing, detailing product name description, quantities required for initial true-up and as-needed licensing based on new hires. Licensing types included perpetual (uninterrupted user's right to use for the version purchased) and subscription (user's right to use for the current version supported by the reseller for the term purchased).

Quotations were received prior to the stated closing time from Dell Technologies, CDW Canada, Compugen Inc., Insight, Longview and Softchoice LP. (Individual pricing quotation breakdowns may be found in Attachment 1: Bidder Product Quotation Details)

Analysis

Four companies (Dell Technologies, CDW Canada, Compugen Inc and Softchoice LP) submitted quotations that responded to all the listed requirements in the RFQ: 3-year subscription costs, perpetual licensing costs and as-needed licensing for years 2 and 3.

Two companies had incomplete bids; Insight Canada Inc and Longview only provided pricing for subscription costs and perpetual licensing costs, and declined to provide as-needed licensing in years 2 and 3. In addition, Longview did not provide pricing for the requested full 3-year term for Office 365 licenses making their bid incomplete, as it was not responsive to all of requirements described in the RFQ.

Staff determined that the quotation received from Dell Technologies totalling \$807,882.34 was therefore the lowest priced quotation and responsive to all of the requirements set out in the RFQ.

Financial Impact

The RFQ licensing requirements were based on known users and equipment when they were determined, and did not allow for additional requirements and unknown future demand created by the current pandemic. In the past year, City staff and additional equipment have been deployed to work remotely. Given the current situation, the City continues to require additional licenses ensure compliancy. There is an estimated \$181,935 remaining in funding which could be used for these licenses purchases. Any remaining funding would be returned to the software provision fund.

Capital projects CY00047 and CY00051 form the funding source of \$989,818.00. Initial projected funding required is \$807,882.34 exclusive of taxes. The financial impact over a three-year period is summarized as follows:

Estimated Cost

Approved Budget	
Capital account CY00047 (Microsoft Office Licensing)	\$494,909.00
Capital account CY00051 (Microsoft Office Licensing)	\$494,909.00
Total Approved Budget	\$989,818.00
Estimated Costs	
Contract 7036Q - Supply and Delivery of Microsoft Licenses -Year 1	\$624,418.60
Contract 7036Q – Supply and Delivery of Microsoft Licenses – Year 2	\$81,448.88
Contract 7036Q - Supply and Delivery of Microsoft Licenses - Year 3	\$81,448.88
Contract 7036Q – As needed Licensing (Years 2 and 3)	\$20,565.98
Subtotal	\$807,882.34
Contingency	\$,181,935.66
Total Estimated Costs	\$989,818.00
Funds Remaining	\$ 0.00

Conclusion

This report presents the RFQ summary results for Contract 7036Q. It is recommended that a contract be awarded to Dell Technologies as the lowest responsive and responsible bidder with 3-year cost estimated at \$807,882.34, exclusive of taxes, and to approve a contingency amount of \$181,935.66 to accommodate any unforeseen license true up requirement.

PP

Angela Deer Manager, IT Compliance and Project Delivery (604-276-4252)

AED:aed

Att. 1: Bidder Product Quotation Details

Attachment 1 – Bidder Product Quotation Details

Company	Perpetual	Subscription	As-needed	Total Quoted
x -	Licensing	Licensing	Licensing	Amount
Dell Technologies	\$546,969.72	\$244,346.64	\$20,565.98	\$807,882.34
CDW Canada	\$560,146.12	\$252,099.00	\$21,531.55	\$833,776.67
Compugen Inc	\$565,913.70	\$255,256.50	\$21,430.90	\$842,601.10
Softchoice LP	\$559,749.30	\$608,589.00	\$21,108.60	\$1,189,446.90
Insight Canada Inc	\$565,837.15	\$264,727.50	No response	\$830,564.65
Longview	\$571,461.06	\$230,263.00	No response	\$801,724.06 ¹

Table 1: Product Quotation by License Category

Table 2: Product Quotation by License Type

Product	Dell	CDW	Compugen	Softchoice	Insight	Longview
Windows Server						
CAL - user with SA						
annualcost	\$1,031.87	\$1,064.50	\$1,075.50	\$2,824.50	\$1,075.50	\$1,086.00
Windows Server					1	
CAL – device with	*- - - - - - -	AF A CA F A	AF AF AA			#5.005.00
SA annual cost	\$5,687.99	\$5,869.50	\$5,929.00	\$15,571.50	\$5,929.00	\$5,985.00
MS Exchange CAL						
- device with SA						
annualcost	\$28,641.62	\$29,550.00	\$29,856.00	\$78,372.00	\$23,142.00	\$30,144.00
MS Exchange CAL						
– user with SA						
annualcost	\$33,305.58	\$34,362.00	\$34,713.00	\$91,125.00	\$44,775.00	\$35,055.00
Office 365 E3						
Licencing - 3 year						
term-annualcost	\$12,781.82	\$13,187.00	\$13,512.00	\$14,970.00	\$13,321.00	\$13,453.00 ¹
MS Office 2019						
Standard (Perpetual)	\$504,082.60	\$520,046.10	\$525,400.50	\$520,046.10	\$525,327.75	\$530,551.20
MS Office 2019						
Professional Plus						
(Perpetual)	\$21,261.60	\$21,924.90	\$22,150.80	\$21,708.00	\$22,149.00	\$22,367.70
Microsoft Visio						
Standard 2019						
(Perpetual)	\$9,294.80	\$9,584.40	\$ 9,683.20	\$9,489.60	\$9,682.00	\$9,778.00
Microsoft Project						
Standard 2019						
(Perpetual)	\$8,330.72	\$8,590.72	\$8,679.20	\$8,505.60	\$8,678.40	\$8,764.16

¹ Quoted pricing only includes 1-year of Office 365 licensing, not 3-years as requested in RFQ



Report to Committee

To:	General Purposes Committee	Date:	April 26, 2021
From:	Grant Fengstad Director, Information Technology	File:	04-1370-01/2021-Vol 01

Re: Oracle RAC Enterprise and Solaris SPARC Server Upgrades

Staff Recommendation

- That 7191NOITC Oracle Database Software and Solaris Hardware Purchase be awarded to Eclipsys Solutions Inc., in the amount of \$850,000 as part of the 2021 capital plan; and
- 2) That the Chief Administrative Officer and Acting General Manager, Finance and Corporate Services be authorized to execute the contract and all related documentation with Eclipsys Solutions Inc.

Grant Fengstad Director, Information Technology (604-276-4096)

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Finance Purchasing	র্ম ম	Acting GM, F&CS			
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO			

Staff Report

Origin

The City of Richmond ("City") critical business functions utilize a mission-critical database environment in City data centres operating on Oracle RAC (real application clusters). Applications support Property and Land Use (AMANDA), Engineering and Public Works (INFOR Public Sector), Geographic Information System (ESRI GIS), PeopleSoft Human Resources and Payroll (PeopleSoft HCM), PeopleSoft Financials (PeopleSoft FIN), Tempest Taxation / Licensing (Tempest), TIBCO Middleware Enterprise Service Bus (ESB) and ForgeRock Identity and Access Management Systems serving approximately 2,000 employees and over 80,000 registered MyRichmond customers. The Oracle RAC environment was originally installed in 2014 with the original Solaris server hosting environment. The City currently employs two computer data centers located at City Hall and the Public Works site. This enables the City to operate without service disruption due to local failures at each specific site due to the high level of redundancy. The City subscribes to Oracle for the support of its database products through an annual Premier Support licensing model. Premier support provides comprehensive database maintenance and software upgrades that include bug fixes and enhancements and critical security patches for licensed Oracle database products.

In September 2019, IT did some exploratory research into replacing its end of life database infrastructure. The need to upgrade its database software and servers comes from a result of the following factors:

- 1. Oracle has updated its licensing model that now requires organizations to update to Oracle Enterprise Edition in order to have RAC (High Availability Clustering) as an option.
- 2. The City must ensure that database software is maintained to the latest versions in order to ensure continuous support with security and bug fixes being provided by Oracle.
- 3. The City currently has database servers that are now over seven years old that are no longer supported.
- 4. Support for additional databases to support new corporate directives and initiatives is no longer possible under the current infrastructure without upgrading to newer database software and servers.

The analysis involved a comparison of upgrading the City's current premise-based (onsite) Oracle RAC infrastructure versus implementing as a database as a service (DBaaS) hosted solution, namely a Cloud service. Based on the discovery findings, it is recommended to continue with the on premise / perpetual license model. Over a three-year period, the cloud based solution would cost the City significantly more than the premise based option. A capital project was approved 2021 to upgrade the City's current on premise service.

With the implementation of the new environment, the City realizes the following benefits:

- Oracle Enterprise remains the most powerful, highly-available, scalable database solution that supports load-balancing and active/active fail-over in the event of a disaster or interruption of database services. This means that there should be no operational impact or outage to business applications.
- Oracle Database 19c provides the most viable long-term release that allows IT to stay current with the latest bug fixes and enhancements to database security reducing the potential for hackers, viruses and ransomware attacks.
- Oracle SPARC T8 servers provide virtualization technologies that increase performance, reliability, and scalability while increasing sustainability, lowering the carbon footprint and lowering the overall cost of software licensing. The power of virtualization enables the City to operate its' many databases on a single physical server, thus significantly reducing power consumption and lowering green house gas emissions.
- Oracle SPARC T8 servers and Oracle Database 19c improves standardization and reduces time and maintenance in creating and deploying virtualized computers efficiently and consistently while lowering the total cost of ownership and reducing staff time to deploy.

This report supports Council's 2018-2022 Term Goal #1 A Safe and Resilient City and #2 A Sustainable and Environmentally Conscious City:

Enhance and protect the safety and well-being of Richmond

1.1 Future-proof and maintain city infrastructure to keep the community safe

Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.

2.1. Continued leadership in addressing climate change and promoting circular economic principals.

Analysis

Oracle RAC Enterprise and Solaris SPARC Server Upgrades

Staff estimate to complete the implementation and migration of existing Production and Test databases to new Oracle software versions on new database servers by November 1, 2021.

The following project objectives and deliverables are planned for this project:

1. Replace current Solaris SPARC T5-2 servers with newer Solaris SPARC T8-1 servers

- 2. Implement Oracle 19c RAC Enterprise Edition on new Solaris virtualized computers (zones)
- 3. Migrate existing 12 Production and 80+ Test Oracle SE2 database instances to new Solaris zones running Oracle 19c Enterprise RAC

Project Objectives	Deliverables / Success Factors		
Expected benefits, outcomes,	Tangible outputs used to achieve objectives		
improvements			
Continued support for Fault- Tolerant Oracle Database Services	Implementation of Oracle 19c Enterprise provides high- availability and redundancy over a stretched clustered network spanning the City Hall and Works Yard data centers eliminating risk of the database being a single point of failure. This is consistent with Council Term #1 A Safe and Resilient City.		
Stay current with the latest bug fixes and enhancements to database security	Implementation of Oracle 19c database release provides IT with guaranteed bug fixes and security patch updates through April 30, 2024 (Premier Support) and April 30, 2027 (Extended Support) respectively.		
Increase performance, reliability and scalability	New Solaris SPARC T8 physical servers will increase performance for each production business application through the availability and utilization of more system resources (memory, disk, virtual CPUs).		
Increase virtualization	Solaris zones uses virtualization technologies to maintain and run multiple application databases on virtual computers running independently of each other while sharing global hardware resources.		
Reduce Environmental Impact and Increase sustainability	Through the consolidation and virtualization of Oracle database servers, IT is able to reduce environmental impact and increase sustainability, eliminating the need to purchase additional database servers in the future. This is consistent with Council Term Goal #2 A Sustainable and Environmentally Conscious City.		
	The power of virtualization enables the City to operate its' many databases on a single physical server, thus significantly reducing power consumption and lowering green house gas emissions.		
Enable application database isolation	The isolation and separation of business applications on individual zones reduces the global impact of potential outages to all Oracle systems during planned and		

	unplanned outages.
Improved Standardization	Implementation of Oracle 19c database version eliminates the need to support 5 different Oracle database versions that are currently in use at the City.

Financial Impact

The cost for implementing Oracle Enterprise RAC on new Solaris SPARC Servers is estimated to be approximately \$850,000 and will be covered within existing capital project CY00058 Oracle RAC Enterprise and Solaris SPARC Server Upgrades.

Conclusion

The implementation of Oracle Enterprise RAC on new Solaris servers enables the City to continue to provide fault-tolerant Oracle database services while increasing performance, reliability and scalability to critical business applications and ensuring the City stay current with the latest bug fixes and enhancements to security.

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James Teo Database Administrator, IT Innovation and Development (604-204-8657)

Att.1 7191NOITC - Oracle Database Software and Solaris Hardware Purchase



Notice of Intent to Contract

Finance and Corporate Services Division Purchasing Section

7191 Notice of Intent to Contract ("NOITC")

Issue date: Closing date and time:

03/19/2021 03/30/2021 at 12:00 pm, local time.

Re: Oracle Database Software and Solaris Server Hardware Purchase

Notice is hereby given by the City of Richmond ("City") of its intent to upgrade its existing Oracle Database Standard Edition 2 (SE2) Software licenses to Oracle Enterprise Edition (EE) RAC, purchase two new Solaris SPARC T8-1 servers and acquire professional services from Eclipsys Solutions Inc. ("Eclipsys") for supplemental configuration, setup and review of the new Oracle RAC and Solaris OS environment.

Background:

The City initially implemented the Oracle Database Standard Edition 2 (SE2) Real Application Clusters (RAC) on premise solution in 2014 to address the requirements for a robust and highly available database solution that supports many critical business applications. The City currently employs two Solaris SPARC T5-2 servers that distribute Oracle database workload while providing a load-balanced and fail-over system in the event of database interruption.

The City subscribes to Oracle Corporation ("Oracle") for the on-going support of its database products through an annual Premier Support licensing model. As of January 2019, Oracle made a technology change by de-supporting RAC on Oracle SE2 effectively hampering the City's ability to continue to provide a load-balanced, highly available database solution under its currently licensed model without upgrading to Oracle Enterprise Edition (EE) RAC.

Description:

As part of this Contract, Eclipsys is required to provide a new Oracle license agreement for 6 Oracle Database EE RAC licenses that includes the conversion of 4 existing Oracle SE2 licenses including the supply of 2 new licenses to Oracle EE RAC, in addition to provisioning 2 new Oracle Solaris SPARC T8-1 servers. Eclipsys will be providing professional services to supplement the configuration and setup of Oracle RAC and Solaris OS.

Eclipsys is a Value-Added-Reseller (VAR) specializing in a niche market that includes the installation, custom configuration and support of Oracle Database RAC on Solaris SPARC servers. Eclipsys is very familiar with the City's customized IT infrastructure having recently completed an Oracle architecture review and health check of the City's existing Oracle RAC environment in 2020. Eclipsys also leveraged competitive discounts from Oracle providing the City with a cost effective, highly available Oracle Database RAC infrastructure that supports the City's mission critical applications without a major upgrade for the next several years. Eclipsys will be providing support and subject matter expertise during Oracle RAC and Solaris OS



installation and configuration. Post-implementation, Eclipsys will be providing an architecture review and assessment to confirm best practices have been followed.

For the reasons above, the City has determined it is in the best interest to contract with Eclipsys to provide Oracle Database Software Licenses and Solaris SPARC server hardware for an estimated contract value not exceeding \$850,000.00 Canadian dollars, including contingency over an estimated contract term of 1 year.

Anyone requesting more information regarding this NOITC is to contact the City's Manager of Purchasing, in writing by e-mail to <u>purchasing@richmond.ca.</u>

Manager, Purchasing



Report to Committee

Re:	Application For a New Liquor Primary Liquor Lic Inc., at 8191 Alexandra Road, Richmond, BC,	ence - Z	odiac Karaoke & Pub
From:	Cecilia Achiam, General Manager, Community Safety	File:	12-8275-30-001/2021- Vol 01
То:	General Purposes Committee	Date:	April 23, 2021

Staff Recommendation

- 1. That the application from Zodiac Karaoke & Pub Inc., for a new Liquor Primary Liquor Licence to operate a new Karaoke Lounge at the premises located at 8191 Alexandra Road, with liquor service, be supported for:
 - a) A new Liquor Primary Liquor Licence with total person capacity of 240 occupants;
 - b) Proposed hours of liquor sales from Monday to Sunday, from 9:00 AM to 2:00 AM; and
- 2. That a letter be sent to Liquor and Cannabis Regulation Branch, which includes the information attached as Appendix A, advising that Council recommends the approval of the liquor licence application for the reasons that this new application for a Liquor Primary Liquor Licence has been determined, following public consultation, to be acceptable in the area and community.

Cecilia Achiam, General Manager, Community Safety (604-276-4122)

Att. 3

REPORT CONCURRENCE	
SENIOR STAFF REPORT REVIEW	INITIALS:
APPROVED BY CAO	

Staff Report

Origin

The Provincial Liquor and Cannabis Regulation Branch (LCRB) issues licences in accordance with the *Liquor Control and Licensing Act* (the Act) and the Regulations made pursuant to the Act. This report deals with an application to the LCRB and the City of Richmond by Zodiac Karaoke & Pub Inc., (hereinafter referred to as "Zodiac") for a new Liquor Primary Liquor Licence to:

- operate a karaoke lounge and private karaoke box rooms;
- establish hours of liquor service, Monday to Sunday, from 9:00 AM to 2:00 AM; and
- operate with a total person capacity of 240 persons.

The City of Richmond is given the opportunity to provide written comments by way of a resolution to the LCRB with respect to the liquor licence applications and amendments. For a new Liquor Primary Liquor Licence, the process requires the local government to provide comments with respect to the following criteria:

- the location of the establishment;
- the proximity of the establishment to other social or recreational facilities and public buildings;
- the person capacity and hours of liquor service of the establishment;
- the impact of noise on the community in the immediate vicinity of the establishment; and
- the impact on the community if the application is approved.

This report supports Council's Strategic Plan 2018-2022 Strategy #7 A Supported Economic Sector:

Facilitate diversified economic growth through innovative and sustainable policies, practices and partnerships.

Analysis

Location of the Establishment

The Liquor Primary Licence applicant is proposing to operate an eight room Karaoke Box Room establishment as well as a Lounge area. Zodiac is to be located at a new development site located at 8191 Alexandra Road. This property is zoned Auto-Oriented Commercial (CA) with the following permitted uses relevant to this application: liquor primary establishment, restaurant and recreation, indoor.

The specific business applying for a license is new. The Owner, Kenny Gu, did operate Zodiac Karaoke under another trade name, and in a nearby location, for approximately four years until it closed in January of 2020. In years past, there were bylaw enforcement issues with the business previously operated by Mr. Gu (related to smoking) but the issues were resolved. Should similar issues arise in the future, staff are confident that enforcement measures in the City's bylaws are sufficient to take action against this or other non-compliant businesses.

The intent of this new liquor primary licensed karaoke lounge will be to allow the clientele to enjoy a full food and beverage experience. Zodiac expects to cater to tourists, businesses and Richmond residents.

Proximity of the Establishment to Other Social, Recreational and Public Building

There are no schools, parks or other public buildings within 500 meters of proposed location for Zodiac. There are four liquor primary establishments within 500 meter radius of Zodiac.

Person capacity and Hours of Liquor Service of the Establishment

The applicant is proposing to operate Zodiac with a total occupant load of 240 person capacity. The applicant's proposed operating hours of liquor service are Monday to Sunday, 9:00 AM to next day 2:00 AM which is consistent with the City's Policy 9400.

The Impact of noise on the Community in the Immediate Vicinity of the Establishment

The proposed establishment will be located on the second floor of a two floor building, in an area already impacted by aircraft noise. It is staff's belief that no noticeable increase in noise would be present if the liquor primary licence application is supported.

The Impact on the Community if the Application is Approved

The community consultation process for reviewing applications for liquor related licences is prescribed by the Development Application Fees Bylaw 8951 which under Section 1.8.1 calls for:

- 1.8.1 Every **applicant** seeking approval from the **City** in connection with:
 - (a) a licence to serve liquor under the *Liquor Control and Licensing Act and Regulations;*

must proceed in accordance with subsection 1.8.2.

- 1.8.2 Pursuant to an application under subsection 1.8.1, every **applicant** must:
 - (b) post and maintain on the subject property a clearly visible sign which indicates:
 - (i) type of licence or amendment application;
 - (ii) proposed person capacity;
 - (iii) type of entertainment (if application is for patron participation entertainment); and
 - (iv) proposed hours of liquor service; and
 - (c) publish a notice in at least three consecutive editions of a newspaper that is distributed at least weekly in the area affected by the application, providing the same information required in subsection 1.8.2(b) above.

The required signage was posted on January 25, 2021, and three advertisements were published in the local newspaper on January 28, 2021, February 04, 2021 and February 11, 2021.

April 23, 2021

In addition to the advertised signage and public notice requirements, staff sent letters to residents, businesses and property owners within a 50 meter radius of the new establishment. On January 28, 2021, a total of 51 letters were mailed out to residents, businesses and property owners. The letter provided information on the proposed liquor licence application and contained instructions to comment on the application. The period for commenting for all public notifications ended February 27, 2021.

As a result of the community consultative process described, the City has not received any responses opposed to this application.

Other Agency Comments

As part of the review process, staff requested comments from other agencies and departments such as Vancouver Coastal Health, the Richmond RCMP, Richmond Fire-Rescue and the Building Approvals Department and the Business Licence Department. These agencies and departments generally provide comments on the compliance history of the applicant's operations and premises. As this is a new business and development, no concerns were expressed from any of the agencies or departments regarding this application.

Financial Impact

None

Conclusion

The results of the community consultation process of Zodiac's proposed Liquor Primary Liquor Licence application was reviewed based on the LCRB criteria. The analysis concluded there should be no noticeable potential impact from noise, no significant impact to the community and no comments or views from the neighboring residents, businesses or property owners. Staff therefore, recommend approval of the application from Zodiac to operate a Liquor Primary Licence with liquor service from Monday to Sunday from 9:00 AM to next day 2:00 AM, with an occupant load of 240 persons.

Willim

Carli Williams, P.Eng. Manager, Business Licence and Bylaws (604-276-4136)

VMD:vmd

- Att. 1: Appendix A
 - 2: Letter of Intent
 - 3: Arial Map with 50m buffer area

Appendix A

Re: Application for a New Liquor Primary Liquor Licence – Zodiac Karaoke & Pub Inc. – 8191 Alexandra Rd., Richmond BC

- 1. That the application from Zodiac Karaoke & Pub Inc., to operate at, 8191 Alexandra Rd., requesting a new Liquor Primary Liquor Licence for a new karaoke box room and lounge, with liquor service, be supported for:
 - a) A new Liquor Primary Liquor Licence for primary business focus of a Karaoke Lounge with a total person capacity of 240 persons; and
 - b) Liquor service hours for Monday to Sunday, from 9:00 AM to 2:00 AM.
- 2. That a letter be sent to Liquor and Cannabis Regulation Branch advising that:
 - a) Council supports the applicants new Liquor Primary Liquor Licence application, and the hours of liquor service with the conditions as listed above;
 - b) The total person capacity set at 240 persons is acknowledged;
- 3. Council's comments on the prescribed criteria (Section 71 of the Liquor Control and Licencing Regulations) are as follows:
 - a) The impact of additional noise and traffic in the area of the establishment was considered;
 - b) The potential impact on the community was assessed through a community consultation process; and
 - c) Given that this is a new establishment there is no history of non-compliance with this this establishment;
 - d) As the operation of a licenced establishment may affect nearby residents, businesses and property owners, the City gathered the views of the community through a community consultation process as follows:
 - i) Residents, businesses and property owners within a 50 meter radius of the establishment were notified by letter. The letter provided information on the application with instructions on how to submit comments or concerns; and

ii) Signage was posted at the subject property and three public notices were published in a local newspaper. The signage and public notice provided information on the application with instructions on how to submit comments and concerns.

 e) Council's comments on the general impact of the views of residents, businesses and property owners are as follows:
 CNCL – 108
- i) The community consultation process was completed within 90 days of the application process; and
- ii) The community consultation process did not generate any comments and views of residents, businesses and property owners.
- f) Council recommends the approval of the licence application with liquor service to 2AM for the reasons that this new application for a Liquor Primary Licence is acceptable to the majority of the residents, businesses and property owners in the area and community.

Attachment 2



Experts in liquor licensing for the success of your business

APPLICATION FOR A LIQUOR PRIMARY LIQUOR LICENSE

AT: ZODIAC 8191 ALEXANDRA ROAD RICHMOND, B.C. V6X 1C3

APPLICANT: ZODIAC KARAOKE & PUB INC.

LETTER OF INTENT FOR THE APPLICATION FOR A LIQUOR PRIMARY LICENSE

Submitted to:

Liquor and Cannabis Regulation Branch 4th Floor – 645 Tyee Road Victoria, BC V9A 6X5

Submitted by:

Rising Tide Consultants 1620 – 1130 West Pender Street Vancouver, BC V6E 4A4 p. 604.669.2928 f. 604.669.2920

INTRODUCTION

This Letter of Intent is provided in support of an Application for a Liquor Primary License submitted to the Liquor and Cannabis Regulation Branch and the City of Richmond for a Karaoke lounge located at 8191 Alexandra Road, Richmond, B.C. V6X 1C3.

Zodiac Karaoke previously had a liquor primary license issued by the Liquor and Cannabis Regulation Branch at 8291 Alexandra Road, Richmond, B.C. Attached is a copy of this liquor primary license number 162535.

The applicant had the intention of relocating this previous license to the site at 8191 Alexandra Road, Richmond, B.C. however, as the license was cancelled by the Liquor and Cannabis Regulation Branch, the applicant is applying for this new replacement license at the new site of 8191 Alexandra Road, Richmond, B.C. The new location is in very close proximity to the previous location.

The applicant is requesting approval for a capacity of approximately 240 persons including staff for this liquor primary licensed karaoke lounge. Please see the preliminary floor plans attached to the application for a liquor primary license.

The applicant will ensure that this karaoke lounge will satisfy the requirements of the Liquor and Cannabis Regulation Branch and the City of Richmond in terms of floor plans, design and monitoring of the various karaoke rooms.

The applicant is committed to the Liquor Branch requirements for karaoke rooms which are as follows:

- Each karaoke room will be free of blinds & curtains and a clear glass observation window will be fitted into each room with a surface area of 3.25 square feet or more and will ensure an unobstructed view into each room.
- 2. All servers, management and the licensee will have Serving It Right certification.

3. There will be no locks on doors so that there is easy access for staff and liquor authorities at all times.

In addition, the licensee will have a video surveillance system throughout the entire establishment. The larger karaoke rooms will have a dedicated and trained server with Serving It Right in the room to provide and monitor the food & beverage service.

PRIMARY FOCUS/ESTABLISHMENT TYPE

This establishment is close to businesses, hotels and conference facilities near the airport. It will cater to tourists and business people in the area. It will also cater to the local residents of Richmond who will frequent this establishment.

The target market will be adults primarily between the ages of 20 to 50 with a variety of occupations who are seeking a karaoke experience in Richmond.

The establishment will have eight private soundproof karaoke rooms of varying size in order to cater to small, medium or larger groups. Five of these karaoke rooms are VIP rooms and the other three rooms are Party Rooms. There are also five booths and an open lounge area in this establishment.

The intent of this liquor primary licensed karaoke lounge is to allow the local population to enjoy a full food and beverage experience while having a karaoke and sing-along experience in a friendly atmosphere.

HOURS OF OPERATION

The proposed hours of licensing requested are 9.00 am to 2.00 am Monday to Sunday.

ENTERTAINMENT

The main entertainment at Zodiac is in the form of Karaoke music and singing combined with a food and beverage experience.

FOOD SERVICES

The applicant will have a menu of light bar food available primarily snacks and fruit and vegetable platters.

COMPOSITION OF NEIGHBOURHOOD

Attached is a site plan showing the location of the establishment. The current zoning of the property is CA – (Auto-Oriented Commercial). This zoning has a permitted use of a liquor primary establishment. The surrounding area is a mixed commercial retail area.

NOISE IN THE COMMUNITY AND DISTURBANCES

The applicant has taken measures and ensures they will be in compliance with the noise bylaw of the City of Richmond at all times. Given the location of the proposed establishment, noise will not been a factor in the operation of the venue.

The applicant will also work to ensure that any sound is contained to the establishment and does not spill into the neighbouring area. The applicant will ensure that the establishment is compliant with the City of Richmond noise bylaws.

The nature of this karaoke lounge operation requires the music levels to be reduced to ensure that the sound is contained inside the specific rooms and there is no sound transferring between rooms.

This proposed liquor primary licensed establishment should not impact negatively on the surrounding area due to the fact that it is located in a commercial area. The applicant will not permit the operation of the licensed areas to impact negatively on the surrounding businesses in the areas. The busy times of the karaoke lounge are mainly in the evening and do not impact the neighbouring businesses in a negative way.

Noise and the impact on the community are factors the City of Richmond will consider in assessing this application.

LICENSING OPTIONS

The applicant is not requesting any additional licensing options or endorsements at this time.

OTHER FACTORS

The applicant also submits the following additional factors for consideration:

- The applicant's focus is on offering the public the convenience of a karaoke lounge.
- The proposed establishment will further diversify the hospitality and entertainment venues available to residents and business professionals in Richmond.

The location is ideal for tourists and business professionals as it is close to the airport and the hotels in the area. The location is very convenient for residents and business professionals. While this establishment will be a liquor primary licensed establishment, it will also provide food service.

BENEFITS OF THE PROPOSED ESTABLISHMENT

The applicant's proposed liquor licensed establishment will benefit the community in the following ways:

- Employment opportunities for residents of Richmond and the Lower Mainland.
- Provide an additional source of tax revenue for the Federal, Provincial and Municipal Governments.
- Provide an additional liquor licensed karaoke lounge for the Richmond area for the enjoyment of tourists and local residents.

All of which is respectfully submitted this 8th day of January, 2021. Bert Hick Rising Tide Consultants 1620–1130 West Pender Street Vancouver, B.C. V6E 4A4Tel: (604) 669-2928 Fax: (604) 669-2920

8191 Alexandra Rd

Attachment 3





BC Major Infrastructure Projects Brochure Spring 2021

The BC Major Infrastructure Projects Brochure is for projects that are \$50 million and above and includes projects from the Province of British Columbia as well as from other public sector bodies in BC.

frastructure BC is committed supporting public sector dlients through all phases infrastructure delivery. is brochure focuses on two important phases of infrastructure delivery: planning and procurement.

Infrastructure BC works with all levels of government in delivering complex infrastructure to improve people's lives and communities. With continued focus on public infrastructure spending in BC, this brochure provides vital information to companies in the construction industry.



Project Phases

Planning

Provides project information and analysis of potential service delivery options, procurement options and costs.

Pre-Procurement

client approval to proceed to completed. Project awaiting Business Case has been procurement.

Procurement Active

RFQ

reserves indicating their interest in the project, and Inversion in the second s qualifications.

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proposals to fulfill the project Invites eligible bidders to prepare and submit specific requirements.

BC's Major Infrastructure Any public sector body for inclusion in future may provide projects to Infrastructure BC in British Columbia brochure versions. **Projects Brochure** will be updated semi-annually.

Planning (not yet approved)

SECTOR	PROJECT	OWNER	PROJECT TYPE	PROCUREMENT START (ANTICIPATED)	IBC INVOLVED YES or NO	LOCATION	CAPITAL COST	CONSTRUCTION (ANTICIPATED)	
	John Hart Dam Seismic Upgrade ¹	BC Hydro	щ	Procurement has not started	No	Vancouver Island	\$\$	2022	
•	Ladore Spillway Seismic Upgrade ¹	BC Hydro	щ	Procurement has not started	No	Vancouver Island	ŞŞ	2024	
•	Strathcona Upgrade Discharge ¹	BC Hydro	щ	Procurement has not started	No	Vancouver Island	Ş	2024	
•	Peace to Kelly Lake Stations Sustainment ²	BC Hydro	щ	Procurement has not started	No	Northern Interior	ŞŞ	2023	
•	Mainway Stations Upgrade ³	BC Hydro	ж	Procurement started	No	Lower Mainland	Ś	2023	
•	KSM Mine Load Interconnection	BC Hydro	щ	Procurement has not started	No	Northern Interior	Ś	2022	
•	Bridge River I Replace Units 1-4 Generators/Govenors	BC Hydro	щ	Procurement has not started	No	Lower Mainland	ŞŞ	2023	
•	Kootenay Canal Modernize Controls	BC Hydro	щ	Procurement has not started	No	Southern Interior	Ś	2024	

¹ Design Bid Build with ECI

² Design Bid Build except work at Kennedy (KDY) and McLeese (MLS) capacitor controls and equipment upgrade to be Design Build ³ Design Bid Build except GIS and RIP BUS to be Design Build

	• •		•••	• •	•••	• •	
 Burnaby Hospital Phase 2	Fraser Health Authority	NB	Fall 2022		TBD	TBD Burnaby	TBD Burnaby \$\$\$
Richmond Hospital Redevelopment	Vancouver Coastal Health Authority	NB/R	Fall 2022		/es	res Richmond	res Richmond \$\$\$
Slocan Street Redevelopment	Vancouver Coastal Health Authority	NB	Fall 2022	Υ€	s	ss Vancouver	ss Vancouver \$\$
UHNBC New Acute Care Tower	Northern Health Authority	NB	Summer 2022	Yes		Prince George	Prince George \$\$\$
Vernon Jubilee Hosp. Psych. Inpatient Unit Replacement	Interior Health Authority	NB	TBD	TBD	• • • • • • • • •	Vernon	Vernon
VGH OR Renewal Phase 2	Vancouver Coastal Health Authority	В	Spring 2022	Yes	• • • • • • • •	Vancouver	Vancouver \$\$
Victoria Law Courts	Min. Citizens' Serv. & Min. Public Safety SG	NB/R	TBD	TBD	•••••	Victoria	Victoria \$\$
Fort St. John Law Courts	Min. Citizens' Serv. & Min. Public Safety SG	NB/R/E	TBD	TBD		Fort St. John	Fort St. John \$
EMBC Post-disaster Facility	Ministry of Citizens' Services	NB	TBD	TBD		Greater Victoria	Greater Victoria \$

LEGEND PROCUREMENT METHOD DESIGN BUILD	Plan secror	nning (not yet approved)	OWNER School District	PROJECT TYPE	PROCUREMENT START (ANTICIPATED)	IBC INVOLVED YES of NO	LOCATION	CAPITAL COST	CON: (AN
DESIGN BID BUILD	()	westside Secondary	SCNOOL DISTRICT No. 23	BB	Summer 2023	TBD	Kelowna	Ś	
DESIGN BUILD FINANCE	Ø	Burke Mountain Seconday	School District No. 43	gg	Spring 2023	TBD	Coquitlam	ŝ	
PROGRESSIVE DESIGN BUILD	Ø	University of Victoria (UVic) Engineering Expansion	UVic	NB/E	Spring 2021	No	Victoria	Ś	
CONSTRUCTION MANAGEMENT	6	University of BC (UBC) School of Biomedical Engineering	UBC	B	Spring 2022	No	Vancouver	Ś	
ALLIANCE	6	BCIT Trades and Technology	BCIT	Æ	2022	No	Burnaby	ŞŞ	
TO BE DETERMINED	6	Douglas College (DOUG) Academic & Housing Building	Douglas College	NB	Spring 2022	No	New Westminster	ŞŞ	
SECTOR	6	North Island College (NIC) Student Housing	North Island College	NB	Spring 2022	No	Comox	Ś	
EDUCATION	6	Capilano University (CAPU) Student Housing	Capilano University	Æ	Fall 2021	No	North Vancouver	ŝ	
	Ø	University of the Fraser Valley (UFV) Student Housing	UFV	BB	Early 2022	No	Abbotsford	ŝ	
HFALTH C	45	Royal BC Museum Redev. Project Museum Project	Min. of Tourism, Arts, Culture and Sport	TBD	TBD	Yes	Victoria	\$\$\$	
PROJECT TYPE		Capstan Station	TransLink	NB	Summer 2021	No	Richmond	Ś	
NEW BUILD NB RENOVATION R		Marpole Transit Centre	TransLink	NB	Fall 2023	No	Vancouver	ŝŝ	
EXPANSION E		Hwy. 99 George Massey Crossing (GMC) and corridor improvements	Min. of Transportation & Infrastructure	NB	2022-2024 depending on option	Yes	Richmond Delta	\$\$\$\$	
CAPITAL COST		Hwy. 1 widening 264th Street to Whatcom	Min. of Transportation & Infrastructure	ш	TBD	TBD	Langley Abbotsford	\$\$\$\$	
\$\$\$\$150-\$150 MILLION\$\$		Surrey Langley SkyTrain	Min. of Transportation & Infrastructure	NB	TBD	Yes	Surrey Langley	\$\$\$\$	



\$500-\$1000 MILLION >\$1000 MILLION

\$\$\$\$ \$\$\$



Capilano University Student Housing – Artist rendering by HDR Architecture Associates, Inc. (December 2020)

LEGEND PROCUREMENT METHOD	Pre-	Procurement		PROJECT	PROCUREMENT START	IBC		CAPITAL	CONSTRUCTION
DESIGN BUILD	SECTOR	PROJECT	OWNER	TYPE	(ANTICIPATED)	YES or NO	LOCATION	COST	(ANTICIPATED)
	•	G.M. Shrum G1 to 10 Control System Upgrade	BC Hydro	щ	In Progress	No	Northern Interior	Ś	2017
DESIGN BILD BOLLD	•	Mount Lehman Substation Upgrade	BC Hydro	щ	2020 (start)	No	Lower Mainland	Ś	2019
PROGRESSIVE DESIGN BUILD	•	Capilano Substation Upgrade	BC Hydro	ш	2020 (start)	No	Lower Mainland	Ś	2019
CONSTRUCTION MANAGEMENT	•	5L063 Telkwa Relocation	BC Hydro	щ	2019 (start)	No	Northern Interior	ŝ	2020
ALLIANCE	•	Sperling Metalclad Switchgear Feeder Section Replacement	BC Hydro	щ	2021 (start)	No	Lower Mainland	ŝ	2020
TO BE DETERMINED	¢	New Surrey Hospital & Cancer Centre	Fraser Health Authority	B	Fall 2021	Yes	Surrey	\$\$\$\$	2023-2027
SECTOR	-	Royal BC Museum Collections & Research Building Project	Min. of Tourism, Arts, Culture and Sport	NB	June 2021	Yes	Colwood	ŝ	2022-2024
		Burrard Station Upgrades	TransLink	R/E	Summer 2021	No	Vancouver	Ś	2022-2023
еруку « итытыз 🦻 налан с		Hwy.1 Ford to Tappen	Min. Transport. & Infrastructure	ш	Fall 2021	No	Salmon Arm	ŝŝ	Early 2022
		Hwy. 17 Keating Cross Road - Flyover Road	Min. Transport. & Infrastructure	ш	Winter 2021-2022	TBD	Central Saanich	ŝ	Spring 2022
PROJECT TYPE		Hwy. 7 266 Street to 267 Street - 4-laning	Min. Transport. & Infrastructure	ш	Early 2022	Yes	Whonnock	Ś	Spring 2022
NEW BUILD NB RENOVATION R		Hwy. 1 Jumping Creek to Macdonald	Min. Transport. & Infrastructure	ш	Early 2022	Yes	Revelstoke	ŝŝ	Winter 2022-2023
EXPANSION E	*	Burnaby Lake North Interceptor – Winston Street Tunnel	Metro Vancouver	NB	2021	No	Burnaby	ŝŝ	Summer/Fall 2021
CAPITAL COST \$ \$50-\$150 MILLION	•	Northwest Langley Wastewater Treatment Plant – Liquid Treatment	Metro Vancouver	NB	Fall 2021	No	Langley	\$\$\$	Early 2022
\$\$\$\$150-\$200 WITTION	•	Northwest Langley Wastewater Treatment Plant – Solids Treatment	Metro Vancouver	NB	Spring 2022	No	Langley	ŞŞ	Fall 2022



\$500-\$1000 MILLION NOLLING

\$\$\$\$ \$



Master plan of the Royal Bay development in Colwood, with the location of the Royal BC Museum Collections and Research Building highlighted.

BC Hydro's G.M. Shrum Generating Station is located next to the W.A.C. Bennett Dam.

⁴ ⁴ Design Build Finance and Construction Management



involvement, email kathy.cloutier@infrastructurebc.com; For more information visit: www.infrastructurebc.com for all others please contact the project owner directly. For information on projects with Infrastructure BC

4

Richmond Hospital Acute Care Tower replacement project

Recommendation

- (1) That Council write to the Premier, Minister of Health and the Minister of Finance and ask for Treasury Board approval of the Business Plan and confirmation of the funding for the new Acute Care Tower in Richmond; and
- (2) cc Richmond MLAs, Vancouver Coastal Health Board and the Richmond Hospital Foundation; and
- (3) That Council invite the Richmond MLAs to a meeting to discuss the funding and timeline for the Richmond Hospital upgrade

Background:

- Jun., 2016 – the Province announced it had approved the first phase of planning for a new Acute Care Tower, the Concept Plan

-Jan., 2017 – the board of Vancouver Coastal Health approved the plan and submitted to the Ministry of Health

-Mar. 6, 2017 – Richmond Hospital Foundation presentation at General Purposes Committee. Link to minutes and Richmond Hospital Foundation presentation https://www.richmond.ca/cityhall/council/agendas/gp/2017/030617_minutes.htm

- Mar. 13, 2017 -Richmond Council wrote to the Premier, Minister of Health, Minister of Finance, Richmond MLA's, the Leader of the Opposition and Vancouver Coastal Health (see attached)

- Mar. 29, 2018 – Premier Horgan announced the approval of the Concept Plan for the new Acute Care Tower and the move forward to the Business Plan stage

- Jul. 2, 2020 – Premier Horgan and Health Minister Dix, at a visit to Richmond Hospital, announced an expanded scope for the project which included new a Medical Imaging Centre and new Emergency Department to be included in the Plan

- Nov. 2020 - Business Plan approved by Vancouver Coastal Health and submitted to the government

-Apr.20, 2021 - provincial budget announcement is silent on new Acute Care Tower

-May 10, 2021 – the Richmond Hospital Foundation announces that their ACT NOW capital campaign for a new acute care tower officially reached its \$50 million goal (see attached letter)

We know that the existing Richmond Hospital North Tower structure has significant structural deficiencies and there is no doubt about the urgency for a new Acute Care tower.

On behalf of the residents of the city of Richmond, we need to again urge the provincial government to advance and fund this critically important project.

01-0155-03-02



TO: MAYOR & EACH COUNCILLOR FROM: CITY CLERK'S OFFICE

XL OI-OISO-20- HEAL " - OPLEI Malcolm D. Brodie Mayor

6911 No. 3 Road Richmond, BC V6Y 2C1 Telephone: 604-276-4123 Fax No: 604-276-4332 www.richmond.ca

March 13, 2017

The Honourable Christy Clark Premier of British Columbia PO Box 9041 STN PROV GOVT Victoria, BC V8W 9E1

Dear Premier Clark:

Re: Acute Care Tower at Richmond Hospital

At the Regular Council meeting held on Monday, March 13, 2017, Richmond City Council considered the above matter and adopted the following resolution:

That a letter be written to the Premier, the Minister of Health, the Minister of Finance, Richmond MLAs, the Leader of the Opposition and Vancouver Coastal Health calling on the provincial government to commit to a new hospital tower to replace the north tower in Richmond.

Recently, the Richmond Hospital Foundation presented before City Council on the urgent need for a new acute care tower at Richmond Hospital. In their presentation, the Foundation identified concerns that the original hospital tower, built in 1996 is now more than 50 years old, no longer seismically stable and that the infrastructure of the current tower is obsolete.

They also presented that the operating rooms are built below the flood plain and are too small to accommodate today's medical equipment. Moreover, the current standard in hospitals is to have 80% single occupancy rooms for infection control purposes whereas Richmond Hospital currently has triple and quadruple occupancy rooms with merely ten percent being single occupancy.

Hospitals across British Columbia are receiving funding and being upgraded. Although the government has announced major capital health infrastructure investments, the concept plan for a new acute care tower has yet to be approved. Given the extensive growth the City has seen over the years, it is critical that the north tower at Richmond Hospital be replaced.

Richmond City Council respectfully requests that the government immediately commit to replacing the north tower, approve the concept plan submitted to the Ministry of Health and immediately fund the business plan stage so that Vancouver Coastal Health may quickly advance the proposed project.



We look forward to receiving this urgently needed information. Should you have any questions or wish to discuss the matter, please contact me directly or Cathryn Volkering Carlile, General Manager, Community Services, at 604-276-4068.

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Yours truly, 1

Malcolm D. Brodie

pc:

Richmond City Councillors The Honourable Terry Lake, Minister of Health The Honourable Michael de Jong, Minister of Finance The Honourable, Linda Reid, MLA, Richmond East The Honourable Teresa Wat, MLA, Richmond Centre John Yap, MLA, Richmond-Steveston John Horgan, Leader of the Opposition Kip Woodward, Chair, Vancouver Coastal Health Board Richmond Hospital Foundation SMT



May 10, 2021

His Worship Mayor Malcolm Brodie and City Councillors City of Richmond 6911 No. 3 Road Richmond BC V6Y 2C1

Dear Mayor Brodie and Councillors:

RE: ACT NOW Capital Campaign Completion

On behalf of Richmond Hospital Foundation I am pleased to inform you that we will be announcing later this week that our ACT NOW capital campaign for a new acute care tower has officially reached its \$50 million goal.

This is an incredibly historic achievement for Richmond, and it demonstrates how deeply this community believes in our local health care, for now and for future generations.

On behalf of the Foundation, I would like to thank you all for your leadership over the years to speak out and advocate for the need to build this new tower as quickly as possible.

On a separate note, while we are grateful to the Province for bringing the project to its current stage, we are still waiting for the final approval of the Business Plan by Treasury Board and an announcement by the Premier to the people of Richmond. This remains a critical milestone that has not yet been completed and will facilitate the project continuing to move forward. We encourage you to continue to raise your voice on behalf of the people of Richmond. Any assistance and leadership you can provide will, of course, be appreciated.

Thank you again for your exemplary leadership over the years.

Sincerely,

Natalie D. Meixner, ICD.D President & CEO Richmond Hospital Foundation 7000 Westminster Hwy, Richmond BC V6X 1A2

604 244 5252 richmondhospitalfoundation.com

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Joyful Giving. Joyful Living.



Report to Committee

То:	Public Works and Transportation Committee	Date:	April 1, 2021
From:	Lloyd Bie, P.Eng. Director, Transportation	File:	02-0775-50-6708/Vol 01
Re:	Cycling Network Plan Update - Proposed Phase	1 Engag	ement

Staff Recommendation

- That the proposed Phase 1 engagement activities to support the update of the Cycling Network Plan, as described in the report titled "Cycling Network Plan Update - Proposed Phase 1 Engagement," dated April 1, 2021 from the Director, Transportation, be endorsed for implementation; and
- 2. That staff be directed to report back on the results of the Phase 1 engagement.

Yd R.

Lloyd Bie, P.Eng. Director, Transportation (604-276-4131) Att. 2

	REPORT CONCURRE	ENCE
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Communications Parks Services Recreation and Sport Engineering Sustainability & District Energy Policy Planning Development Applications	N N N N N N N N	
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO

Staff Report

Origin

The Official Community Plan has a target to increase cycling mode share from 1% in 2008 to 10% by 2041. The recently endorsed Community Energy and Emission Plan (CEEP) Strategic Directions intended to guide the revised 2020-2050 CEEP identifies accelerating achievement of this target mode share to 2030. The Council-approved 2018 and 2019 Capital Budgets include funding for the combined update of the City Centre and city-wide (outside of City Centre) existing cycling network plans (the Project). Key deliverables include a prioritised implementation strategy, conceptual designs for cycling facility types, and policy guidance for accommodating emerging micro mobility devices. This report presents the proposed Phase 1 engagement activities to gain feedback from the public and stakeholders regarding issues and opportunities for the existing cycling network.

This report supports Council's Strategic Plan 2018-2022 Strategy #2 A Sustainable and Environmentally Conscious City:

Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.

2.2 Policies and practices support Richmond's sustainability goals.

This report supports Council's Strategic Plan 2018-2022 Strategy #4 An Active and Thriving Richmond:

An active and thriving community characterized by diverse social and wellness programs, services and spaces that foster health and well-being for all.

4.2 Ensure infrastructure meets changing community needs, current trends and best practices.

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

Leadership in effective and sustainable growth that supports Richmond's physical and social needs.

6.3 Build on transportation and active mobility networks.

This report supports Council's Strategic Plan 2018-2022 Strategy #8 An Engaged and Informed Community:

Ensure that the citizenry of Richmond is well-informed and engaged about City business and decision-making.

8.1 Increased opportunities for public engagement.

8.2 Ensure citizens are well-informed with timely, accurate and easily accessible communication using a variety of methods and tools.

Analysis

Cycling Network Plan Update Objectives

In 2008, the City updated the City Centre Transportation Plan (CCTP), which was incorporated into the City Centre Area Plan (CCAP, adopted in September 2009). The CCAP identifies a planned network of bike routes within the City Centre. In 2012, the City updated the Official Community Plan (OCP). The OCP identifies the City's cycling-related strategies and policies, a planned city-wide network (outside the City Centre) of major street bike routes and a complementary city-wide network of local street bikeways.

Since the completion of the CCAP and OCP update, Richmond has seen significant change with the arrival of the Canada Line, continued population growth and a consistent high level of development activity. At the same time, there has been an evolution in the design of cycling facilities with greater emphasis on bikeways that are comfortable for all cyclists (e.g., on-street cycle tracks separated from traffic on major streets, off-street paths).

The Project will ensure that the City's cycling network and policies are reflective of the community's current needs, continue to support the City's long-term mobility objectives and reflect best practices with respect to cycling facility planning and design.

Schedule and Process

The Project was initiated in Summer 2020 and is anticipated to be completed later in 2021. The planned schedule and process includes two rounds of engagement with the public (Figure 1):

- Phase 1: Gather perspectives from the community on what is important in their decision to cycle more often, and opportunities to improve the cycling experience and physical cycling network.
- Phase 2: Based on the Round 1 engagement results and technical analysis, present and gather feedback on an updated preliminary cycling network and complementary cycling policies as well as infrastructure priorities.



Figure 1: Planned Schedule and Process for Cycling Network Plan Update

In preparation for the Phase 1 engagement, Project activities to date have focused on a review of the current cycling network comprising (Attachment 1)¹:

- Documentation of the existing conditions (i.e., cycling facility types, comfort level, and ridership).
- Analysis of network connectivity and cycling accessibility to key destinations, including the preliminary identification of gaps.

Phase 1 Engagement

All engagement activities will take place on-line with initiation in late May/early June pending Council approval. Public engagement will be via the City's Let's Talk Richmond site, which will host:

- A survey to identify where and why residents currently ride, and seek comments on what would encourage them to ride more (Attachment 2).
- An interactive map of Richmond showing the existing cycling network, including committed but not yet constructed facilities, where participants can "pin" locations to identify gaps or areas of concern.
- An ideas board where participants can share their comments on and priorities for cycling in Richmond.

With the support of the Richmond School District, a separate simpler and shorter survey will be distributed to students (targeted to Grades 6-9) to identify current levels of cycling to/from school and any barriers to increased cycling. Students will also have the opportunity to use the interactive map and ideas board to provide additional feedback.

An external stakeholder session will also be convened with representatives invited from relevant agencies including the Ministry of Transportation and Infrastructure, TransLink, Vancouver Airport Authority, Richmond School District, ICBC, HUB Cycling, Richmond RCMP, and Vancouver Coastal Health. A separate stakeholder session will be held for members of the Richmond Active Transportation Committee (RATC) and a RATC representative will also be invited to the larger external stakeholder session.

Public awareness of the engagement process will be provided through the City's standard communication tools including social media (Twitter and Facebook), inclusion on the City website, and posting of an advertisement at transit shelters in the City Centre that have a digital panel (Figure 1). The same poster will also be temporarily installed along bike routes across the city.



Advertisement

¹ The existing cycling network depicted and quantified encompasses facilities within the geographic boundary of Richmond. Not all of the cycling facilities shown are located on roads or lands within the City's jurisdiction.

Staff believe these collective measures to engage with the public and stakeholders will reach the majority of the intended audience despite the current inability to conduct traditional in-person open houses and meetings.

Financial Impact

All activities can be accommodated within the existing approved funding sources.

Conclusion

The Phase 1 engagement activities for the public and stakeholders will inform development of a preliminary updated cycling network and prioritized implementation strategy, which will be the focus of Phase 2 engagement in Summer-Fall 2021.

-faide

Fred Lin, P.Eng., PTOE Senior Transportation Engineer (604-247-4627)

Joan Caravan Transportation Planner (604-276-4035)

JC:jc

Att. 1: Cycling Network Plan Update - Existing Network Analysis Summary | Executive Summary

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Executive Summary

This update to the Cycling Network Plan (CNP) sets out to help the City of Richmond respond to its objective of reducing vehicle trips and increasing cycling to 10% of all trips by 2041 by developing an informed vision of the future cycling network and identifying the required steps to achieve it.

Existing Cycling Network

The city's cycling network comprises more than 300 lane-km of cycling facilities, including a mix of facility types. Figure 1 illustrates the composition of Richmond's existing cycling network by facility type. The key characteristics of each facility type are summarized in Table 1.



Figure 1: Proportion of Cycling Facility Types

steer

The Existing Cycling Network map, Figure 2 on the following page, shows the distribution of cycling facilities throughout the city by facility type. Notably, informal cycling routes are not shown.

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Table 1: Summary of Cycling Facilities by Key Characteristics

Facility Type	Alignment / Surfaco	Exclusive vs Shared	Treatments
Bike Path	Off-Street / Paved	Exclusive	Uni- or bi-directional lanes separated from traffic by boulevard, or through park / not adjacent to roadway.
Protected Bike Lane	On-Street / Paved	Exclusive	Uni- or bidirectional lanes separated by 0.3-1.0m delineator (bollards, curbs, concrete barriers, planter boxes, etc.)
Muld-Use Path / Greenway	Off-Street / Paved	Shared with pedestrians	Uni- or bi-directional lanes for all active uses and recreation.
Recreational Trail	Off-Street / Unpaved	Shared with pedestrians	Bi directional paths, typically finished with crushed gravel
Bike Lane / Bike-Accessible Shoulder	On-Street/ Paved	Exclusive	Uni directional lane, delineated from traffic with painted line
Neighbourhood Street Bikeway	On-Street / Paved	Shared with traffic on local roads	On-street sharrow markings with directional signage on roadway and street signs
Shared Roadway	On-Street / Paved	Shared with traffic on main roads	On-street sharrow markings with shared roadway signage

Next Steps

An awareness of the current composition and distribution of facilities within the cycling network is essential to inform consultation efforts. As the foundation of many existing cycling trips in the city, the current network actively shapes and informs how users will experience and perceive further cycling meds and will continue to act as a baseline when considering further cycling improvements and their prioritization in subsequent study phases. As the network develops, balancing the needs for enhanced safety and an expanded network will continue to require a combination of facility types to accommodate different users and trips of varying purposes through the city.

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Figure 2: City of Richmond's Existing Cycling Network by Facility Type

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Attachment 1 Cont'd

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Cycling Comfort Level

In consultation with City of Richmond staff, and to allow for consistency with the reported data for Metro Vancouver municipalities, this study has adopted the cycling comfort level criteria used within TransLink/HUB's 2019 Benchmorking the Stote of Cycling in Metro Voncouver report. A detailed list of the criteria for cycling comfort by facility type is provided in Appendix A.

Generally, the level of comfort – or conversely, the level of stress – of a given cycling facility depends on its specific design configuration, characteristics of the adjacent traffic (i.e. volume and speed), and user mix. Typically, cyclists are most comfortable when physically separated from other modes, and stress is most significantly impacted by exposure to motor vehicle traffic. Additionally, comfort levels tend to decrease as both traffic speeds and volumes increase.

Comfortable for Very Few	Comfortable for Few	Comfortable for Some	Comfortable for Most
<u>Shared / Adjacent to Traffic</u> with Posted Speed: > 50 km / hr	<u>Shared / Adjacent to Traffic</u> with Posted Speed: ≤ 50 km / hr	Shared / Adjacent to Traffic with Posted Speed: ≤ S0 km/hr	Fully Protected OR Shared / Adjacent to Traffi with
Traffic Volume: ≥ 6,000 vehicles / day	Traffic Volume: < 6,000 vehicles / dəy	Traffic Volume: ≤ 3,000 vehicles per day	Posted Speed: ≤ 30 km/hr Traffic Volume: ≤ 2,000 vehicles per day

Figure 3: Cycling Comfort Level Criteria

Inherent design features of different facility types lend themselves towards lower or higher levels of comfort. Thus, while Figure 4 shows that over 50% of the existing cycling network in Richmond can be classified as 'comfortable for most', the breakdown of comfort level by facility type in Figure 5 highlights that this is primarily accounted for by off-street Recreational Trails and Multi-Use Paths/Greenways.

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Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Next Steps

Public engagement presents an important opportunity to affirm perceptions of comfortable and safe cycling and to gather feedback on the types of facilities and conditions that would be most likely to increase cycling use. This understanding of perceived comfort will be informative when considering which cycling investments should be prioritized.

As limited financial resources are used to build out the network, a balance will need to be achieved between increasing the comfort level of existing facilities and potentially competing desires for an expanded network that makes cycling more accessible and equitable throughout the city.

Cycling Ridership

Recently installed in late 2019, bike counters on River Dr MUP west of No. 4 Road, Railway Greenway MUP at Maple Road, and No. 2 Road MUP south of Steveston Highway provide initial insight Into the daily trends and seasonal usage patterns of cyclists at different locations. Figure 6 to the right shows the average daily cycling volumes from Nov 2019 through Sept 2020 alongside average historical precipitation and temperature data for Richmond.

While the relative cycling rates vary greatly by location (approx. 5-10 times as many average daily cyclists on the Rallway Greenway in Mar to Jun 2020), all three locations similarly reflect a seasonal pattern of increased cycling with warmer temperatures and reduced rainfall during the summer months.

Third-party data obtained from Strava affirms the findings of the bike counter data, with a focus on longer distance recreational cycling patterns. Strava's historical trip data supports anecdotal evidence that Richmond remains a popular destination for recreational cyclists, indicating that in a typical (non-pandemic) year nearly one third of active Strava users cycling in Richmond are visitors from other communities. Comparing historical data also indicates a general increase in local recreation during the summer months of the pandemic by users of the Strava platform in Richmond.



Figure 5: Cyclist Comfort Level by Facility Type

The majority of remaining facilities are considered 'comfortable for some' (20%) or 'comfortable for few' (27%). This mainly reflects the shortcomings of conventional bike lanes/bike-accessible shoulders, which may not be viewed as a viable option by many potential users, particularly inexperienced cyclists, youth, and the elderly.

Importantly, facility types are not evenly distributed across the network and may serve different user groups or trip purposes. This is particularly true of Recreational Trails like the Dyke Trail, which offers limited utility for general purpose trips or commuting. The Cycling Connectivity and Accessibility Analysis section begins to unpack some of the challenges of this distribution.

March 2021 | iii



Figure 6: Avg Monthly Cyclist Volumes and Climate Data (Dec 2019 - Sept 2020) Next Steps

ext Steps

Overall, these initial findings highlight the importance of establishing a reliable dataset to monitor cycling activity in the city. Despite Strava's limitations as an opt-in platform with only a subset of cycling trips, it provides a fine-grained level of cycling data at no cost. Identified trip patterns can better inform development of the future network and investment prioritization.

Continued monitoring of bike counter data as well as expanded installation at other strategic locations into the future will help to better understand cycling patterns as the network evolves. Such an expansion would also enable a decreased reliance on third-party data, which may not continue to be reliable in the long-term and which represents only a subset of cyclists.

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March 2021 | iv

Attachment 1 Cont'd

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Network Connectivity and Accessibility Analysis

Network connectivity represents a measure of the relative ease of reaching other locations within the cycling network from a given location. Cycling links with more immediate connections to other facilities or access to potential routes are considered more "connected" to the broader network and olfer greater route choices to move throughout the network. Hence, discontinuous facilities located far from the primary north-south and eastwest spines of the network exhibit low levels of connectivity and require cyclists to use informal routes to reach destinations and other parts of the cycling network from these locations.

While some areas of low connectivity were uncovered, the evaluation identified that even small extensions of the network and formalization of key informal routes could dramatically improve connectivity and cycling route choice throughout the city.

Cycling accessibility to points of interest was also examined. It was found that most commercial and mixed used areas are accessible via the existing cycling network, and all rapid transit stations are located adjacent to cycling facilities. One notable exception is the commercial area adjacent to Highway 99 in North Richmond, and the Cambie Community Centre, which is the only community centre not accessible within 400m of the cycling network.

Special focus was given to cycling accessibility to schools and educational institutions, as students are a key demographic for fostering cycling culture and trips to school by private vehicle could be considerably reduced by increasing student cycling behaviours and safe routes to school. While most secondary and post secondary schools were accessible within 400m of the cycling network, a number of elementary schools were not.

In the school context, comfort levels along the entire journey are critical for students who are less likely to be confident cyclists. These students and their parents are less likely to tolerate higher levels of traffic exposure.

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Next Steps

While most of the identified key destinations (e.g. community centres, schools, libraries, tourist destinations) were found to be located near existing cycling facilities, limited route options and network gaps still limit convenient and direct access to some facilities for many users. This is particularly true for less confident cyclists who may not be comfortable cycling with mixed traffic, even if for a short distance between dedicated cycling facilities and their final destination.

One such group, students, would benefit from the establishment of a more comprehensive neighbourhood street bikeway network and 'safe routes to school' program to address existing gaps and encourage healthy and sustainable travel from a young age.

Looking Ahead

The analysis and findings summarized within this memo will be used as the basis for the first round of public and stakeholder engagement and as a stepping-stone to future phases of work.

While the initial stage of public consultation will be focused on the existing network, the future, planned cycling network will be assessed in the next phase of work alongside the findings and input gathered through public and stakeholder engagement. This will support the prioritization of new and upgraded cycling facilities and will inform conversations about the relative impacts of targeting investments in different areas.

The updated cycling network plan will continue to deliver on the goals of improved cyclist safety, enhanced utility of the active transportation network, and increased attractiveness of cycling as a comfortable and convenient transportation mode in Richmond.

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Attachment 2

Cycling Network Plan Update: Phase 1 Engagement Survey Questions

1. I typically travel by each of the following modes *

	Daily	Weekly	Monthly	Sometimes	Rarely	Never
Walk	0	0	0	0	0	0
Car (driver)	0	0	0	0	0	0
Car (passenger)	0	0	0	0	0	0
Bike	0	0	0	0	0	0
Transit	0	0	0	0	0	0
Other	0	0	0	0	0	0
Please choose one a	nswer p	er row				

- 2. In 2020 with the start of the pandemic, I travelled by bike *
 - $^{\bigcirc}$ Less than in 2019
 - $^{\bigcirc}$ About the same as in 2019
 - O More than in 2019

Please choose one

- 3. In 2021 and beyond, I plan to go by bike *
 - $^{\bigcirc}\,$ Less than in 2020
 - $^{\bigcirc}$ About the same as in 2020
 - $^{\bigcirc}$ More than in 2020

Please choose one

- 4. I cycle for the following types of trips *
 - School
 - 🗆 Work
 - Daily needs (e.g., groceries, banking, personal appointments, library)
 - To recreational facilities (e.g., parks, fitness centres)
 - For recreation
 - I don't currently cycle
 - □ Other (please specify)
 - Please check all that apply



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Cycling Network Plan Update: Phase 1 Engagement Survey Questions

- 5. I choose to cycle because *
 - It's fast and convenient
 - It's healthy / good exercise
 - it's better for the environment
 - I don't have access to a car
 - 👻 lt's fun
 - Other
 - Please rank each option
- 6. If you chose "Other" for Question 5, please specify

Please add your comment here...

- 7. I feel comfortable cycling *
 - On trails and off-street paths
 - In bike lanes with physical barriers
 - □ In bike lanes without physical barriers
 - $\hfill\square$ In mixed traffic on neighbourhood streets
 - In mixed traffic on major streets
 - I don't feel comfortable cycling in Richmond
 - Other (please specify)

Please check all that apply

Cycling Network Plan Update: Phase 1 Engagement Survey Questions

- 8. I feel comfortable cycling with my children *
 - On trails and off-street paths
 - □ In bike lanes with physical barriers
 - In bike lanes without physical barriers
 - □ In mixed traffic on neighbourhood streets
 - In mixed traffic on major streets
 - I don't feel comfortable cycling in Richmond
 - I don't have or cycle with children
 - □ Other (please specify)

Please check all that apply

- 9. I would cycle more if *
 - There were more direct bike routes to the places I want to go
 - I had access to a bike
 - I had a secure place to park my bike
 - I had access to changerooms/showers
 - Cycling facilities were physically separated from traffic
 - Other

Please rank each option

10. If you chose "Other" for Question 9, please specify

Please add your comment here...

Cycling Network Plan Update: Phase 1 Engagement Survey Questions

11. I own a bicycle *

○ Yes

O No

Please choose one

12. I or a member of my household purchased a bike in 2020 *

O Yes

O No

Please choose one

 I am interested in using a shared bike, electric bike, or electric kick scooter program *

	Not all Interested	Somewhat Uninterested	Unsure	Somewhat Interested	Very Interested
Shared Bike	0	0	0	0	0
Shared Electric Bike	0	0	0	0	0
Shared Electric Kick Scooter	0	0	0	0	0
Please choose one op	otion per row				

14. The age group I, or the cyclists in my household, belong to is *

2-5 years	6-12 years
13-18 years	🛛 19-35 years
36-50 years	🗆 51-64 years
🛛 65+ years	
Please choose all that apply	

15. My postal code is *

Please add your comment here...

0/255

16. Other thoughts or ideas I would like to share about current cycling conditions in Richmond

Please add your comment here...

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Report to Committee

То:	Public Works and Transportation Committee	Date:	April 1, 2021
From:	Lloyd Bie, P.Eng. Director, Transportation	File:	01-0154-04/2021-Vol 01
Re:	TransLink 2021 Cost-Share Programs - Supplemental Application		

Staff Recommendation

That as described in the report titled "TransLink 2021 Cost-Share Programs – Supplemental Application" dated April 1, 2021 from the Director, Transportation:

- (a) the cycling-related project recommended for cost-sharing as part of the TransLink 2021 BICCS Recovery Program be endorsed;
- (b) should the above project receive final approval from TransLink, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the funding agreements and the Consolidated 5 Year Financial Plan (2021-2025) be updated accordingly; and
- (c) staff be directed to implement the project approved by TransLink and report back as part of the City's proposed applications to TransLink's 2022 Cost-Share Programs.

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Lloyd Bie, P.Eng. Director, Transportation (604-276-4131) Att. 1

REPORT CONCURRENCE			
ROUTED TO:	CONCUR	RENCE	CONCURRENCE OF GENERAL MANAGER
Finance Engineering Roads & Construction	[[[N N N	be Erceg
SENIOR STAFF REPORT REVIEW		INITIALS:	APPROVED BY CAO

Staff Report

Origin

In January 2021, Council endorsed the submission of several road, bicycle and transit-related improvement projects for funding consideration from TransLink's 2021 capital cost-share programs. In March 2021, TransLink announced a new municipal cost-share program for cycling infrastructure geared towards the rapid implementation of regional Major Bikeway Network corridors and Urban Centre bikeway networks for implementation between July and December 2021. This report seeks Council's endorsement of a project application and authorization to execute the anticipated funding agreement.

This report supports Council's Strategic Plan 2018-2022 Strategy #5 Sound Financial Management:

Accountable, transparent, and responsible financial management that supports the needs of the community into the future.

5.4 Work cooperatively and respectfully with all levels of government and stakeholders while advocating for the best interests of Richmond.

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

Leadership in effective and sustainable growth that supports Richmond's physical and social needs.

6.3 Build on transportation and active mobility networks.

Analysis

TransLink 2021 BICCS Recovery Program

The Bicycle Infrastructure Capital Cost-Share (BICCS) Recovery Program will fund new or significantly improved bicycle facilities that provide a high level of comfort for cyclists. Projects must be located within an Urban Centre or along TransLink's regional Major Bikeway Network (see Attachment 1 for Richmond's portion). Projects must be completed by December 2021. Given the compressed timeline, TransLink anticipates that projects will primarily be delivered using a "lighter, quicker, cheaper" approach to infrastructure and that these may be interim designs that could be upgraded in the future to achieve an ultimate design.

One application per municipality is permitted with funding allocated based on a competitive score up to a maximum award of \$1.0 million and up to 100% funding. The total funding available has not been finalized but is estimated to be \$1.5-\$3.0 million.

Upgrade of Existing Bike Lane Infrastructure to include Protection

Based on TransLink's criteria of project eligibility, completion deadline and evaluation metrics, staff have identified the addition of physical protection between an existing painted bike lane and

the adjacent vehicle lane as a feasible project. Such a project will support the following Official Community Plan policies that recognize the importance of protected cycling facilities on major streets to enhance the safety and comfort of cyclists:

selected arterial roads and collectors with higher traffic volumes and speeds have "major street bike routes" that comprise, either on-street bike lanes with physical separation from motor vehicles where possible, or off-street bikeways parallel to the roadway;

continue to update the existing major street bike network to: where feasible, upgrade key segments by providing a physical separation between cyclists and motorists;

The upgrade of existing cycling facilities to include continuous and permanent protection is being implemented as part of the annual capital plan process (Table 1). Note that projects in Table 1 are sample of projects and do not represent the full list of bike lane improvement projects.

Road	Year	Before	Form of Protection	Length
Westminster Hwy (south side): Gilley Road- Smith Cr	2014	Painted Shoulder	Extruded Curb	0.60 km
Westminster Hwy (south side): Nelson Road- McMillan Way	2015	Painted Shoulder	Concrete Barrier	1.65 km
Garden City Road (east side): Alderbridge Way-Alexandra Road (northbound)	2016	Painted Shoulder	One-Way Off-Street Bike Path with Barrier Curb	0.14 km
Westminster Hwy (south side): No. 8 Road- Nelson Road	2018	Painted Shoulder	Concrete Barrier	0.80 km
 No. 3 Road: various locations west side Alderbridge Way-Lansdowne Rd both sides Sea Island Way-Capstan Way west side at Richmond Centre frontage 	Planned: 2021+	Rollover Curb	One-Way Off-Street Bike Path with Barrier Curb	0.37 km 0.25 km 0.47 km
Garden City Road (west side): Lansdowne Road-Westminster Hwy	Planned: 2021	Painted Shoulder	Extruded Curb	0.40 km
Westminster Hwy (south side): No. 6 Road- No. 7 Road	Planned: 2021	Gravel Shoulder	Extruded Curb and Wooden Bollards	1.50 km

Table 1: Recently Completed and Planned Upgrades of Existing Bike Lanes to Provide Protection

Granville Avenue (Garden City Road-Railway Avenue)

For the TransLink program application, staff propose the installation of delineators along both sides of Granville Avenue between Garden City Road and Railway Avenue (approximate length of 3.4 km in each direction). The Granville Avenue cycling corridor meets TransLink's location criteria (i.e., is partially within the City Centre and is part of TransLink's Major Bikeway Network) and was also chosen for the following additional reasons:

- Key east-west bike route that connects the Railway Greenway with the City Centre, as well as two main north-south bike routes Railway Avenue and Garden City Road.
- Observed history of motorists illegally parking in the bike lanes.
- Relatively wide vehicle lanes where road dieting can be implemented to narrow the vehicle lane adjacent to the bike lane to discourage speeding as well as create a buffer zone (0.5m wide) that can safely accommodate a protective device between the bike and vehicle lanes.

• Relatively fewer driveways, particularly on the north side, that enables greater continuity of the protection.

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Preliminary discussion with TransLink has confirmed that the project is eligible. The form of protection will comprise plastic delineators similar to those used for the protected bike lanes on River Parkway as these devices:

- Can be easily sourced and installed to fulfil TransLink's program completion requirements.
- Are an industry recommended measure to deter motorists from encroaching into a bike lane.
- Allow provision of an extensive length of protection (3.4 km in each direction) that maximizes funding availability.
- Enable ease of a future upgrade to an ultimate design.



Figure 1: Example of Buffered Bike Lane with Delineator Posts (29th St E, North Vancouver)

The delineators will be centred in a painted buffer zone that will be established by adding another lane line parallel to the existing bike lane line, thereby slightly narrowing the adjacent travel lane (Figure 1). Gaps will remain at driveways and bus stops.

Full width road maintenance on Granville Avenue between Minoru Blvd and Railway Avenue is planned over the next three years starting in 2022; the delineators and line markings will be removed and reinstated as part of this work.

Requested Funding and Estimated Project Cost

The requested City funding for the application to TransLink's 2021 BICCS Recovery cost-share program is \$100,000, which will support the project estimated cost of \$400,000 (Table 2). While a municipality can apply for up to 100% TransLink funding, the City's proposed provision of 25% of the costs will increase the project's competitive score and improve the chances of receiving the full requested funding. Historically, TransLink's competitive-based cost-share programs have been significantly oversubscribed and based on municipal interest expressed to date, staff believe this new program will be similarly oversubscribed.

Project	TransLink	Estimated City Funding &	Estimated
	Funding ⁽¹⁾	Source	Project Cost
Granville Avenue (Garden City Road- Railway Avenue): Delineator Protection	\$300,000	\$100,000 (2020 Active Transportation Improvement Program)	\$400,000

(1) The amount shown represents the maximum funding contribution to be requested from TransLink based on the City's cost estimate for the project. The actual amount invoiced to TransLink follows project completion and is based on incurred costs.

Should the submission be successful, the City would enter into a funding agreement with TransLink. The agreement is a standard form agreement provided by TransLink and includes an indemnity and release in favour of TransLink. Staff recommend that the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the

agreement and the Consolidated 5 Year Financial Plan (2021-2025) be updated accordingly. Should TransLink not provide full funding, the project scope will be reduced to meet the available funding.

Financial Impact

The City's proposed total funding share of \$100,000 can be accommodated within the approved 2020 Active Transportation Improvement Program.

Conclusion

The bike route improvement project proposed for submission to TransLink's BICCS Recovery cost-share program for 2021 will support the goals of a number of City plans and strategies including the Official Community Plan, the Community Energy and Emissions Plan and the Community Wellness Strategy. This report highlights the project to be submitted to TransLink's BICCS Recovery Program and does not represent the full suite of bike lane improvement projects that the City is pursuing.

In addition to maximizing external funding in implementing local cycling improvements, significant benefits for those using sustainable travel modes in terms of upgraded infrastructure that provides safety enhancements will also be achieved should the project be approved by TransLink and Council.

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Joan Caravan Transportation Planner (604-276-4035) JC:jc

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Fred Lin, P.Eng., PTOE Senior Transportation Engineer (604-247-4627)

Att. 1: TransLink Major Bikeway Network: Richmond Section

TransLink Major Bikeway Network: Richmond Section





Report to Committee

То:	Public Works and Transportation Committee	Date:	April 6, 2021
From:	Lloyd Bie, P.Eng. Director, Transportation	File:	10-6360-03-01/2021- Vol 01
Re:	Sidewalk Width Standards for Major and Minor Arterial Roads		

Staff Recommendation

That staff be directed to update the City of Richmond's Engineering Design Specifications to increase the sidewalk width from 1.5m to 2.0m on arterial roadways, as described in the report titled "Sidewalk Width Standards for Major and Minor Arterial Roads" dated April 6, 2021 from the Director, Transportation.

Yd R.

Lloyd Bie, P.Eng. Director, Transportation (604-276-4131)

Att. 1

REPORT CONCURRENCE			
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER	
Engineering Development Applications Policy Planning Sustainability	য য য য	be Erceg	
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO	

Staff Report

Origin

At the November 30, 2020 meeting of the General Purposes Committee, the following referral was carried:

Staff to evaluate sidewalk width standards and report back with recommendations.

This report responds to the referral.

This report supports Council's Strategic Plan 2018-2022 Strategy #4 An Active and Thriving Richmond:

An active and thriving community characterized by diverse social and wellness programs, services and spaces that foster health and well-being for all.

4.2 Ensure infrastructure meets changing community needs, current trends and best practices.

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

Leadership in effective and sustainable growth that supports Richmond's physical and social needs.

6.3 Build on transportation and active mobility networks.

Analysis

Current City Standards for Sidewalk Widths

The City's current standard for new sidewalk construction considers the location and volume of pedestrian activity anticipated to use the facility. New sidewalks within the City Centre, Steveston Village and streets within a 400m radius of a Neighbourhood Centre have a minimum sidewalk width of 2.0m (where site conditions permit) to accommodate the higher number of pedestrians. All other streets have a minimum sidewalk width of 1.5m. These existing standards are minimums and may be wider in high pedestrian activity zones where warranted.

Older road designs typically have a 1.5m sidewalk with an adjacent 0.6m-0.8m utility strip between the sidewalk and curb (Figure 1). Although the combined width may appear to comprise the extent of the pedestrian facility, the utility strip is populated with a variety of infrastructure that impedes pedestrians (e.g., hydrants, street lights, signage, and utility poles) and thus is not calculated as part of the walking area.

City policies and design standards support improvements to the streetscape to foster a walkable community. Accordingly, the upgrade of older road designs pursued as part of a redevelopment or capital project include a new cross-section for road frontages (Figure 2, outside City Centre). Generally, the 0.6m-0.8m utility strip is replaced with a minimum 1.5m landscaped boulevard
behind the road curb that accommodates above-ground utilities and street trees within this buffer strip. The new sidewalk at the appropriate width is relocated to behind the boulevard instead of next to the adjacent travel lane.





Figure 1: Before - Older Design with Utility Strip and 1.5m Sidewalk

Figure 2: After - Current Design with Boulevard/Utility Strip and 1.5m Sidewalk

If a sidewalk is envisioned to accommodate cyclists (i.e., a multi-use path), the minimum width for the shared facility is 3.0m. Cyclists are not legally permitted on sidewalks per the provincial Motor Vehicle Act unless otherwise signed or by bylaw.

Best Practices Review

Staff reviewed the current sidewalk policies of peer municipalities (Table 1).

Municipality	S/W Width Classification	Preferred Width (Minimum Width under Constrained Circumstances)						
Richmond	Area Plans	Ge	neral	City Ce Steve	entre / eston	Neig	Within 400 ghbourhood	m of d Centre
		1.5m		2.0m		2.0m		
Maple Ridge	General	1	.5m	-			-	
Burnaby	General	1	.5m	-			-	
Municipality	S/W Width Classification	Le	ocal	Colle	ctor	Arte	rial	Commercial
Surrey	Road Type	1	.5m	1.8	m	1.8	m	-
Delta	Road Type	1.	.5m	1.5	m	2.2	m	2.2m
Langley	Road Type	1	.5m	1.5	m	1.8	m	1.8m
Municipality	S/W Width Classification	Single Family	Multi- Family	Single Family	Multi- Family	Single Family	Multi- Family	Commercial
Coquitlam	Land Use / Road Type	1.5m	1.8m	1.5m	2.5m	2.0m	2.0m	-
Vancouver	Land Use / Road Type	1.8m (1.8m)	2.1-2.4m (1.8m)	2.1-2.4m (1.8m)	2.4m (2.1m)	2.1-2.4m (1.8m)	2.4m (2.1m)	3.0-4.0m (2.4m)
Municipality	S/W Width Classification	Single	Family	Multi-Family			Commerc	cial
New Westminster	Land Use	1	.5m	1.8m-2.0m		2.5m		

able 1: Comparison of Sidewalk Widt	Standards of Metro	Vancouver Municipalities
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The findings indicate that the City's current sidewalk width standards are generally comparable with other municipalities and appropriate (i.e., the standard is wider for areas with anticipated

higher levels of pedestrian demand). However, there is opportunity for the City to increase sidewalk widths along major and minor arterial roads to better align with prevailing standards in other municipalities.

Recommendation

To support the City's Official Community Plan modal share target for 2041 (18% of trips by walking) and advance achieving this target to 2030 as outlined in the City's Community Energy and Emissions Plan 2020-2050 Directions, staff recommend updating the City's Engineering Design Specifications to increase the standard width of sidewalks on major and minor arterial roadways from 1.5m to 2.0m. Based on staff's observations, the current standard of a 1.5m sidewalk width is functioning adequately; however, the recommended increased width to 2.0m will better:

- allow appropriate pedestrian facilities to be provided in coordination with adjacent land uses redeveloped at higher densities (multi-family and commercial) with correspondingly more residents and higher pedestrian activity,
- align with transit corridors and encourage walking connections to transit facilities, and
- enhanced accessibility for persons in mobility assistive devices.

The revised standard will apply to major and minor arterial roadways outside the City Centre, Steveston Village and streets within a 400m radius of a Neighbourhood Centre with the exception of arterial roadways located adjacent to the Agricultural Land Reserve (Attachment 1).

Proposed Implementation

The recommended standard of 2.0m for new sidewalk construction on major and minor arterial roads will be secured primarily through road dedication via the rezoning process consistent with the current practice for frontage upgrades. The maximum incremental increase in road dedication above and beyond the current frontage requirement for new developments will be up to 0.5m depending on the existing setback behind the road curb and property line. For example, for older arterial road designs, the minimum setback from road curb to property line typically yields a road dedication for frontage upgrades of 1.0m to accommodate a 1.5m sidewalk. Hence, the proposed wider 2.0m sidewalk standard at the same location will require a 1.5m dedication. This modest change is not considered to have a significant impact on development potential although it may result in front yard setback variance requests to off-set the increase road dedication.

Application of the increased width will be context-sensitive and on a case-by-case basis to allow for existing site conditions (e.g., tree preservation). The additional 0.5m width can also be considered as a transportation demand management measure to support a reduction in the required number of on-site parking spaces to be provided.

For arterial roadways where current Planning Policies do not support redevelopment or where rezoning applications are not anticipated (e.g. within the ALR), the recommended sidewalk width will be applied through future City capital projects.

This requirement will apply to all new Rezoning, or Subdivision applications located on major and minor arterial roads submitted after Council endorsement of the recommended sidewalk width standards and the update of the City's Engineering Design Specifications. The requirement will not apply to sidewalk widths approved prior to the update (i.e., the requirements will not apply retroactively to existing sidewalks).

If a Servicing Agreement has already been identified as part of an approved Rezoning application but the Servicing Agreement has not yet been entered into, the City will work with the applicant to achieve the new standard where possible.

If an acceptable rezoning application has been submitted to the City prior to the update of the design standards, City staff will work with the developer to accommodate the additional sidewalk width if possible.

Upon update of the Engineering Design Specifications, an information bulletin will be prepared and posted on the City's website to advise of the new sidewalk width requirements for major and minor arterial roads. Pending Council endorsement, staff will advise the Urban Development Institute of the updated standard.

Future City capital projects will be designed based on the new standard where applicable. The proposed 2.0m sidewalk width is anticipated to result in a thirty percent increase in cost for new sidewalk construction. The next update of the City Development Cost Charges program will incorporate the new standard sidewalk widths.

Financial Impact

None.

Conclusion

The recommended increase to the City's standard sidewalk width for major and minor arterial roads from 1.5m to 2.0m supports multiple City plans and strategies (e.g., Official Community Plan, Community Wellness Strategy, Community Energy and Emissions Plan) to foster a culture of walking for transportation and health, and enhance the pedestrian facility network.

Jani Amin

Sonali Hingorani, P.Eng. Transportation Engineer (604-276-4049) JC:jc

Janavan

Joan Caravan Transportation Planner (604-276-4035)

Att. 1: Major and Minor Arterials where Recommended Revised Sidewalk Widths will Apply

Major and Minor Arterials where Recommended Revised Sidewalk Widths will Apply



Road Classification Map Bylaw 9901 2018/09/04



Report to Committee

Re:	Multi-Family Water Meter Program and Water Co	nservat	ion Initiatives Update
From:	Milton Chan, P.Eng. Director, Engineering	File:	10-6060-02-01/2021- Vol 01
То:	Public Works and Transportation Committee	Date:	April 23, 2021

Staff Recommendation

That staff bring forward options and recommendations for a mandatory Multi-Family Water Meter Program for consideration as part of the 2022 Utility Budgets and Rates report.

R

Milton Chan, P.Eng. Director, Engineering (604-276-4377)

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Finance Department Water Services	5	- gh hing			
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO			

Staff Report

Origin

Water metering in the City has been successfully implemented for 100% of single-family residential, industrial, commercial, and institutional (ICI) properties. Water metering provides Richmond residents with an equitable way to pay for drinking water and supports the Official Community Plan objective to pursue water demand management strategies and continue water conservation initiatives.

This report supports the following strategies within Council's Strategic Plan 2018-2022:

Strategy #1 A Safe and Resilient City:

Enhance and protect the safety and well-being of Richmond.

1.2 Future-proof and maintain city infrastructure to keep the community safe.

1.3 Ensure Richmond is prepared for emergencies, both human-made and natural disasters.

Strategy #2 A Sustainable and Environmentally Conscious City:

Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.

2.1 Continued leadership in addressing climate change and promoting circular economic principles.

2.2 Policies and practices support Richmond's sustainability goals.

This report provides an update on the City's water meter program, water conservation initiatives and recommendations for advancing the multi-family water meter program.

Analysis

Water Metering

The key benefits to water metering include equity, conservation, leak detection, improved information for analysis, and reduced load on the sanitary system.

The City currently meters 100% of ICI and single-family properties. Mandatory metering of new multi-family complexes began in 2005, and 316 complexes (16,930 dwelling units) have been metered under this program. Volunteer metering of existing multi-family complexes began in 2010, through which 148 complexes (9,234 dwelling units) have been metered. To date, 50% of multi-family dwellings have been metered through a combination of the volunteer program and mandatory program.

Universal deployment of the fixed base water meter reading network throughout the City was endorsed by Council through the 2017 Capital budget process. The fixed base network covers the entire urban area in Richmond and will ultimately read 97% of Richmond's water meter inventory. The network facilitates automated data collection, reduces costs and carbon emissions associated with reading water meters, allows staff to gather real-time consumption data, assists customers in identifying causes of leaks and water consumption habits, and enhances revenue forecasting to inform the utility budget process. The fixed base network has been deployed and is in the final stages of system optimization.

The population of Richmond has increased by 25% since metering started in 2003; however, total consumption in the City has decreased by approximately 12% (4,500,000 m³) over the same period. By reducing water consumption, the City achieved a cost reduction of over \$10M in Metro Vancouver water and sewer charges in 2020 alone. This is a strong indication that water metering efforts to date are having a positive impact on water conservation and minimizing the need for costly infrastructure upgrades by managing increases in demands.

Water Conservation Initiatives

To further promote reduced water use, the City provides metered customers with water conservation kits, which include low flow showerheads, faucet aerators, toilet fill cycle diverters, toilet leak detection tablets, and educational water conservation tools. In addition, the City has successful programs for toilet rebates, rain barrels, and clothes washer rebates. In 2020, 877 toilet rebates, 154 rain barrels, and 226 clothes washer rebates were provided to Richmond residents. These combined initiatives are estimated to save over 3,500,000 liters of water in 2021 alone.

Multi-Family Water Meter Program

The City subsidizes water meter installations for multi-family complexes by \$100,000 or \$1,200 per unit, whichever is greater.

In 2017, Council endorsed an advanced volunteer multi-family water meter program to encourage a higher rate of adoption. As a part of this advanced program, staff hosted presentations and information sessions to provide more engagement opportunities for residents. The advanced program also included a 5-year guarantee (increased from two years), which ensures that complexes will not pay more than the flat rate during that period. This allows residents time to fix any leaks in their system and adjust their consumption habits without the risk of incurring a higher utility bill.

As of January 2021, 50% of the multi-family dwellings have been metered, 97% of which saved money in 2020, averaging a 46% savings compared to the flat rate.

Table 1 is a tabulation of the multi-family residential inventory and their water metering status as of January 2021.

Туре	Number of Complexes	Number of Units	Number of Complexes Metered	Number of Units Metered	% of Units Metered
Townhouse	618	17,978	282	6,496	36%
Apartment	305	34,466	182	19,668	57%
Total	923	52,444	464	26,164	50%

Table 1. Multi-Family Inventory

While the advanced volunteer program has been successful in providing residents with more information and incentives, the rate of adoption has remained low. An annual average of 2.6 multi-family complexes volunteered for meters since the advanced program started in 2017. At the current rate, it would take over 175 years to meter all multi-family dwellings.

Considering the significant benefits of water metering, it would be prudent to give further consideration to advancing the Multi-Family Water Meter Program towards universal metering. Staff recommend that options to implement a universal multi-family meter program be investigated and that a recommended implementation strategy be brought forward for consideration as a part of the 2022 Budgets and Rates report.

Financial Impact

None at this time. If Council endorses the recommendation, staff will bring forward options along with a recommended implementation strategy for Council consideration as a part of the 2022 Utility Budgets and Rates report.

Conclusion

The City of Richmond continues to be a leader in water conservation through the water meter program, fixed base meter readings, and water conservation initiatives. The ICI and single-family residential sectors are fully metered as well as 50% of the multi-family properties. While the remaining multi-family properties can participate in the volunteer water meter program, the adoption rate has been low. Staff recommend that options and recommendations for a mandatory Multi-Family Water Meter Program be brought forward for consideration as a part of the 2022 Budgets and Rates report.

Jason Ho, P.Eng. Manager, Engineering Planning (604-244-1281)

Christopher Chan, EIT, PMP Project Manager, Engineering Planning (604-204-8516)

6664046



- To: Planning Committee
- From: Wayne Craig Director, Development

Date:May 3, 2021File:RZ 18-831725

Re: Application by Kadium No. 4 Development Ltd. for Rezoning at 10340, 10360, 10380, 10400 and 10420 No. 4 Road from the "Single Detached (RS1/E)" Zone to the "Medium Density Townhouses (RTM2)" Zone

Staff Recommendation

 That Richmond Zoning Bylaw 8500, Amendment Bylaw 10261, for the rezoning of the site at 10340, 10360, 10380, 10400 and 10420 No. 4 Road from the "Single Detached (RSI/E)" Zone to the "Medium Density Townhouses (RTM2)" Zone, be introduced and given first reading.

Wayne Co

Wayne Craig Director, Development (604) 247-4625

WC:rp/js/blg

Att. 6

REPORT CONCURRENCE				
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER		
Affordable Housing		be Erceg		

Staff Report

Origin

Kadium No. 4 Development Ltd. has applied to the City of Richmond for permission to rezone 10340, 10360, 10380, 10400 and 10420 No. 4 Road (Attachment 1) from the "Single Detached (RS1/E)" zone to the "Medium Density Townhouses (RTM2)" zone in order to develop a 19-unit townhouse project, including four studio secondary suites, with access from No. 4 Road. A Location Map for the subject site is provided on Attachment 1.

Findings of Fact

A Development Application Data Sheet providing details about the development proposal is provided with this report on Attachment 2.

Subject Site Existing Housing Profile

The subject site currently contains five single-family dwellings, none of which contain secondary suites. The existing dwellings are each currently being rented for residential use. The existing dwellings would be demolished.

Surrounding Development

Existing development immediately surrounding the subject site includes the following:

- To the North: Single detached residential properties, designated Neighbourhood Residential and designated for arterial road townhouse development in the Official Community Plan (OCP), and zoned "Single Detached (RS1/E)".
- To the South: Existing single detached residential properties, designated Neighbourhood Residential and designated for arterial road townhouse development in the OCP and zoned "Single Detached (RS1/E)".
- To the East: Existing single detached dwellings fronting Dennis Crescent, designated Neighbourhood Residential in the OCP and zoned "Single Detached (RS1/E)".
- To the West: No. 4 Road, which is an Arterial Road with a public sidewalk on the west side, and across which is an existing single detached residential properties, designated for arterial road townhouse development in the OCP and zoned "Single Detached (RS1/E)".

Related Policies & Studies

Official Community Plan

The subject site is located in the Shellmont planning area, and is designated "Neighbourhood Residential" in the Official Community Plan (OCP) (Attachment 3). The "Neighbourhood Residential" designation accommodates single-family, two-family, and multiple family housing as principal uses, to which the proposed development is consistent.

Arterial Road Policy

The subject site is located in an area governed by the Arterial Road Land Use Policy, and is designated "Arterial Road Townhouses". The subject site has a 104.6 m (343 ft.) frontage along No. 4 Road, which exceeds the 50 m (164 ft.) minimum development site frontage on major arterial roads, such as No. 4 Road.

The proposal is consistent with the Arterial Road Policy.

Floodplain Management Implementation Strategy

The proposed redevelopment must meet the requirements of the Richmond Flood Plain Designation and Protection Bylaw 8204. Registration of a flood indemnity covenant on Title is required prior to final adoption of the rezoning bylaw.

Affordable Housing Strategy

The City's Affordable Housing Strategy requires a cash-in-lieu contribution of \$8.50 per buildable square foot towards the City's Affordable Housing Reserve Fund for all rezoning applications involving townhouse developments. A \$215,051.65 contribution is required prior to final adoption of the rezoning bylaw.

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

Urban Design and Site Planning

The applicant proposes 19 units in six buildings arranged on either side of a central north-south drive aisle. The site plan and massing are generally consistent with the Development Permit Guidelines for Arterial Road Townhouses. Conceptual development plans are provided in Attachment 4.

The 13 units along No. 4 Road have direct pedestrian access to the sidewalk though landscaped front yards. All of the street-fronting units are three storeys, with living space primarily located on the second and third storeys. There are four proposed secondary suites (units #1, #7, #14 and #19). The end street-fronting units (units #7 and #14) are set back 3.0 m and both step down to two storeys: the third storeys are additionally stepped back 4.45 m on northerly unit #7 and 4.75 m on southerly unit #14, considering that the north and south adjacencies are single-detached residential dwellings.

The six units at the rear of the property have pedestrian access from the drive aisle and are designed with living space on both the first and second storeys. The proposed rear buildings are each two storeys and are set back 6.0 m from the east (rear) property line (3.0 m from the west boundary of the sanitary SRW), considering the interface with the single-family neighbourhood to the east.

Two convertible units (units #7 and #14) are provided that are designed with the potential to be easily renovated to accommodate a future resident in a wheelchair. These units each feature an accessible parking spaces. In addition, one of the visitor parking spaces (at northeast corner of the site) is an accessible parking space.

All of the units have private outdoor space at grade in the form of a landscaped front or rear yards.

The 114.1 m² shared outdoor amenity area is proposed at the rear of the site, opposite the main access drive-aisle. The current concept includes a play structure for young children, a modest patio area with a mail box, Class 2 bicycle parking and bench seating. The area would be delineated and screened from adjacent private outdoor spaces by fencing. The size of the shared outdoor amenity area complies with associated design guidelines; a detailed design and programming of the private and shared outdoor amenity areas will be reviewed through the Development Permit process.

The applicant has also provided a general demonstration of how the property to the north could be developed for townhouses.

Existing Legal Encumbrances

There is an existing 3.0 m wide statutory right-of-way (SRW) along the rear property line for the sanitary sewer. The applicant is aware that no construction or tree planting is permitted within the SRW area.

Transportation and Site Access

Vehicle access to the subject site is proposed from a driveway crossing to No. 4 Road. The vehicle access will be shared and provide access to the future development to the north. A statutory right-of-way (SRW) for public rights-of-passage (PROP) will be registered on title prior to adoption of the rezoning bylaw. On-site vehicle maneuvering is accommodated by a T-shaped drive aisle.

This section of No. 4 Road currently only has a sidewalk along the west side of the road. A 2.0 m wide road dedication is required across the entire No. 4 Road frontage in order to accommodate the standard sidewalk and boulevard width, as well as a segregated cycling path. A segregated cycling path is proposed along the City boulevard, between the City sidewalk and the tree planting strip that is adjacent to the curb of No. 4 Road. This road dedication is required prior to final adoption of the rezoning bylaw. Vehicle and bicycle parking for residents are provided consistent with Richmond Zoning Bylaw 8500. Each unit includes a two-car garage in a side-by-side arrangement, with an energized outlet capable of providing Level 2 EV charging outlet, consistent with Richmond Zoning Bylaw 8500, and space for Class 1 bicycle parking.

Visitor parking is provided consistent with Richmond Zoning Bylaw 8500. Two visitor parking spaces, including one accessible visitor parking space, are provided on the north end of the site and two visitor parking spaces are provided on the south end, for a total of four visitor parking spaces. Class 2 bicycle parking is provided at the shared outdoor amenity area, adjacent to the children's playground.

Tree Retention and Replacement

The applicant has submitted a Certified Arborist's Report; which identifies on-site and off-site tree species, assesses tree structure and condition, and provides recommendations on tree retention and removal relative to the proposed development. The Report assesses 18 bylaw-sized trees on the subject property and four trees on neighbouring properties. No street trees are located within the existing City boulevard.

The City's Tree Preservation Coordinator has reviewed the Arborist's Report and supports the Arborist's findings, with the following comments:

- There are 18 on-site trees:
 - Three trees are located within the proposed road dedication area and are in poor health. Tree #420 (a Cedar tree) has a significant lean to the south, this tree has also been Hydro pruned for overhead line clearance, resulting in an unbalance canopy (heavy in the direction of the lean). Tree #432 (a Cherry tree) is in very poor condition as the tree has poor vigor and health, sparse foliage, and has been previously topped and bark is crumbly. Tree #433 (a Norway Maple tree) has a twin stem with a crack in the trunk that extends to the base. Approximately a third of its canopy has been removed by BC Hydro for Hydro line clearance. The health of these trees and the requirements for frontage improvements and continual canopy removal by BC Hydro for line clearance do not make these trees candidates for retention and they should be replaced.
 - Four trees (#419, #430, #431 and #436) are located within the rear yard, all of which are in poor condition, in conflict with the required sanitary sewer upgrade and should be removed.
 - o 11 other on-site trees:
 - Two trees are proposed to be relocated within the site:
 - Tree # 422 (a Japanese Maple tree) and #435 (a Japanese Snowbell tree) are in good condition and located within the driveway. However, the applicant has agreed to relocate these trees to or near the shared outdoor amenity area in order to retain them. These trees are identified on the marked-up Tree Management Plan that is provided on Attachment 5.
 - Eight on-site trees (#421, #423 #426, #428, #429, and #434) would be removed and replaced, due to their poor condition.

- One tree (#427; a Japanese Maple tree) is in good condition but needs to be removed as the site geometry, site access requirements and the tree's size prevent its retention in its current location or its relocation within the site.
- There are several hedges on-site, none of which are subject to the tree bylaw.
 - Hedge H1-H7 is located along the south property line. This hedge is to be retained and, through the Development Permit process, would be determined to either remain in its existing location (as a visual terminus to the interior driveway) or be relocated to elsewhere along the south lot line (to serve as screening from the adjacent lot to the south). This hedge is identified on the marked-up Tree Management Plan that is provided on Attachment 5.
 - All other on-site hedges are located along existing property lines or within the sanitary SRW and are not in good condition, and should therefore be removed.
- There are four mature off-site trees (Tags# OS1, OS2, OS3 and OS4) located on an adjacent neighbouring property (10311 Dennis Crescent) and within an existing sanitary SRW are to be retained and protected, and tree protection must be provided as per City of Richmond Tree Protection Information Bulletin Tree-03.

Considering that the four off-site trees are located within an existing SRW, within which the sanitary infrastructure requires replacement, the project arborist should work with City Engineering staff to coordinate methods for minimize harm to the tree during infrastructure works within the Tree Protection Zone. In the event that City staff are unable to accept the arborist's methods for works within the Tree Protection Zone, the applicant should either:

- Provide additional SRW area for the sanitary sewer line in order to accommodate a diversion around the dripline of the subject trees.
- Coordinate an alternative solution that is acceptable to City Engineering staff.
- Obtain permission from the owner of the subject trees in order to remove them and provide replacement trees in accordance with Tree Protection Bylaw No. 8057.

Tree Replacement

The applicant proposes to remove 16 on-site trees (Trees # 420, 421, 432, 433, 434, 436, 423, 424, 425, 426, 427, 428, 429, 430, 431 and 419). The 2:1 replacement ratio would require a total of 32 replacement trees. The applicant has agreed to plant 36 trees on the development site; for a total of 38 trees, including the relocated trees. The required replacement trees are to be of the following minimum sizes, based on the size of the trees being removed as per Tree Protection Bylaw No. 8057.

No. of Replacement Trees	Minimum Caliper of Deciduous Replacement Tree	Minimum Height of Coniferous Replacement Tree
10	6 cm	3.5 m
12	8 cm	4 m
4	9 cm	5 m
2	10 cm	5.5 m
4	11 cm	6 m

Tree Protection

Four mature off-site trees (Tags# OS1, OS2, OS3 and OS4) located on an adjacent neighbouring property (10311 Dennis Crescent) and within a sanitary SRW should be retained and protected. As such, the applicant would be required to complete the following items to ensure that the subject trees are protected at development stage:

- Prior to final adoption of the rezoning bylaw, submission to the City of a contract with a certified arborist for the supervision of all works conducted within or in close proximity to tree protection zones. The contract must include the scope of work required, the number of proposed monitoring inspections at specified stages of construction, any special measures required to ensure tree protection, and a provision for the arborist to submit a post-construction impact assessment to the City for review.
- Prior to demolition of the existing dwelling on the subject site, installation of tree protection fencing around all trees to be retained. Tree protection fencing must be installed to City standard in accordance with the City's Tree Protection Information Bulletin Tree-03 prior to any works being conducted on-site, and remain in place until construction and landscaping on-site is completed.

Variance Requested

The proposed development is generally consistent with the "Medium Density Townhouses (RTM2)" zone, except for the variance noted below (Staff comments in *bold italics*).

1. Decrease the minimum front setback from 6 m to 4.5 m.

Staff are supportive of the proposed variance for the following reasons:

- The Arterial Road Guidelines for Townhouses in the OCP support a reduced front yard setback where a larger rear yard is provided, on the condition that there is an appropriate interface with neighbouring properties. The proposal includes a 9.4 m building setback from the future back-of-curb location and a 6 m landscaped rear yard setback.
- The variance is a function of the required road dedication along No. 4 Road and the installation of the new off-street bike path and sidewalk.
- Prior to Development Permit issuance, the applicant must provide an acoustic report demonstrating that the proposed units fronting No. 4 Road will meet the appropriate CMHC noise thresholds and standards for indoor spaces.

Townhouse Energy Efficiency and Renewable Energy

The proposed development consists of townhouses that staff anticipate would be designed and built in accordance with Step 3 of the Energy Step Code for Part 9 construction (Climate Zone 4). As part of a future Development Permit application, the applicant will be required to provide a report prepared by a Certified Energy Advisor which demonstrates that the proposed design and construction will meet or exceed these required standards.

Amenity Space

The applicant is proposing a cash contribution in-lieu of providing the required indoor amenity space on-site. The total cash contribution required for the proposed 19-unit townhouse development is \$33,611, based on \$1,769 per unit, as per the OCP, and must be provided prior to rezoning adoption.

A 114.1 m^2 outdoor amenity space is provided on site. Based on the preliminary design, the size of the proposed outdoor amenity space is consistent with the OCP minimum requirement of 6 m^2 per unit (114.0 m^2). Staff will work with the applicant at the Development Permit stage to ensure the design of the outdoor amenity space meets the Development Permit Guidelines contained in the OCP.

Development Permit Application

Prior to final adoption of the rezoning bylaw, a Development Permit application is required to be processed to a satisfactory level. Through the Development Permit, the following issues are to be further examined:

- Compliance with Development Permit Guidelines for the form and character of multiple-family projects provided in the OCP.
- Confirmation that interior noise levels and noise mitigation measures comply with the City's Official Community Plan and Noise Bylaw requirements, via provision of an acoustical and thermal report and recommendations prepared by an appropriate registered professional.
- Refinement of the landscape design and the interface with abutting low density residential lots.
- Refinement of the shared outdoor amenity area design, including the choice of play equipment, to create a safe and vibrant environment for children's play and social interaction.
- Review of the design for the four units that include secondary suites.
- Review of relevant accessibility features for the two proposed convertible units and aging-in-place design features in all units.
- Review of a sustainability strategy for the development proposal.
- Ensure that plantings within the sanitary SRW, if any, are to the satisfaction of City Engineering staff.
- Ensure the on-site relocation of trees #422 and #435 are proposed in viable locations.
- Accommodate the viable retention of hedge H1 H7.

Site Servicing and Frontage Improvements

Prior to final adoption the rezoning bylaw, the applicant is required to enter in to a Servicing Agreement for the design and construction of the required site servicing and frontage works, as described in Attachment 6. Site servicing and frontage improvements include, but may not be limited to:

- Replace the existing sanitary sewer along the rear yard.
- Provide frontage improvements that include a new sidewalk and cycling path.

Financial Impact or Economic Impact

This 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 purpose of this application is to rezone the site at 10340, 10360, 10380, 10400 and 10420 No. 4 Road from the "Single Detached (RS1/E)" zone to the "Medium Density Townhouses (RTM2)" zone, to permit the development of 19 townhouse units with vehicle access from No. 4 Road.

The proposed rezoning and ensuing development of the site is generally consistent with the land use designations and applicable policies contained in the Official Community Plan (OCP) for the subject site. Further review of the project design will be completed as part of the Development Permit application review process.

The list of rezoning considerations is included in Attachment 6, which has been agreed to by the applicant (signed concurrence on file).

It is recommended that Richmond Zoning Bylaw 8500, Amendment Bylaw 10261 be introduced and given first reading.

Robin Pallett, RPP, MCIP Planner 2 (604) 276-4200

RP:js/blg

Attachments: Attachment 1: Location Map and Aerial Photo Attachment 2: Development Application Data Sheet Attachment 3: Shellmont Area Land Use Map Attachment 4: Conceptual Development Plans Attachment 5: Tree Management Plan with Staff Comments Attachment 6: Rezoning Considerations

Attachment 1



Location Map and Aerial Photo





Development Application Data Sheet

Development Applications Department

RZ 18-831725

Attachment 2

Address: 10340,10360,10380, 10400 and 10420 No. 4 Road

Applicant: Kadium No. 4 Development Ltd.

Planning Area: Shellmont

	Existing	Proposed
Site Area:	3,824.9 m ²	3,616.1 m ²
Land Uses:	Single-family residential	Multiple-family residential
OCP Designation:	Neighbourhood Residential (NRES)	No change
Zoning:	Single Detached (RS1/E)	Medium Density Townhouse (RTM2)
Arterial Road Land Use Policy Designation	Townhouse	No change
Number of Units:	5 single-family dwellings	19 townhouse dwellings

On Future Subdivided Lots	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	Max. 0.65	0.65	none permitted
Buildable (net) Floor Area:*	Max. 2,350.4 m²	2,348.8 m ²	None
Lot Coverage (% of lot area):	Building: Max. 40% Non-porous Surfaces: Max. 65% Live Landscaping: Min. 25%	Building: 38.7% Non-porous Surfaces: 58.9% Live Landscaping: Min. 26.7%	None
Lot Size:	No minimum	3,616.1 m²	None
Lot Dimensions:	Width: 30 m Depth: 35 m	Width: 104.6 m Depth: 36.6 m	None
Setbacks:	Front/West: Min. 6.0 m	Front/West: 4.5 m	Variance requested
	Rear/East: Min. 3.0 m	Rear/East: 6.0 m	None
	South Side: Min. 3.0 m	South Side: 3.0 m	None
	North Side: Min. 3.0 m	North Side: 3.1 m	None
Building Height	Max. 12 m	Street-Fronting Buildings (A, B &G): 9.35 m Rear Buildings (C, D, E & F): 6.61 m	None

On Future Subdivided Lots	Bylaw Requirement	Proposed	Variance
Off-street Parking Spaces – Regular (R) / Visitor (V):	Min. 2 (R) and 0.2 (V) per unit	2 (R) and 0.2 (V) per unit	None
Off-street Parking Spaces – Visitor Accessible:	Min 2% when three or more visitor stalls required = Min. 1 space	1 (at the northeast corner of the site)	None
Total off-street Spaces:	Min. 38 (R) and 4 (V)	38 (R) and 4 (V)	None
Tandem Parking Spaces:	Permitted – Max 50% of required spaces	0% (0 spaces)	None
Small Car Parking Spaces:	Max. 50%	36.8%	None
Bicycle Parking Spaces – Class 1:	Min. 1.25 per unit	2.0 per unit	None
Bicycle Parking Spaces – Class 2:	Min. 0.2 per unit	0.2 per unit	None
Bicycle Parking Spaces – Total:	Min. 24 (Class 1) and 4 (Class 2)	38 (Class 1) and 4 (Class 2)	None
Amenity Space – Indoor:	Min. 50 m ² or cash-in- lieu	Cash-in-lieu	None
Amenity Space – Outdoor:	Min. 6 m² per unit = 114 m²	114.1 m ²	None

* Preliminary estimate; not inclusive of garage; exact building size to be determined through zoning bylaw compliance review at Building Permit stage.

Attachment 3

Shellmont Area Land Use Map

8. Shellmont



Attachment 4



Nail in aluminum Tag #806 🏵 Site Benchmark Elevation:0.92













CNCL - 171













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Drawn: HC Checked: MC Scale: 1/16" = 1'-0" Project Number:

RZ 18-831725

MATTHEW CHENG ARCHITECT INC.

Revision Date: JUL. 27, 2018 Print Date: JUL. 27, 2018













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PMG PROJECT I

OF 5







еколест. 19 UNIT TOWNHOUSE DEVELOPMENT 10340 - 10420 NO. 4 ROAD RICHMOND RICHMOND RICHMOND RICHMOND RICHMOND TREE MANAGEMENT PLAN DATE: JAY22.2019 DAWNOLMMER DAWN DAWNOLMMER DAWN DAWNOLMMER DAWN DAWNOLMMER DESCHIPTION DAWNOLMMER

19-093

PMG PROJECT N

9005







6911 No. 3 Road, Richmond, BC V6Y 2C1

Address: 10340, 10360, 10380, 10400 and 10420 No. 4 Road

File No.: RZ 18-831725

Prior to final adoption of Richmond Zoning Bylaw 8500, Amendment Bylaw 10261, the developer is required to complete the following:

- 1. 2.0 m road dedication along the entire site frontage.
- 2. Consolidation of all the lots into one development parcel (which will require the demolition of the existing dwellings).
- 3. Retention of on-site trees #422 and #435, and off-site trees #OS1, #OS2, #OS3 and #OS4, requires the following:
 - a) Submission of a Contract entered into between the applicant and a Certified Arborist for supervision of any onsite works conducted within the tree protection zone of the trees to be retained. The Contract should include the scope of work to be undertaken, including: the proposed number of site monitoring inspections, and a provision for the Arborist to submit a post-construction assessment report to the City for review.
 - b) Submission of a Tree Survival Security to the City in the amount of \$3,000 for the four off-site trees to be retained (\$750/tree).
 - c) 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.
- 4. Registration of a legal agreement on title identifying that the proposed development must be designed and constructed in a manner that mitigates potential traffic noise generated by No 4 Road to the proposed dwelling units. Dwelling units must be designed and constructed to achieve:
 - a) CMHC guidelines for interior noise levels as indicated in the chart below:

Portions of Dwelling Units	Noise Levels (decibels)			
Bedrooms	35 decibels			
Living, dining, recreation rooms	40 decibels			
Kitchen, bathrooms, hallways, and utility rooms	45 decibels			

- b) the ASHRAE 55-2004 "Thermal Environmental Conditions for Human Occupancy" standard for interior living spaces.
- 5. Registration of a flood indemnity covenant on title.
- 6. Registration of a cross-access easement, statutory right-of-way, and/or other legal agreements or measures, as determined to the satisfaction of the Director of Development, over the internal drive-aisle in favour of future developments to the north of the site, including the installation of way-finding and other appropriate signage on the subject property, and requiring a covenant that the owner provide written notification of this through the disclosure statement to all initial purchasers, provide an acknowledgement of the same in all purchase and sale agreements, and erect signage in the initial sales centre advising purchasers of the potential for these impacts.
- 7. The submission and processing of a Development Permit* completed to a level deemed acceptable by the Director of Development.
- 8. Contribution of \$1,769 per dwelling unit (e.g. \$33,611) in-lieu of on-site indoor amenity space to go towards development of City facilities.
- 9. City acceptance of the developer's offer to voluntarily contribute \$8.50 per buildable square foot (e.g. \$215,051.65) to the City's affordable housing fund.
- 10. Enter into a Servicing Agreement* for the design and construction of engineering infrastructure improvements. A Letter of Credit or cash security for the value of the Service Agreement works, as determined by the City, will be required as part of entering into the Servicing Agreement. Works include, but may not be limited to:

Water Works

a) Using the OCP Model, there are 288 L/s of water available at 20 psi residual at the hydrant on the west side of No. 4 Road, fronting lot 10491 No 4 Road. Based on your proposed development, your site requires a minimum fire flow of 220 L/s.

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- b) The Developer is required to:
 - i. Confirm with Richmond Fire Rescue (RFR) that the fire hydrant on the west side of No. 4 Road, fronting lot 10491 No 4 Road, is sufficient to service the development. Knowing that in the event of an emergency the Fire Truck and hose would shut down No. 4 Road in both the North and South directions if the hydrant at 10491 No 4 Road will be utilized.
 - ii. Submit Fire Underwriter Survey (FUS) or International Organization for Standardization (ISO) fire flow calculations to confirm the development has adequate fire flow for onsite fire protection. Calculations must be signed and sealed by a Professional Engineer and be based on Building Permit Stage and Building designs.
 - iii. Provide right of way for water meter chamber, exact dimensions and location of the right of way shall be finalized at the servicing agreement stage.
- c) At the Developer's cost, the City is to:
 - i. Cut and cap at main the existing water service connections at the No. 4 Road frontage.
 - ii. Install a new water service connection at the No. 4 Road frontage, complete with water meter and meter chamber in a right-of-way onsite which will be provided by the developer.

Storm Sewer Works

- d) At the Developer's cost, the City will:
 - i. Cut and cap the existing connections along No. 4 Road frontage.
 - ii. Remove all old connections and install one new storm sewer connection to service the proposed site. Details of the new storm service shall be finalized via the servicing agreement design review.

Sanitary Sewer Works

- e) The Developer is required to:
 - i. Replace the existing sanitary sewer along the rear yard to 200mm diameter PVC, approximately 80m in length, and install one new 1200mm manhole 1.5m south of the northern property line. An additional 1200mm manhole to be installed at high end of system, located at southern PL of lot 10400 No 4 Road. This is required as the current sanitary line will sit beneath the necessary retaining wall (and approx. 1m of fill) required to raise the site above flood construction level.
 - ii. The new sanitary sewer is to sit 1.5m east of the property line, in the middle of the City's right of way within the properties to the east.
 - iii. Notify neighbors to the east about the required sanitary works occurring in the City's right of way within their property line.
 - iv. Re-connect existing single family homes to east of development to the new sanitary sewer as they are part of the same system.
 - v. Restore all rear yard landscaping that would be impacted by the sanitary works at developer's cost.
 - vi. Provide one new sanitary service connection to accommodate the development at the northern property line.
 - vii. All site preparation works (e.g., preload, etc.) and building foundation works shall not commence until the required sanitary works are complete. Therefore, the developer may have to finalize the SA design and construct the sanitary works prior to site preparation works.
- f) At the Developer's cost, the City is to:
 - i. Cap existing sanitary connections along the property line.

Frontage Improvements

- g) The Developer is required to:
 - i. Coordinate with BC Hydro, Telus, and other private communication service providers to:
 - ii. Review existing street lighting levels along No. 4 Road and upgrade accordingly along development's frontage.

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iii. Provide other frontage improvements as per Transportation's requirements. Improvements shall be built to the ultimate condition wherever possible.

General Items

- h) The Developer is required to:
 - i. Provide if pre-load is required, prior to pre-load installation, a geotechnical assessment of preload and soil preparation impacts on the existing utilities fronting or within the development site, proposed utility installations, and provide mitigation recommendations. The mitigation recommendations shall be incorporated into the first SA design submission or if necessary to be implemented prior to pre-load.
 - ii. 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, dewatering, 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.
- 11. Ensure that, via the Servicing Agreement process, the required replacement of sanitary infrastructure is accommodated through:
 - a) the removal of trees that are located within the existing sanitary statutory right-of-way, including:
 - i. provision of additional replacement trees (two replacement trees for every off-site tree that permission is obtained for removal) reflected on an updated landscaping plan or tree planting plan and submission of a Landscape Security in the amount of \$750 per additional replacement tree; minimum 6 cm deciduous caliper or 3.5 m high conifers). NOTE: minimum replacement size to be as per Tree Protection Bylaw No. 8057 Schedule A 3.0 Replacement Trees; or
 - ii. provision of the developer's offer to voluntarily contribute \$750 per additional replacement tree that is unable to be planted on-site to the City's Tree Compensation Fund for the planting of replacement trees within the City.
 - b) provision of additional statutory right-of-way area, for which the design must be prepared in accordance with City specifications & standards. Works to be secured via Servicing Agreement (SA). The maintenance & liability responsibility is to be clearly noted. The design must be prepared in accordance with City specifications & standards and the construction of the works will be inspected by the City concurrently with all other SA related works; or;
 - c) an alternative solution that is acceptable to City Engineering staff.
- 12. If deemed necessary by City Engineering staff via the Servicing Agreement process, registration of a new sanitary statutory right-of-way (or modification of the existing statutory right-of-way) on the subject site in order to accommodate sanitary infrastructure.

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

- 13. Ensure that, via the Servicing Agreement process, the required replacement of sanitary infrastructure is accommodated through:
 - a) the removal of trees that are located within the existing sanitary statutory right-of-way, including:
 - iii. provision of additional replacement trees (two replacement trees for every off-site tree that permission is obtained for removal) reflected on an updated landscaping plan or tree planting plan and submission of a Landscape Security in the amount of \$750 per additional replacement tree; minimum 6 cm deciduous caliper or 3.5 m high conifers). NOTE: minimum replacement size to be as per Tree Protection Bylaw No. 8057 Schedule A 3.0 Replacement Trees; or
 - iv. provision of the developer's offer to voluntarily contribute \$750 per additional replacement tree that is unable to be planted on-site to the City's Tree Compensation Fund for the planting of replacement trees within the City.
 - b) provision of additional statutory right-of-way area, for which the design must be prepared in accordance with City specifications & standards. Works to be secured via Servicing Agreement (SA). The maintenance & liability

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responsibility is to be clearly noted. The design must be prepared in accordance with City specifications & standards and the construction of the works will be inspected by the City concurrently with all other SA related works; or;

- c) an alternative solution that is acceptable to City Engineering staff.
- 14. Ensure that no part of a building, structure hard ground surface or tree is proposed to be located within or encroach into an existing or proposed statutory right-of-way.
- 15. Submission of a Landscape Plan and a landscaping cost estimate that (including installation costs), prepared by a Registered Landscape Architect, to the satisfaction of the Director of Development. The cost estimate should include a 10% contingency. The Landscape Plan should:
 - ensure that a total of 32 replacement trees are planted and maintained (minimum 6 cm deciduous caliper or 3.5 m high conifers).
 - not include hedges or trees within a sanitary SRW
 - not include hedges along the front property line;
 - not include species that are prone to contemporary blights;
 - include a mix of coniferous and deciduous trees; and
 - include the dimensions of tree protection fencing as illustrated on the Tree Retention Plan attached to this report.

No. of Replacement Trees	Minimum Caliper of Deciduous Replacement Tree	Minimum Height of Coniferous Replacement Tree
10	6 cm	3.5 m
12	8 cm	4 m
4	9 cm	5 m
2	10 cm	5.5 m
4	11 cm	6 m

16. Complete an acoustical and thermal report and recommendations prepared by an appropriate registered professional, which demonstrates that the interior noise levels and noise mitigation standards comply with the City's Official Community Plan and Noise Bylaw requirements. The standard required for air conditioning systems and their alternatives (e.g. ground source heat pumps, heat exchangers and acoustic ducting) is the ASHRAE 55-2004 "Thermal Environmental Conditions for Human Occupancy" standard and subsequent updates as they may occur. Maximum interior noise levels (decibels) within the dwelling units must achieve CMHC standards follows:

Portions of Dwelling Units	Noise Levels (decibels)		
Bedrooms	35 decibels		
Living, dining, recreation rooms	40 decibels		
Kitchen, bathrooms, hallways, and utility rooms	45 decibels		

17. Complete a proposed townhouse energy efficiency report and recommendations prepared by a Certified Energy Advisor which demonstrates how the proposed construction will meet or exceed the required townhouse energy efficiency standards (BC Energy Step Code Step 3 or better), in compliance with the City's Official Community Plan.

Prior to a Development Permit* being forwarded to Council for consideration, the development must complete the following requirements:

18. Submission of a Landscape Security based on the cost estimate provided by the Landscape Architect plus a 10% contingency.

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

19. 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.

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- 20. Incorporation of accessibility measures in Building Permit (BP) plans as determined via the Rezoning and/or Development Permit processes.
- 21. 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.

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

Date



Richmond Zoning Bylaw 8500 Amendment Bylaw 10261 (RZ 18-831725) 10340, 10360, 10380, 10400 and 10420 No. 4 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 of the following area and by designating it "MEDIUM DENSITY TOWNHOUSES (RTM2)"

P.I.D. 003-561-674

Legal Lot 4, Block 4N, Sub Block 3, Plan NWP15456, Section 35, Range 6W, New Westminster Land District

P.I.D. 003-586-626 Lot 5, Block 4N, Sub Block 3, Plan NWP15456, Section 35, Range 6W, New Westminster Land District

P.I.D. 004-058-941 Lot 6, Block 4N, Sub Block 3, Plan NWP15456, Section 35, Range 6W, New Westminster Land District

P.I.D. 010-121-790 Lot 7, Block 4N, Sub Block 3, Plan NWP15456, Section 35, Range 6W, New Westminster Land District

P.I.D. 003-823-865 Lot 8, Block 4N, Sub Block 3, Plan NWP15456, Section 35, Range 6W, New Westminster Land District

2. This Bylaw may be cited as "Richmond Zoning Bylaw 8500, Amendment Bylaw 10261".

FIRST READING	CITY OF RICHMOND
PUBLIC HEARING	APPROVED by
SECOND READING	APPROVED by Director
THIRD READING	or Sencitor
OTHER CONDITIONS SATISFIED	v
ADOPTED	

MAYOR

CORPORATE OFFICER



Report to Committee

Re:	Housekeeping Request - Abandonment of Unadopted Bylaws		
From:	Claudia Jesson Director, City Clerk's Office	File:	12-8060-01/2021-Vol 01
То:	General Purposes Committee	Date:	April 19, 2021

Staff Recommendation

That the unadopted Zoning and OCP Amendment Bylaws, as outlined in Attachment 1, of the staff report titled "Housekeeping Request – Abandonment of Unadopted Bylaws" dated April 19, 2021 from the Director, City Clerk's Office, be abandoned.

Claudia Juman

Claudia Jesson U Director, City Clerk's Office (604-276-4006)

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Development Applications	V	and Comments			
SENIOR STAFF REPORT REVIEW	INITIALS: MO	APPROVED BY CAO			

Staff Report

Origin

Council Policy No. 5017 states that the City Clerk may bring forward to Council any Zoning or Official Community Plan Amendment Bylaw, where one year or more has elapsed from the conclusion of the relevant Public Hearing, with a recommendation either to abandon the bylaw, to require another Public Hearing, or another recommendation if warranted.

The last time Council considered a report requesting the abandonment of unadopted bylaws was in September, 2019. As a housekeeping matter to clean up the files, this report presents eight unadopted bylaws for abandonment where the associated rezoning application has either been withdrawn at the applicant's request or closed by City staff due to inactivity.

Not included in the proposed list are bylaws for which more than one year has passed since a Public Hearing, and the applicant is continuing to take active steps to addressing the rezoning considerations. Staff do not recommend abandoning such bylaws at this time.

This report supports Council's Strategic Plan 2018-2022 Strategy #8 An Engaged and Informed Community:

Ensure that the citizenry of Richmond is well-informed and engaged about City business and decision-making.

Analysis

Upon reviewing the OCP and Zoning Bylaw amendments which have been to a Public Hearing but have not yet been adopted, planning staff identified a number of applications that have had little or no subsequent activity. In some instances, applications have been closed due to inactivity, or withdrawn.

A letter was provided to applicants where there was no activity on a rezoning application, to request that staff be advised of their intentions with respect to the outstanding bylaw. The results of this survey indicate that applicants expressed no objection to their respective bylaw being abandoned, or the applicant specifically does not wish to proceed with their application.

Financial Impact

None.

April 19, 2021

Conclusion

Attachment 1 identifies unadopted OCP and Zoning Amendment Bylaw amendments that are no longer applicable because either the related application has been withdrawn, the applicant does not wish to proceed, or the applicant has not made contact with staff for the purpose of proceeding with the requirements of the application. Staff therefore recommend that the noted unadopted bylaws be abandoned.

Matt O'Halloran

Manager, Legislative Services (604-276-4098)

MO:mo

Att. 1: List of Bylaws to be abandoned

Attachment 1

List of Bylaws to Be Abandoned - 2021

Bylaw No	<u>File No</u>	<u>Bylaw Title</u>	<u>First</u> <u>Reading</u>	<u>Public</u> <u>Hearing</u> <u>Date</u>	<u>Status of</u> <u>Other</u> <u>Development</u>	Reason for <u>Action</u> <u>Taken</u>	<u>Bylaw Action</u> <u>Recommenda</u> <u>tion</u>
9873	15-707952	RZ - 7460 & 7480 Railway Ave	June 11/18	July 16/18		Withdrawn by applicant	This bylaw should be abandoned
9703	16-748526	RZ - 8511 No 4 Rd	April 24/17	May 15/17	AH-17- 793563- Closed	Withdrawn by applicant	This bylaw should be abandoned
9697	15-707253	RZ - 16160 and 16268 River Rd	Mar 27/17	Apr 18/17		Withdrawn by applicant	This bylaw should be abandoned
9630	15-699299	RZ - 8111 No 3 Rd	Nov 14/16	Dec 19/16	SD 15- 699300- Closed SA 16- 738956- Closed	Withdrawn by applicant	This bylaw should be abandoned
9211	13-630280	RZ - 13751 and 13851 Steveston Hwy	May 25/15	June 15/15	DP 14- 674456 Closed	Closed due to inactivity	This bylaw should be abandoned
9210	13-630280	RZ - 13751 and 13851 Steveston Hwy	May 25/15	June 15/15	DP 14- 674456 Closed	Closed due to inactivity	This bylaw should be abandoned
8465	08-446388	RZ - 7631 Ash St and 7680 Heather St	Dec 16/08			Withdrawn by applicant	This bylaw should be abandoned
7737	04-268223	RZ - 5411 and 5431 Steveston Hwy	July 12/04			Bylaw 7911 replaced Bylaw 7737 and adopted.	This bylaw should be abandoned



Page 1 of 1	Bylaws (Zoning and Official Community Plan) – Time Limit Policy 5017 After Public Hearing
	Adopted by Council: November 9, 1992

POLICY 5017:

It is Council policy that:

The City Clerk shall forward directly to Council any Zoning or Official Community Plan Amendment Bylaw where one year or more has elapsed from the conclusion of its Public Hearing, with a report on the circumstances which have precluded its presentation to Council for adoption and the position of the applicant on the matter (if available), with the recommendation:

- 1. that the bylaw be abandoned; or
- 2. that the third reading of such bylaw be rescinded and that a second Public Hearing on that bylaw be held at the expense of the City or the applicant, whichever is appropriate; or
- 3. that another recommendation be made, provided that the staff report contains clear reasons why neither sections 1 nor 2 above is applicable.



Report to Committee

То:	Planning Committee	Date:	May 5, 2021
From:	Wayne Craig Director, Development	File:	08-4105-01/2021-Vol 01
	James Cooper Director, Building Approvals		
Re:	UBCM Grant Application - Local Government De Program	velopme	ent Approvals

Staff Recommendation

- 1. That the application to the Union of British Columbia Municipalities (UBCM) Local Government Development Approvals Program for \$500,000 be endorsed;
- 2. Should the application be successful, that the Chief Administrative Officer and the General Manager, Planning and Development be authorized on behalf of the City to enter into an agreement with UBCM for the above mentioned project; and
- 3. That a capital submission of \$740,000 for the Digitization of Development Approvals system (AMANDA) be approved with \$740,000 funded from Rate Stabilization Account, and that the Consolidated 5-Year Financial Plan (2021-2025) be amended accordingly.

Wayne To

Wayne Craig Director, Development (604-247-4625)

James Cooper Director, Building Approvals (604-247-4606)

WC/JC:jr

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REPORT CONCURRENCE				
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER		
Intergovernmental Relations & Protocol Finance Department Information Technology	Unit I I I I I I I I I I I I I I I I I I I	be Erceg		
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO		

Staff Report

Origin

The Union of British Columbia Municipalities (UBCM) has announced a call for applications to the Local Government Development Approvals Program, a Provincial grant program funded by the Ministry of Municipal Affairs and Housing as part of the Canada-BC Safe Restart Agreement. This report is in response to that announcement and provides an outline of the City's application to the program.

This report supports the following strategies within Council's Strategic Plan 2018-2022:

Strategy #6 Strategic and Well-Planned Growth:

Leadership in effective and sustainable growth that supports Richmond's physical and social needs.

6.1 Ensure an effective OCP and ensure development aligns with it.

Strategy #8 An Engaged and Informed Community:

Ensure that the citizenry of Richmond is well-informed and engaged about City business and decision-making.

8.2 Ensure citizens are well-informed with timely, accurate and easily accessible communication using a variety of methods and tools.

Findings of Fact

In 2019, the Ministry of Municipal Affairs initiated the Development Approvals Process Review and engaged local governments and other stakeholders to discuss the challenges and opportunities of the current development approvals process in BC. The City of Richmond participated in this process review. Building upon that work, UBCM on March 10, 2021 announced the Local Government Development Approvals Program ("the Grant Program"). UBCM, through the Ministry of Municipal Affairs, is making available \$15 million in funding to local governments "to support the implementation of established best practices and to test innovative approaches to improve development approvals processes while meeting local government planning and policy objectives".

The Grant Program's application window closes on May 7, 2021. The Grant Program can contribute to 100 per cent of the cost of eligible activities up to a maximum amount of \$500,000. The activities contained in the application are to be capable of completion within two years of the Grant Program approval.

A copy of the Grant Program and Application Guide is attached (Attachment 1).

City staff have completed an application in advance of the May 7, 2021 deadline, but require a Council resolution in support of the application. UBCM has requested that a Council resolution supporting the project and the grant submissions be submitted to UBCM within 30 days of the close of applications (i.e., no later than June 6, 2021). **Analysis**

2020 Upgrade of Existing AMANDA Software Platform

In Spring, 2020, the City's Information Technology Department undertook a critical upgrade of the City's existing permitting and development application tracking software (AMANDA) to a web-based platform as per the City Council approved Digital Strategy. The AMANDA platform is fundamental as a central registry and permit assessment processing system for all Development Applications and Building Permits submitted to the City. The upgrade project was completed in March, 2021.

Grant Program Application Description and Anticipated Outcomes

A wide-range of activities are supported by the Grant Program; however, staff have strategically focused the application in the following areas outlined in the Program guide:

- Improving information technology to facilitate development application processing (including supporting future implementation of digital application submissions).
- Conducting internal reviews of current development approvals processes to identify opportunities for greater efficiency and effectiveness leveraging technology improvements.

The City's application to the Grant Program seeks to build off the recent critical updates to the AMANDA platform by implementing business improvements and enhancements that support the day-to-day operations and activities of the Development Applications and Building Approvals Departments. Planned improvements include supporting digital applications, increasing opportunities for concurrent stakeholder input and enhanced information distribution directly to development clients, related stakeholders and the general public.

Key actions and outcomes anticipated with this implementation are:

- 1. Review of the development application processes by the City's Business Service Solutions Division to identify opportunities to improve efficiency/effectiveness to reduce application process times.
- 2. Updating the AMANDA platform's business rules and functions in keeping with the updated application review processes.
- 3. Additional enhancements to facilitate:
 - a) Development of a Web Portal enabling digital application submissions.
 - b) Improved information distribution to development clients and community members.
 - c) Development of a mobile inspection app for Building Permits.

The proposed improvements have an added benefit in that they would not only improve the development application process but also increase the public accessibility and availability of information related to development. This would contribute positively to the City's ongoing efforts to improve communication and engagement of community members.

Should the application to the Grant Program be successful, the City would be required to enter into a funding agreement with UBCM. As with any submission to senior governments, there is no guarantee that this application will be successful. City staff will provide an update to Council on the outcome of the City's application.

Financial Impact

A detailed budget has been prepared as part of the City's application to the Grant Program (Attachment 2). City staff estimate the cost of the scope of work associated with its application to be approximately \$740,000.

As noted above, the Grant Program can contribute a maximum of 100 per cent of the cost of eligible activities up to a maximum of \$500,000. The City's application requests funding for the maximum \$500,000 available through the Grant Program.

Staff recommend that a capital project submission in the amount of \$740,000 be approved by Council with \$740,000 funded from Rate Stabilization Account (RSA). Should the City be successful with the grant application, the amount received will replace the City funding from Rate Stabilization Account.

Conclusion

Staff recommend that Council endorse the application to the UBCM Local Government Development Approvals Program. The Grant Program provides an appropriate source of funding to support improvements and enhancements to the City's development approvals process and tracking software including improved access to information by the general public.

Jun Per

Joshua Reis, MCIP, RPP, AICP Program Manager, Development (604-204-8653)

JDR:js/blg

<u>Attachments:</u> Attachment 1: UBCM Local Government Development Approvals Program Guide Attachment 2: Proposed Draft Project Budget



1. Introduction

In 2019, the Ministry of Municipal Affairs initiated the Development Approvals Process Review (DAPR). The Ministry engaged local governments and a broad range of stakeholders to discuss the challenges of current development approvals processes in B.C., to identify opportunities for addressing those challenges, and to develop an informed list of ideas about how to improve the efficiency and effectiveness of processes. A <u>summary report</u> of engagement findings identified several key themes. The Ministry intends to move forward on initiatives that draw upon these, which may include work on development finance tools, public input processes and provincial referrals, in collaboration with local governments, the development sector and other stakeholders.

The Local Government Development Approvals Program, a component of the Canada-BC Safe Restart Agreement, is one element in addressing the DAPR Report findings.

Local Government Development Approvals Program

The development approvals process refers to all operational steps and decision making in relation to a local government's consideration of approving development, from the pre-application phase to the issuance of the building permit. The local government's review process ensures that development applications conform to policies, plans, and regulations for building and development.

The intent of the Local Government Development Approvals Program is to support the implementation of established best practices and to test innovative approaches to improve development approvals processes while meeting local government planning and policy objectives.

The Local Government Development Approvals Program is not intended to support projects where proposed deliverables require or are directly focused on provincial legislative changes.

The Ministry of Municipal Affairs has provided \$15 million in funding and UBCM is administering the program.

2. Eligible Applicants

All local governments (municipalities, regional districts, and the Islands Trust) in BC are eligible to apply.

Eligible applicants can submit one application per intake.

3. Grant Maximum

The Program can contribute a maximum of 100% of the cost of eligible activities – to a suggested maximum of \$500,000.

Funding permitting, applications for projects that exceed the suggested maximum may be considered for funding provided that applicants are able to provide rationale for the request. If the total funding request



ATTACHMENT

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exceeds the available funding, applicants that have requested additional funds may be asked to reduce their funding request.

In order to ensure transparency and accountability in the expenditure of public funds, all other contributions for eligible portions of the project must be declared and, depending on the total value, may decrease the value of the funding. This includes any other grant funding and any revenue that is generated from activities that are funded by the Local Government Development Approvals Program.

4. Eligible Projects

To be eligible for funding, applications must demonstrate that proposed activities will meet the intent of the program and:

- Include new activities or represent a new phase of an existing project (retroactive funding is not available).
- Be capable of completion by the applicant within two years of the date of grant approval.
- For projects that are dependent on external partnerships, provide evidence that external partners (e.g. development community, provincial Ministry, other local governments) are willing to participate

5. Requirements for Funding

As part of the approval agreement, approved projects must meet the following requirements for funding:

- Any in-person activities, meetings, or events meet physical distancing and other public health guidance in relation to COVID-19.
- Activities must comply with all applicable privacy legislation under the *Freedom of Information and Protection of Privacy Act* in relation to the collection, use, or disclosure of personal information while conducting funded activities. Personal information is any recorded information about an identifiable individual other than their business contact information. This includes information that can be used to identify an individual through association or inference.

6. Eligible & Ineligible Costs & Activities

Eligible costs are direct costs that are approved for funding, properly and reasonably incurred, and paid by the applicant to carry out eligible activities. Eligible costs can only be incurred from the date of application submission until the final report is submitted.

Table 1 identifies examples of activities that are eligible for funding. Please note that an internal review of current development approvals may be valuable before undertaking specific projects but is not a pre-requisite for funding. However, evidence of readiness and/or rationale to undertake proposed activities is required in the application form and may contribute to higher application scores.

It is expected that proposed activities may involve internal or external partnerships. Please refer to Section 4 for funding requirements for working with external partners. Eligible activities must be cost-effective.

Table 1: Activities Eligible for Funding

- A. Conducting internal reviews of current development approvals processes to identify opportunities for greater efficiency and effectiveness.
- B. Updating or creating specific internal approvals procedures that will result in more effective and efficient development approvals processes. Examples include but are not limited to:
 - · Creating or updating a development approvals process guide for use by staff
 - Updating the development approval procedures bylaw(s) to clarify or improve the process for applicants to apply for amendments to a bylaw or request the issuance of a permit (for consideration by Council or Board)
- C. Supporting efficient and effective decision making in order to further local government planning and development objectives. Examples include but are not limited to:
 - Developing policies to determine the types of bylaw amendments for which the local government would or would not waive the public hearing (for consideration by Councils and Boards),
 - Updating development permit guidelines to specify clear decision-making parameters to support delegation of such decisions to staff (for consideration by Council and Board).
 - Developing amendments to a zoning bylaw to reduce the need for commonly requested variances (for consideration of adoption by Council and Board)
- D. Facilitating collaboration or coordination with external partners (e.g. development community, provincial Ministry, other local governments). Examples include but are not limited to:
 - Developing guidelines that clarify to applicants the requirements that an application must meet to be accepted by staff and expectations of local government-applicant interaction throughout the application process.
 - Establishing a pre-application process, including, for example, pre-application developer meetings.
 - Development of enhanced communication materials/training for subdivision
 - Review and development of guidelines/processes to improve provincial referrals and
 enhanced communications of provincial regulatory requirements
- E. Improving information technology to facilitate development application processing. Examples include but are not limited to:
 - Undertaking assessments to support future implementation of digital application platform or digital permitting software.
 - · Purchasing and implementing new or upgraded digital platforms or software
 - Training staff on software or platform, or on process changes required to adopt software or platform
- F. Training and capacity building for staff, elected officials (e.g. change management training), or external partners (e.g. application processes) in order to support the project.
- G. Other activities that support the improvement of the local government development approval process and that meet the intent of the program may be considered for funding.

Additional Eligible Costs & Activities

In addition to the activities identified in Table 1, the following expenditures are also eligible provided they relate directly to eligible activities:

- Incremental applicant staff and administration costs (i.e. creating a new position or adding new responsibilities to an existing position)
- Consultant costs (e.g. change management consultant, software consultant)
- Public information costs (e.g. FAQs for the public, guidance on how to participate in the public process, role of the decision-maker in the process)

Ineligible Costs & Activities

Any activity that is not outlined in Table 1 or is not directly connected to activities approved in the application is not eligible for grant funding. This includes:

- Development of funding application package
- Development of architectural, engineering, or other design drawings for the construction or renovation of facilities
- Routine or ongoing operating and/or planning costs or activities, including service subscriptions, or membership fees
- Capital costs (including computer hardware)
- Audit fees, interest fees, or fees to incorporate a society
- Fundraising, lobbying, or sponsorship campaigns
- Regular salaries and/or benefits of applicant staff or partners
- Project-related fees payable to the eligible applicant(s) (e.g. permit fees, community amenity contribution, etc.)
- Purchase of promotional items, door/raffle prizes, give-away items, and/or gifts for community members.
- Costs being claimed under any other government programs

7. Application Requirements & Process

Application Deadline

The application deadline is <u>May 7, 2021</u>. Applicants will be advised of the status of their applications within 90 days of the application deadline.

Required Application Contents

All applicants are required to submit an electronic copy of the complete application, including:

- Completed Application Form with all required attachments.
- Detailed budget that indicates the proposed expenditures from Local Government Development Approvals Program funding and that aligns with the proposed activities outlined in the application form. Although additional funding or support is not required, any other grant funding or in-kind contributions must be identified.
- Council, Board or Local Trust Committee resolution indicating support for the current proposed activities and willingness to provide overall grant management.

• For projects with externals partners: written confirmation from the external partner confirming their role and willingness to participate.

Submission of Applications

Applications should be submitted as Word, Excel or PDF files. Total file size for email attachments cannot exceed 20 MB.

All applications should be submitted to:

Local Government Program Services, Union of BC Municipalities

E-mail: lgps@ubcm.ca

Review of Applications

UBCM will perform a preliminary review of all applications to ensure the required application contents have been submitted and to ensure that eligibility criteria have been met.

Following this, an Evaluation Committee will assess and score all eligible applications. Higher application review scores will be given to projects that:

- Demonstrate alignment with intent of the Local Government Development Approvals Program
- Are outcome-based and include performance measures
- · Provide evidence of readiness to undertake proposed activities
- Include internal local government cross-departmental collaboration and/or collaboration with one or more external partners (e.g. development community, provincial Ministry, other local governments, etc.)
- Demonstrate cost-effectiveness

Point values and weighting have been established within each of these scoring criteria. Only those applications that meet a minimum threshold point value will be considered for funding.

The Evaluation Committee will consider the population and provincial, regional, and urban/rural distribution of proposed projects. Recommendations will be made on a priority basis and preference may be given to local governments with growth rates higher than 1% (2016 Census, Statistics Canada) between 2011 and 2016. All funding decisions will be made by UBCM.

All application materials will be shared with the Province of BC.

8. Grant Management & Applicant Responsibilities

Grants are awarded to eligible applicants only and, as such, the applicant is responsible for completion of the project as approved and for meeting reporting requirements.

Applicants are also responsible for proper fiscal management, including maintaining acceptable accounting records for the project. UBCM reserves the right to audit these records.

Notice of Funding Decision & Payments

All applicants will receive written notice of funding decisions. Approved applicants will receive an Approval Agreement, which will include the terms and conditions of any grant that is awarded, and that is required to be signed and returned to UBCM.

Grants are awarded in two payments: 50% at the approval of the project and when the signed Approval Agreement has been returned to UBCM and 50% when the project is complete and UBCM has received and approved the required final report and a financial summary.

Please note that in cases where revisions are required to an application, or an application has been approved in principle only, the applicant has 30 days from the date of the written notice of the status of the application to complete the application requirements. Applications that are not completed within 30 days may be closed.

Progress Payments

To request a progress payment, approved applicants are required to submit:

- Description of activities completed to date
- Description of funds expended to date
- Written rationale for receiving a progress payment

Changes to Approved Projects

Approved grants are specific to the project as identified in the application, and grant funds are not transferable to other projects. Approval from UBCM will be required for any significant variation from the approved project.

To propose changes to an approved project, applicants are required to submit:

- Amended application package, including updated, signed application form, updated budget, and an updated Council, Board, or Local Trust Committee resolution.
- Written rationale for proposed changes to activities and/or expenditures

Applicants are responsible for any costs above the approved grant unless a revised application is submitted and approved prior to work being undertaken.

Extensions to Project End Date

All approved activities are required to be completed within the time frame identified in the approval agreement and all extensions beyond this date must be requested in writing and be approved by UBCM. Extensions will not exceed six months.

9. Final Report Requirements & Process

Final reports are required to be submitted within 30 days of completion of the project. Applicants are required to submit an electronic copy of the complete final report, including the following:

- Completed Final Report Form with all required attachments
- Detailed financial summary that indicates the actual expenditures from the Local Government Development Approvals Program funding and other sources (if applicable) and that aligns with the actual activities outlined in the final report form
- Copies of any materials that were produced with grant funding (e.g. guidance material, reports on results of performance measurement)
- Optional: any photos or media related to the funded project

Submission of Final Reports

Final reports should be submitted as Word, Excel or PDF files. Total file size for email attachments cannot exceed 20 MB.

All final reports should be submitted to:

Local Government Program Services, Union of BC Municipalities

E-mail: lgps@ubcm.ca

Review of Final Reports

UBCM will perform a preliminary review of all final reports to ensure the required report elements have been submitted.

All final report materials will be shared with the Province of BC.

10. Additional Information

For enquiries about the application process or general questions regarding the program, please contact UBCM at <u>lgps@ubcm.ca</u> or (250) 356-0930.

UBCM - 2021 Development Approvals Program Grant - Detailed Project Budget *City of Richmond Project: Digitization of Development Approvals*

Project	UBCM Contribution Request	City of Richmond Contribution	Total Contribution
Digitization of Development Approvals	\$500,000.00	\$239,062.60	\$739,062.60
	Eligible Activities	Projected Cost Estimate	Considerations/Comments
	Process Mapping & Improvements Identification	\$ 162,750.00	Current and future state mapping, based on a total of seven application types, as well as, process improvements and documentation.
	Technology Assessment	\$ 72,800.00	Business and technical review, GAP analysis, and recommendations.
	Amanda Enhancements & Workflow Optimization	\$ 273,000.00	Review of automations, notifications, triggers, digitization, and workflow optimization based on the technology assessment.
	Portal Services & Enhancements	\$ 70,200.00	Based on the technology assessment.
	New Application(s)	\$ 23,400.00	Installation of Amanda Inspector App.
	Integration	\$ 32,500.00	Integration into the City's digital nervous ecosystem (DNE).
	Process Data Review	\$ 3,000.00	
	Stakeholder Engagement	\$ 1,500.00	
	Jurisdictional Scan	\$ 1,500.00	
	Training & Development	\$ 24,024.00	Amanda7 Daily User training for up to 12 participants; bridge training for system administrators/SMEs; general training for Amanda7 system administrators; and Inspector app end-user training for inspectors in the field.
	Contingency	\$ 74,388.60	
	Total	\$739,062.60	



To:	Mayor and Councillors	Date:	April 23, 2021
From:	Carli Williams, P.Eng. Manager, Business Licence and Bylaws	File:	12-8080-12-01/Vol 01

Re: Response to Council Referral for Soil Use for the Placement of Fill Application for 8511 No. 6 Road (Jiang)

This memorandum responds to a referral made by Council at the October 13, 2020 regular Council meeting. At the meeting, Council considered the report "Soil Use for the Placement of Fill Application for the Property Located at 8511 No. 6 Road (Jiang)", which proposes to deposit soil on the subject property for the purpose of remediating the property and developing a blueberry farm. During consideration of the report, Council referred the matter back to staff to provide feedback regarding the following:

- (1) That the 'Soil Use for the Placement of Fill' application, submitted by Bohan Jiang (the "Applicant"), proposing to deposit soil on the property located at 8511 No. 6 Road, be referred back to staff to review additional sources of soil as proposed by the Applicant;
- (2) That staff comment as to whether it is prudent to impose geographic restrictions in terms of the source of soils for all of the soil or just the topsoil; and
- (3) That staff examine the wisdom of the soil tracker application and report back.

Additional Source Review

The Applicant's qualified Agrologist (Daniel Lamhonwah, PhD, MES, P.Ag) has provided a report (Attachment 1) identifying locations where soil that is acceptable for completing the proposed project may be sourced. Mr. Lamhonwah identifies source sites beyond Richmond that will be suitable to import in order to remediate the property. Staff requested that Bruce McTavish, MSc, MBA, P.Ag, RPBio, review the Madrone report on behalf of the City. Mr. McTavish's review (Attachment 2) confirmed "that the geographic source of the soil is not important [and that] it is the texture and the absence of contamination of the soil that is critical for the successful restoration of the site".

Geographic Restrictions

City staff consider that geographic restrictions may potentially eliminate appropriate source sites located outside of Richmond that have been identified and confirmed by a qualified Agrologist (the "Agrologist") responsible for a project proposal. Such a restriction could limit or eliminate the ability of a property owner to successfully improve and/or remediate a property that, subject to the opinion of an Agrologist, requires soil importation to achieve such an improvement.



In addition, such a restriction may potentially place the City at odds with the Agricultural Land Commission (ALC). ALC staff have stated that the ALC does not restrict soil relocation to the region in which the soil originates from. It is the responsibility of the Agrologist who is responsible for the project to ensure such criteria match that of the source sites identified by the Agrologist. In general, soils should be medium textured, stone-free with a suitable amount of organic matter content. As long as a source site's soil meets the criteria established by the ALC, the ALC would not typically restrict importation due to a source site being situated beyond the community in which the project is located. Attachment 3 identifies the criteria utilized by the ALC.

In consideration of the above, it is not recommended to impose geographic restrictions on the source site for this application.

Soil Tracker Application

Through the City's permitting process, staff have incorporated a significant number of requirements that must be adhered to which assist in ensuring permit holders are held accountable to permit conditions. The most significant requirements are as follows:

- The Agrologist providing project oversight must sign-off on a source site prior to soil being imported from the identified site to the approved soil deposit site;
- On-site monitor inspecting each load prior to importation; and
- An Agrologist report is provided every 3,000 cubic metres.

Staff do consider that a soil tracker application is potentially a more efficient way to meet these requirements should a project receive approval. However, the only application available at this time is a proprietary application run by a third party business. Requiring the use of an application would be directing work to a specific business. The Community Charter generally prohibits the provision of any form of financial assistance to businesses, subject to specific limited exceptions. This prohibition specifically encompasses the provision of a grant, benefit, advantage, or other form of assistance. Adding the provision of utilizing a specific application would be considered a form of assistance.

Any further questions on this matter can be directed to the writer who will also be available during the regular General Purposes meeting on April 19, 2021.

Willim

Carli Williams, P.Eng. Manager, Business Licence and Bylaws (4136)

pc: SMT

Att. 1: Madrone Report re. Locations for Suitable Soil (rev. 06 Apr 2021)Att. 2: McTavish Review re. Madrone Report (05 Mar 2021)Att. 3: ALC Soil Suitability Table for Agricultural Reclamation

Attachment 1



1081 Canada Ave Duncan, BC V9L 1V2 p. 250.746.5545 f. 250.746.5850 #202 – 2790 Gladwin Road Abbotsford, BC V2T 4\$7 p. 604.504.1972 f. 604.504.1912

> info@madrone.ca www.madrone.ca

April 6, 2021

Mr. Barry Mah Westwood Topsoil Ltd. 6604 62B Street Delta, BC V4K 5A8 westwoodbarry@mac.com

Dear Mr. Mah,

RE: Locations of suitable soils for importation to 8511 No. 6 Road, Richmond, BC (CD 28808)

1 Introduction

Madrone Environmental Services Ltd. ('Madrone'), acting as the qualified professionals (QP's) retained by you, Mr. Barry Mah ('the Client'), was asked by Mr. Mike Morin¹, Soil Bylaw Officer, City of Richmond ('the City'), to respond to commentary² from the City regarding suitable locations to source soil for completion of the importation project proposed for 8511 No. 6 Road, Richmond, BC ('the Site'). This report, prepared by Daniel Lamhonwah, PhD, MES, P.Ag, of Madrone provides the following information requested by the City:

- Identify how much of the proposed volume of soil to be deposited is subsoil vs. topsoil;
- Provide the soil make up (i.e., soil texture) and soil mapping for the proposed locations Madrone has identified as suitable topsoil sources to complete the project, which are situated in:
 - Richmond;
 - o Delta;
 - South Vancouver;
 - South Burnaby; and
 - The UBC Endowment Lands;

¹ Email communication addressed to Barry Mah from Mike Morin, Soil Bylaw Officer, Community Bylaws, City of Richmond. Subject: CD 28808 - Request for additional information re. Council referral (Jiang). Sent on Monday, 19 October 2020 12:44.

² City of Richmond Council Meeting minutes. October 13, 2020 (7:00 PM). Richmond City Hall.

- Provide a more thorough explanation for each map that was provided with Madrone's October 13, 2020 memo prepared by Madrone to the City; and
- Provide additional maps and explanation of the areas identified above and any other locations in the Lower Mainland that have the appropriate soil to complete the project.

2 Proposed Soil Volumes – Topsoil and Subsoil

The approximate volume of **topsoil** required for completion of the project is $18,750 \text{ m}^3$, calculated based on the proposed import area (2.5 ha; 25,000 m²) and the depth of topsoil needed (75 cm).

The approximate volume of **subsoil** required for completion of the project is $6,250 \text{ m}^3$, calculated based on the proposed import area (2.5 ha; 25,000 m²) and the depth of subsoil needed (25 cm). Note that the subsoil in this case is the silty clay loam or silty clay textured soil cap proposed to be placed over the existing wood residue on the Site.

The total volume of soil (subsoil and topsoil) requested for the project is therefore 25,000 m³.

3 Suitable Topsoil Importation Locations

It is our professional opinion that the textural and origin criteria for suitable **topsoil** required for project completion include:

- 1. A loam textured soil (ideally a silt loam to loam)
- 2. Contains minimal coarse fragment content (i.e., minimal gravel, cobble and stone content); and
- 3. Is sourced from an area currently and historically zoned residential due to a lower risk of contamination compared to a commercial area or industrial area. Lands zoned and used for agriculture were considered to not be unsuitable sources locations because of the regulatory restrictions of removing soils form agricultural lands.

Information about local/regional soil associations been provided by the provincial Soil Information Finder (SIFT) Tool³ with mapping completed, in most cases, at a scale of 1:20,000. Mapping showing the locations of suitable soils are presented in the appendices of this report.

³ Province of British Columbia (2018). Soil Information Finder Tool. <u>https://www2.gov.bc.ca/gov/content/environment/air-land-water/land/soil/soil-information-finder</u>. Accessed November 9, 2020.

3.1 Municipality of Richmond

The majority of Richmond contains soils classified as 'unclassified urban'; these soils are found west of No.4 Road and stretch towards coastal areas. Central Richmond (between No.4 and No. 6 Roads) is characterized by the presence of poorly-drained organic (peat) soils belonging to the Lumbum, Triggs, Lulu and Richmond soil associations. Organic soils are still the dominant soil type toward east Richmond (east of No. 6 Road) however, there are occasional, discontiguous areas of mineral soils (e.g., silt loam soils).

Within Richmond, suitable topsoils for importation to the Site belong to the Annis, Blundell, Crescent and Westham soil associations (Appendix A). Of these soils, Blundell appears to be most spatially distributed in residential neighbourhoods, particularly in the areas surrounding the Greenacres Golf Course (between Sidaway Road and No.7, north of the Westminster Highway), and thus theoretically available as a source for the Site. There also appears to be discontiguous areas of Blundell soils mapped in the Southarm neighbourhood, in between No.4 Road and No. 5 Road, north and south of Steveston Highway.

3.2 Municipality of Delta

Within Delta, suitable topsoils for the purpose of importation to the Site belong to the Ladner and Benson soil associations (Appendix B). Although Ladner soils cover a substantial area in Delta, most of the areas where these soils are found are located on existing agricultural lands and thus cannot be removed without extensive permitting (and even then, this may be unjustified given the importance of topsoil for agricultural land). There may be some residential areas in Delta where Ladner soils are available such as west of the Delta Hospital in the neighbourhood of Ladner. The remaining areas in Delta are predominantly mapped as containing silt clay loam (mineral soils) or are classified as 'unclassified urban'.

3.3 South Vancouver

Within South Vancouver, suitable topsoils for importation to the Site belong to the Ladner and Benson soil associations (Appendix C). In South Vancouver, these soils are mapped around the Point Grey Golf and Country Club, with Ladner soils being more spatially distributed and theoretically available as a source for importation. The majority of South Vancouver is mapped as containing 'unclassified urban' soil which is not suitable topsoil for importation to the Site.

3.4 South Burnaby

Madrone had previously suggested that South Burnaby may contain topsoils suitable for importation to the Site. Our follow-up desktop study indicated that soils belonging to the Ladner and Delta soil associations in South Burnaby, which would otherwise have been suitable for importation, do not appear to be in residential areas and thus not ideal for importation to the Site (Appendix D). The majority of the remaining soils mapped for South Burnaby belong to the Richmond, Triggs, Annacis or Lumbum soil associations – all of which are organic soils which would not be suitable for topsoil either due to the non-ideal texture, high to extreme acidity and high organic carbon content. There are also large areas near the Fraser River where the soil is
indicated as 'anthropogenic' (human-made or influenced, such as deposited sands and gravels for dykes) which is also unsuitable for topsoil. It is our professional opinion that South Burnaby is not a suitable source location for topsoils required to complete the proposed project on the Site.

3.5 UBC Endowment Lands

Madrone had also previously suggested that the University of British Columbia (UBC) Endowment Lands may contain topsoils suitable for importation to the Site. Our follow-up desktop study indicated that the UBC Endowment Lands is mapped as containing 'unclassified urban' soil and thus not suitable topsoil for importation to the Site based on available information. Because there is an absence of provincial soils data for this area, a detailed investigative study (including field test pits) would be required to determine suitability for importation to the Site.

4 Conclusions

Based on Madrone's desktop assessment, there are limited single locations (particularly in the Richmond and Delta areas) where enough loam textured topsoil can be sourced (18,750 m³ required for the Site) that would be suitable topsoil for importation to the Site for the purpose of project completion. Thus, the sourcing of suitable topsoil would likely need to come from multiple locations, including areas outside of the Richmond and Delta area, for completion of the proposed importation project within a 2 year timeframe. As such, we recommend that the following locations (**Figure 1**) be considered for sourcing of imported soils proposed for the Site:

- Blundell soils (silt loam texture; stone-free) in Richmond mapped around the Greenacres Golf Course between Sidaway Road and No. 7, north of the Westminster Highway (**Point 1, Figure 1**);
- Blundell soils (silt loam texture; stone-free) in the Southarm neighbourhood of Richmond mapped between No.4 Road and No. 5 Road, north and south of Steveston Highway (**Point 2, Figure 1**);
- Ladner soils (silt loam texture; stone-free) in the Municipality of Delta mapped west of the Delta Hospital in the neighbourhood of Ladner (**Point 3, Figure 1**); and
- Ladner soils (silt loam texture; stone-free) in South Vancouver mapped around the Point Grey Golf and Country Club (**Point 4, Figure 1**)

Note that these recommendations are based on provincial mapping which was developed at a small scale covering large areas (1:20,000) and were likely not field verified (via assessment of soil pits) for specific residential neighbourhoods. We advise that a field assessment be conducted by a qualified professional to confirm the location-specific textural characteristics of any soils prior to importation. Moreover, prior to importation to the Site, source soils should be sampled and submitted for laboratory analyses to ensure they are not chemically contaminated (heavy metals, polyaromatic hydrocarbons etc.).

Please contact the undersigned authors should there be any questions regarding the contents of this report.

Sincerely,

MADRONE ENVIRONMENTAL SERVICES LTD.

Prepared by:

*This is a digitall the plicate ot official manually signe ument

Daniel Lamhonwah, PhD, MES, P.Ag Environmental Scientist, Professional Agrologist

Senior Reviewed by: This digitally 305ig is а ICATA. STOWAF official manually PHSATA

Jessica Stewart, P.Ag, P.Geo Professional Agrologist, Professional Geoscientist



FIGURE 1. RECOMMENDED LOCATIONS TO SOURCE SOIL FOR IMPORTATION TO 8511 NO. 6 ROAD, RICHMOND, BC

APPENDIX A – Soil Mapping for Municipality of Richmond

Note: The mapped distribution of each soil association described in each appendix is visualized with the thick yellow line on the provided mapping. The area(s) shaded in red are interpreted as being residential (i.e., locations most ideal for sourcing of that particular soil association). This visualization is the same for each map presented in the appendices.

Soils association: Annis

Characteristics: Silt loam texture, 0% coarse fragment content (stone-free), poorly drained Mapped distribution: Limited presence in Richmond and Delta. Distribution in residential areas not identified.



FIGURE A1. ANNIS SOIL SERIES MAPPED LOCATIONS - OUTLINED IN SOLID YELLOW.

Soils association: Blundell

Characteristics: Silt loam texture, 0% coarse fragment content (stone-free), poorly drained Mapped distribution: Found mostly in agricultural areas in central and east Richmond, and industrial and commercial areas in north Delta proximal to the Fraser River. Limited distribution in residential areas.



FIGURE A2. BLUNDELL SOIL SERIES MAPPED LOCATIONS – OUTLINED IN SOLID YELLOW. LOCATIONS HIGHLIGHTED IN RED REPRESENT THE MOST IDEAL AREA(S) FOR SOURCING OF THIS PARTICULAR SOIL ASSOCIATION.

Soils association: Crescent

Characteristics: Silt loam texture, 0% coarse fragment content (stone-free), poorly drained Mapped distribution: Found mostly in agricultural areas in south Richmond, and industrial and commercial areas in north Delta proximal to the Fraser River. Limited distribution in residential areas.



FIGURE A3. CRESCENT SOIL SERIES MAPPED LOCATIONS – OUTLINED IN SOLID YELLOW. LOCATIONS HIGHLIGHTED IN RED REPRESENT THE MOST IDEAL AREA(S) FOR SOURCING OF THIS PARTICULAR SOIL ASSOCIATION.

Soils association: Westham

Characteristics: Silt loam texture, 0% coarse fragment content (stone-free), poorly drained Mapped distribution: Found mostly in agricultural areas in south Richmond, and industrial and commercial areas in north Delta proximal to the Fraser River. Limited distribution in residential areas.



FIGURE A4. WESTHAM SOIL SERIES MAPPED LOCATIONS – OUTLINED IN SOLID YELLOW. LOCATIONS HIGHLIGHTED IN RED REPRESENT THE MOST IDEAL AREA(S) FOR SOURCING OF THIS PARTICULAR SOIL ASSOCIATION.

APPENDIX B – Soil Mapping for Municipality of Delta

Soils association: Ladner

Characteristics: Silt loam texture, 0% coarse fragment content (stone-free), poorly drained Mapped distribution: Found mostly in agricultural areas in Delta. Limited distribution in residential areas.



FIGURE A5. DELTA SOIL SERIES MAPPED LOCATIONS – OUTLINED IN SOLID YELLOW. LOCATIONS HIGHLIGHTED IN RED REPRESENT THE MOST IDEAL AREA(S) FOR SOURCING OF THIS PARTICULAR SOIL ASSOCIATION.

APPENDIX C – Soil Mapping for South Vancouver

Soils association: Ladner

Characteristics: Silt loam texture, 0% coarse fragment content (stone-free), poorly drained

Mapped distribution: Found mostly on and proximal to the Point Grey Golf and Country Club in the residential areas immediately east.



FIGURE A6. LADNER SOIL SERIES MAPPED LOCATIONS - OUTLINED IN SOLID YELLOW. LOCATIONS HIGHLIGHTED IN RED REPRESENT THE MOST IDEAL AREA(S) FOR SOURCING OF THIS PARTICULAR SOIL ASSOCIATION.

Soils association: Benson

Characteristics: Loam texture, <5% coarse fragment content, poorly drained

Mapped distribution: Found proximal to the Point Grey Golf and Country Club in the residential areas immediately west.



FIGURE A7. BENSON SOIL SERIES MAPPED LOCATIONS – OUTLINED IN SOLID YELLOW. LOCATIONS HIGHLIGHTED IN RED REPRESENT THE MOST IDEAL AREA(S) FOR SOURCING OF THIS PARTICULAR SOIL ASSOCIATION.

APPENDIX D – Soil Mapping for South Burnaby

Soils association: Ladner

Characteristics: Silt loam texture, 0% coarse fragment content (stone-free), poorly drained

Mapped distribution: Located on small commercial (potential contamination sites) and parkland areas adjacent to the Fraser River. Distribution in residential areas not identified.



FIGURE A8. LADNER SOIL SERIES MAPPED LOCATIONS - OUTLINED IN SOLID YELLOW.

Soils association: Delta

Characteristics: Silt loam texture, 0% coarse fragment content (stone-free), poorly drained Mapped distribution: Located on a small commercial area (potential for contamination) adjacent to the Fraser River. Distribution in residential areas not identified.



FIGURE A9. WESTHAM SOIL SERIES MAPPED LOCATIONS – OUTLINED IN SOLID YELLOW. LOCATIONS HIGHLIGHTED IN RED REPRESENT THE MOST IDEAL AREA(S) FOR SOURCING OF THIS PARTICULAR SOIL ASSOCIATION.

March 5, 2021

Re: Madrone February 15, 2021 report titled: Locations of suitable soils for importation to 8511 No. 6 Road, Richmond, BC (CD 28808) (Madrone report(

This memo provides a review of the Madrone report by Mr. Bruce McTavish, MSc MBA PAg RPBio of McTavish Resource & Management Consultants Ltd. (McTavish).

The 6,250 m³ required to increase the depth of the existing subsoil cap, can be any source of stone free soil with texture ranging from silty clay loam to silty clay. Madrone has identified areas and soil series in Richmond, Delta and elsewhere that meet these criteria. McTavish agrees with Madrone that the geographic source of the soil is not important, it is the texture and the absence of contamination of the soil that is critical for the successful restoration of the site. There are may areas of the lower mainland that have soils that have developed from Deltaic deposits and any of these sources are appropriate if they meet the soil texture and stone free criteria.

In general McTavish agrees with the Madrone recommendation on appropriate topsoil. McTavish believes that the soil series that can be used as sources of topsoil can be broadened. The historical topsoil on the site is primarily Lulu and some Triggs. Lulu soils vary from undecomposed to well-decomposed organic material, with partially decomposed (mesic) subsurface deposits. The underlying soil is fine textured deltaic deposits, either silty clay loam (SiCL) or silty clay (SiC). The incorporation and mixing of some organic soil into a topsoil that is silty clay loam to silty clay would therefore be appropriate for this site. Since the subsoil will be silty clay loam to silty clay in texture the topsoil should not be loam as it is at least 1 textural class away from SiCL or 2 from SiC, so a discontinuity will form between the topsoil and subsoil layers.

Regards,

man M. Tanish

Bruce McTavish, MSc MBA PAg RPBio Senior Agrologist McTavish Resource & Management Consultants Ltd.

Attachment 3

ALC Soil Suitability for Agricultural Reclamation

Rating/Property	Good	Fair	Poor	Unsuitable
Reaction (pH)	>5.0 to 7.5	4.0 to 5.0 & 7.6 to 8.4	3.5 to 4.0 & 8.5 to 9.0	<3.5 and >9.0
Salinity (EC) (dSM)	<2	2 to 4	4 to 8	>8
Stoniness	Class 1, 2	Class 3,4	Class 5,6	Class 7
Total coarse fragments (% volume 2 mm to 75 mm diameter)	<10%	11 to 40%	41 to 90%	
Cobbles and Stones (% volume > 75 mm diameter)	<1%	2 to 15%	16 to 80%	
Texture	Fine Sandy Loam, Loam, Sandy Loam, Silt Loam	Clay Loam, Sandy Clay Loam, Silt Clay Loam	Sand, Loamy Sand, Sandy Clay, Silt Clay, Clay, Heavy Clay	
Moist Consistency	very friable, friable	loose	firm, very firm	extremely firm
Organic Carbon %	2 to 17	1 to 2	<1	>17 (soil amendment only)
Equivalent Organic Matter %	3.4 to 30	1.7 to 3.4	<1.7	



Report to Committee

То:	General Purposes Committee	Date:	August 27, 2020
From:	Cecilia Achiam General Manager, Community Safety	File:	12-8080-12-01/Vol 01
Re:	Soil Use for the Placement of Fill Application for the Property Located at 8511 No. 6 Road (Jiang)		

Staff Recommendation

That the 'Soil Use for the Placement of Fill' application, submitted by Bohan Jiang (the "Applicant"), proposing to deposit soil on the property located at 8511 No. 6 Road for the purpose of remediating the property to develop a blueberry farm, be authorized for referral to the Agricultural Land Commission (ALC) for the ALC to review and determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements.

Cecilia Achiam General Manager, Community Safety (604-276-4122)

Att. 14

REPORT CONCURRENCE			
ROUTED TO:	CONCURRENCE		
Engineering Policy Planning Sustainability Transportation	র ম ম ম		
SENIOR STAFF REPORT REVIEW	INITIALS:		
APPROVED BY CAO			

Staff Report

Origin

The City of Richmond received a 'Soil Use for the Placement of Fill' application for the property located at 8511 No. 6 Road (the "Property"). The intent of the application is to address damage to a large portion of the Property due to past activities of a previous landowner(s) approximately 38 years ago, which included excavating and removing the native soil and replacing the soil with untreated woodwaste. The Applicant is proposing to improve the agricultural capability of the Property from its current Class 6 or 7 rating to a Class 1 rating to allow for the development of a blueberry farm.

The Property is situated within the Agricultural Land Reserve (ALR) and is subject to provisions of the *Agricultural Land Commission Act (ALC Act)* and its regulations (the "Regulations"), and the City's Soil Removal and Fill Deposit Regulation Bylaw No. 8094 (the "Soil Bylaw").

Pursuant to applicable Provincial regulations, a 'Soil Use for the Placement of Fill' application requires authorization from local government in order to be referred to the Agricultural Land Commission (ALC) for their review and approval. As such, this application must be submitted to the City for review and a decision from Council. Should the application be referred to the ALC and should it subsequently be approved by the ALC, the Applicant is required to satisfy the City's requirements outlined in the Soil Bylaw before a soil deposit permit would be issued by the City.

The Applicant has satisfied all of the City's referral requirements for submission to the ALC.

This report supports Council's Strategic Plan 2018-2022 Strategy #2 A Sustainable and Environmentally Conscious City:

Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.

2.1 Continued leadership in addressing climate change and promoting circular economic principles.

2.3 Increase emphasis on local food systems, urban agriculture and organic farming.

Analysis

The Property is zoned AG1 (Agriculture). The current zoning permits a wide range of farming and compatible uses consistent with the provisions of the *ALC Act* and Regulations and the City's Official Community Plan and Zoning Bylaw. The Applicant is proposing to deposit 30,000 cubic metres of soil over approximately 2.5 ha of the 4.05 ha Property at an average depth of 1.0m, which would bring the Property to the same elevation as neighbouring properties as it currently resides at a lower elevation due to the previous excavation and removal of native soil.

The soil deposition will serve to cap untreated woodwaste placed on the Property by a previous owner(s) in addition to improving the Property's soil conditions to develop a blueberry farm.

Uses on Adjacent Lots

- To the North: ALR Land is not in agricultural production
- To the East: ALR Golf course
- To the South: ALR Land is in agricultural production
- To the West: ALR Land is not in agricultural production

Table 1: Exis	ting Informatior	and Proposed	Changes for	the Property
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Item	Existing
Owner/Applicant	Bohan Jiang (the "Applicant")
Authorized Agent/Lead Contractor	Barry Mah (the "Agent")
Authorized Consultants	Daniel Lamhonwah, PhD candidate, MES, P. Ag. and Thomas Elliot, PhD, P. Geo, P. Ag. (Madrone Environmental Services Ltd.) (the "Agrologists)
Authorized Farm Manager	Quan Ming Wu (the "Farm Manager")
Lot Size	4.05 hectares (10 acres)
Current Land Uses	A portion of the Property is currently under agricultural production (blueberries and orchard)
Proposed Land Uses	Remediate 2.5ha of the Property to create a blueberry farm
Official Community Plan Designation	Agriculture
ALR Designation	Property is within the ALR
Zoning	AG1
Riparian Management Area (RMA)	Yes; no disturbance proposed
Environmental Sensitive Area (ESA)	No

Project Overview

The Applicant – who has owned the Property since 2005 – is applying to deposit 30,000 cubic metres of soil over approximately 2.5 ha of the 4.05 ha Property at an average depth of 1.0m. The objective is to improve the agricultural capability of the Property from its current Class 6/7 rating to a Class 1 rating to allow for the development of a blueberry farm. Class 1 soil would provide the maximum flexibility for future agricultural activities because it would allow a farmer to grow the widest range of crops.

In addition, the soil deposition will serve to ensure the woodwaste deposited on the Property by a previous owner approximately 38 years ago remains in an anaerobic state to ensure leachate does

not enter neighbouring watercourses. As per the Agrologists, the remediation work will ensure the long term stability of the woodwaste.

The Applicant has advised that the project will take two years to complete. The timeline for completion is heavily dependent on ensuring the appropriate soil – as recommended by the Agrologists – is sourced to complete the project. Soil sourcing has not commenced at this time due to the considerable period of time involved with respect to the soil deposit application process and seeking approval from the City and ALC.

Staff Comments

The proposal aligns with a number of Council endorsed strategies and directions including concerns about the use of Richmond soil. Other objectives satisfied by the project are described as follows:

- The Applicant's desire to utilize Richmond soil where possible provides for a reduction in carbon emissions as there will be a considerable decrease in mileage as trucks will not be traveling back and forth from City approved development projects to the Fraser Valley as is the common practice;
- Following completion of the project, the Applicant's Farm Plan will include expansion of current farming operation by over six acres thus supporting initiatives as described within the City's Food Charter; and
- The proposal to raise the Property to improve the agricultural viability is consistent with the City's current Flood Protection Management Strategy (FPMS) which identifies raising land levels within all areas of the City as a key overall long-term objective. At the January 27, 2020 Regular Council Meeting, Council made a referral for staff to review the FPMS and provide comments with regard to the raising of land, specifically as it relates to agricultural land and agricultural viability. Staff are preparing a response to this referral.

Richmond Food Security and Agricultural Advisory Committee (FSAAC) Consultation

The Applicant presented the proposal to the FSAAC on July 23, 2020. The FSAAC unanimously supported the proposal with conditions, passing the following motion:

That the Food Security and Agricultural Advisory Committee support the ALR Soil Use for Placement of Fill Application at 8511 No. 6 Road, subject to the following considerations:

- Monitoring and regular reporting of fill deposits (suitable fertile soil);
- Completion of a long-term lease (minimum 10 years) between the property owner and the farm operator; and
- Submission of a performance bond equal to the revenue from tipping fees minus the cost to implement the farm plan, to be returned upon completion of the farm plan.

Agricultural Considerations

The Applicant has provided a Proposed Remediation Report (the "Remediation Report") prepared by Bruce McTavish, MSc MBA, PAg, RPBio and Dr. Hubert Timmenga, PhD, PAg, CMC. The Remediation Report (Attachment 1) outlines the history of the Property, the current soil conditions at the time of reporting, soil analysis conclusions, and proposed options to improve the Property. Following analysis and site investigation (ie. test digs), McTavish and Timmenga concluded that the agricultural capability of the Property had been negatively impacted due to the extraction of native peat and the subsequent backfilling of cedar woodwaste and wooden construction debris by a previous owner(s).

The Remediation Report indicates that at the time of their assessment of the Property, "the blueberry plants on the Property are stunted or dead due to the lack of adequate soil depth for them to grow in." It was the opinion of McTavish and Timmenga that "a large portion of the [Property] seems only capable of producing annual weeds". As per McTavish and Timmenga, the Property was deemed to have a Land Capability Assessment of a Class 6 or 7D.

The Remediation Report provided for two options to improve the agricultural capability of the Property. Option 1 outlines movement of the shallow soil cap to facilitate the removal of the woodwaste from the Property and import and deposit soil to complete remediation. This option is prohibitive due to the financial cost of the removal. In addition, as noted in the Remediation Report, "the disruption of the wood waste may lead to the generation of leachate which is not happening at the present time." In addition, the Remediation Report estimates that the Property contains 13,000 m³ of woodwaste. As result, should Option 1 be undertaken – excavating and removing the woodwaste – it would result in the requirement for more soil to be imported/deposited to complete remediation than is currently being requested by the Applicant.

Option 2 (preferred by the Applicant) proposes to leave the woodwaste in its current state. The Remediation Report proposes that the Applicant deposit 25mm of silty clay to silty clay loam on top of the current soil. In addition, that 75mm of topsoil be deposited to improve the land capability for future crops. With the additional soil capping, anaerobic conditions will be maintained and will "inhibit the production of leachate."

The Remediation Report concluded that upon project completion, the land would be improved "to class 2 or 3 which [would] support a wide range of agricultural crops."

In addition, the Applicant has provided a Woodwaste Leachate and Site Drainage Report (the "Leachate/Drainage Report"). The Leachate/Drainage Report (Attachment 2) indicates "the wood waste has been buried on [the Property] for at least [38] years and it is in virtually the same condition as when it was buried." The Leachate/Drainage Report outlines the projected work plan to ensure the proposed capping with imported soil "preserve[s] the wood waste and prevent[s] the formation of leachate."

Subsequent to the initial reporting from McTavish and Timmenga, the Applicant was required to retain a new qualified professional as Mr. McTavish currently reviews and assesses soil deposit proposals on behalf of the City. As a result, Daniel Lamhonwah and Thomas Elliot, PhD, P. Geo,

P. Ag. of Madrone Environmental Services Ltd. were retained to review the proposal and provided additional information on behalf of the Applicant.

As per City requirements, the Agrologists provided an updated Farm Plan (Attachment 3). As noted in the Farm Plan, the Class 6 or 7D classification(s) is an "undesirable soil structure/aeration, with the limiting factor being the root restricting layer of anaerobic wood waste." Subsequent reporting by the Agrologists confirms that the majority of the Property remains a Class 6 or 7D classification.

Following additional study by the Agrologists, the initial conclusion by McTavish and Timmenga that the Property would be improved to a Class 2 or 3 was amended by the Agrologists, who state:

Following implementation of the Remediation Plan and the recommendations [within the Farm Plan], the proposed soil importation and deposit is targeting a **Class 1** agricultural capability by selectively receiving soils suitable to that end goal.

The improvement to Class 1 will allow for the implementation of a blueberry farm as desired by the Applicant and the Farm Manager; however, the proposed improvements would allow for the growing of a multitude of different crops - as verified by the Agrologists - should the Applicant wish to vary crop types in the future. Such crops would require deep rooting (0.6m to 0.9m) and would include rhubarb, sweet potatoes, tomatoes, pumpkins and asparagus.

As per the Farm Manager (Attachment 4), who manages the Property on behalf of the Applicant, 8,000 blueberry bushes were planted in 2006 in addition to implementing irrigation improvements and the application of fertilizer and sawdust. Due to the conditions within the proposed soil deposit area, only 500 plants have survived as of 2016. Following consultation with other local blueberry farmers and continuing crop failure, the Applicant retained the Agent in 2012 to determine a means to improve the Property. The Agent in turn retained McTavish and Timmenga to assess the Property and provide recommendations.

Subsequent to the Remediation Report being provided by McTavish and Timmenga, the Applicant provided a Technical Addendum to [the] Remediation Plan (the "Remediation Addendum"). The Remediation Addendum (Attachment 5) outlines recommendations based on current regulatory practices. In particular, it focuses on source site approval and maintaining the quality of soil that is to be imported and deposited on the Property.

The Applicant has also provided a Technical Memorandum re. Appropriate Imported Soil and Soil Source Sites (the "Soil Memo"). The Soil Memo (Attachment 6) addresses the types of soil required to properly complete the project should the Applicant receive approval. In particular, the Soil Memo addresses why the Applicant should not be solely restricted to importing alluvial soils. Furthermore, the Agrologists advise that limiting the type of soil to alluvial and specifically to sources found within Richmond "may introduce an undesirable salinity limitation (Class N limitation) that may not have existed on a receiving site."

The Agrologists "recommend that the City favours imposing a condition that considers the physical and chemical properties of the soil proposed to be imported instead of restricting the imported soil to a deposition method and/or soil parent material type."

It must be noted that a portion of the Property to the west of the house was improved as a result of excavated soil – sourced from the Property due to construction of a house – being relocated to raise the level of the Property. The raised area (Attachment 7) was planted with blueberry plants and an orchard. The Agent has confirmed that there was no woodwaste under the raised area. This work was conducted following submission of the McTavish and Timmenga reports.

Should the proposal be approved, the City will require that a qualified agrologist be retained to monitor the project and provide regular reporting. Should an agrologist not be retained or cease providing regular oversight and reporting, the City would reserve the right, as per the Soil deposit permit (the "Permit") conditions, to suspend and/or void the Permit until such time as a new qualified agrologist, agreeable to the City and ALC, is retained to monitor the project and provide regular reporting.

The Applicant has confirmed with staff (Attachment 8), in response to the FSAAC conditions of support, that a long term lease will be signed once the proposed soil deposit area is improved to standard capable of growing crops. In addition, while there is no requirement within the current Soil Bylaw, the Farm Manager and Applicant have confirmed a willingness to "submit a \$30,000 performance bond as a guarantee to implement and complete the Farm Plan, to be returned upon completion of the farm plan" (Attachment 9).

Drainage & Geotechnical Considerations

The Leachate/Drainage Report indicates that flow direction for the existing ditches on the Property is to be maintained with minor regrading and widening. In addition, it is proposed that a new ditch be constructed along the west property line. The Leachate/Drainage Report contends that there will be no increase to peak flows into City ditches.

The Leachate/Drainage has been reviewed by Colin S. Johnson, P.Eng (OOTB Engineering Ltd.) at the request of the City. The Drainage Assessment Memo (Attachment 10) confirms "that the site drainage recommendations in [the Leachate/Drainage Report] appear to be reasonable and should allow for adequate storm water drainage from the site, without altering peak flow conditions."

A Geotechnical Assessment (the "Geotech Assessment") has been provided by Tony Yam Engineering Ltd. The Geotech Assessment (Attachment 11) concludes that the "additional fills over the impacted area will not impact the drainage pattern of the adjacent areas (filling elevation of the impacted area is lower than the adjacent areas)." The Geotech Assessment has determined that the "placing of fills will not impact stability of adjacent areas as the impacted area is not less than 6 m away from adjacent properties." In addition, the Agrologists confirm that the soil deposition shall bring the Property to the same elevation as the neighbouring properties.

Permit conditions will provide staff the latitude to request a geotechnical report at any time in addition to requiring a closure report from the geotechnical engineer following completion of the project.

In response to discussions at previous Council and FSAAC meetings, the Agrologists have also provided a Soil Drainage & High Water Table Memorandum (the "Water Table Memo")

addressing the concept of berming and pumping the Property to address excess water issues on the Property rather than importing soil. As per the Water Table Memo (Attachment 12) and the conclusion of McTavish and Timmenga, the "[p]roperty is affected by groundwater and not flood water (i.e., from watercourses)."

A separate technical memorandum that focuses on the Agricultural Environmental Management Code (the "AEM Code Memo") (Attachment 13) further addresses the question of pumping excess water from the Property. The Agrologists state the following:

[P]ump works are generally suitable for bermed (or dyked) areas, such as floodplains, whereby the inundation/excess water is not congruent with the regional high water table. In many circumstances within the [City of Richmond], the issue is more related to high water table and regional conveyance rather than point-specific short duration inundation-water sources (i.e. flooding during the late spring freshet of the Fraser River) that pumping is ideally suited to resolve.

It is the professional opinion of the Agrologists, that berming and pumping cannot eliminate the current excess water issues and that the Property will be improved via importing soil and raising the land.

Despite the aforesaid water table issue and the suitability of berming and pumping, the main driver of the proposal is to ensure that the woodwaste is capped with an appropriate level of soil to ensure that there is no potential for leachate and to ensure that there is an appropriate depth of soil to permit for the planting of a blueberry crop and orchard.

Environmental Considerations

While the overall objective is to improve the agricultural capability of the Property, an additional purpose of the proposal is to cap the woodwaste currently located beneath the surface soil to ensure water does not penetrate and permeate the woodwaste.

As per City staff, at the time of the deposition of the woodwaste and upon receipt of the application in 2012, there were no measures available for the City to undertake enforcement action. Prior to receipt of the application, staff were not aware of the issue and the City does not have any records or complaints related to the issue. Currently, there is no enforcement measure available within the Soil Bylaw or other City bylaws for the City to take action with respect to the woodwaste. In addition, the property owner is not required to advise the province of what has occurred on-site (ie. dumping of untreated woodwaste) as the site is not considered to be contaminated.

Staff note that landfilling with wood waste and the environmental liability associated with such a practice is covered under provincial jurisdiction. The "responsible party" is generally the previous owner, or the site operator who buried the woodwaste. The Agent has confirmed that due to the challenge in proving who undertook the work 38 years ago and the potential expense in litigating the matter, the Owner does not intend to address this matter through the courts; however, would prefer to utilize his financial resources to re-establish the Property to an agricultural standard capable of growing blueberries.

As noted in a Ditch Water Analysis Report submitted by McTavish and Timmenga (Attachment 14), which analysed the water within the ditches on the Property and in the City allowances, testing found that the ditch water was "not affected by wood waste leachate." The Leachate/Drainage Report provides recommendations to ensure there is no generation of leachates from the woodwaste following completion of the project. As per the Leachate/Drainage Report, placement of additional soil will ensure that "the wood waste [remains] in an anaerobic state". Staff are satisfied with the aforesaid reports and conclusions within.

The proposed soil deposition area is outside of the Riparian Management Area located on the east property line running along No. 6 Road.

Staff have determined that areas identified within the City's GIS mapping system as an Environmentally Sensitive Area along the north, south and western property lines are referencing vegetation on adjacent properties. The proposal will not impact any neighbouring Environmentally Sensitive Area.

There will be no impacts to trees due to the soil deposit operations.

As per Permit conditions, all work undertaken in or around a watercourse, must be completed in compliance with the *Water Sustainability Act*, under the guidance of a Qualified Environmental Professional (QEP). The City will require that erosion and sediment control measures be installed and inspected by a QEP should it be deemed necessary by City staff. Staff will require on-going monitoring by a QEP of the project to ensure no leachate enters City ditches or other watercourses.

Financial Costs and Considerations for the Applicant

Due to ongoing and approved development within the City of Richmond and the Lower Mainland, developers and contractors must find a location (the "End Site") that will accept soil excavated and removed off-site to facilitate development. Due to such demand, a market has been created in which End Site owners can generate income via tipping fees. Such fees are variable depending on the location, type and volume of soil, and season. Contractors are willing to pay a premium based on location of the soil (the "Source Site") to the End Site in order to reduce significant costs. Although End Site owners derive income due to tipping fees, soil deposit projects are not without significant costs to the Permit holder.

Please refer to the Farm Plan (pgs. 14-17) to review the potential tipping fee income and soil deposit project and farm development costs as provided by the Applicant.

Road and Traffic Considerations

A Traffic Management Plan has been submitted and reviewed by City staff. Truck access to the Property will be limited to Steveston Highway and will not be permitted to access the Property from Blundell Road or Westminster Highway.

Soil Deposit Permit Requirements and City Inspection and Project Oversight Protocols

Should the proposal receive ALC and City approval, City staff will prepare a comprehensive Permit that sets out a number of conditions, including but not limited to:

- Oversight by a professional agrologist;
- Source site inspection requirements;
- On-site monitoring and reporting requirements;
- Requirements for protection of the Riparian Management Area near the truck entrance point on No. 6 Road;
- Measures needed to eliminate impacts, including drainage, to neighbouring properties and City infrastructure;
- Permitted hours/days of operation;
- An approved Traffic Management Plan; and
- Security deposits (further explained below).

Despite the Remediation Report recommending that source site inspections occur for sites generating more than fifty truck loads, Qualified Professional reporting requirements are intended to be similar to the requirements for the Sixwest Holdings soil deposit project located on Westminster Highway. This will include the agrologist-of-record being required to inspect and approve all source sites. An on-site monitor will be required to inspect each load of soil prior to deposition on the Property and maintain an accurate daily log of trucks depositing soil on the site. At the sole discretion of the City, alternate measures may be required (i.e. survey) to determine the volume of soil deposited on the Property.

In addition to the expected reporting requirements of an agrologist or other qualified professionals to the City and ALC, City staff will maintain proactive inspection and enforcement on the Property that will include the following:

- multiple site inspections per week of the Property at the onset of the project to ensure conditions of the Permit are being maintained;
- weekly site assessments to continue to be undertaken when soil importation is underway to ensure the Permit conditions are respected;
- meet on-site with the site supervisor a minimum of two times per month;
- maintain communication with the agrologist-of-record and Agent on a regular basis;
- review reports to ensure conditions of the Permit are being satisfied; and
- advise the ALC of concerns relative to the project and request that ALC staff undertake inspections to ensure compliance with the approval conditions when deemed necessary by City staff.

No soil will be permitted to be imported/deposited until such time as all City and ALC requirements have been satisfied and the Permit has been issued by the City.

Security Bonds

Should the soil deposit project receive approval, the City will require that the Applicant provide the following security bonds:

- \$5,000 pursuant to s. 8(d) of the current *Boulevard and Roadway Protection Regulation Bylaw No. 6366* to ensure that roadways and drainage systems are kept free and clear of materials, debris, dirt, or mud resulting from the soil deposit activity;
- \$10,000 pursuant to s. 4.2.1 of the current *Soil Removal and Fill Deposit Regulation Bylaw No. 8094* to ensure full and proper compliance with the provisions of this Bylaw and all other terms and conditions of the Permit; and
- The Applicant has also proposed to provide a \$30,000 bond to the City for implementation of the Farm Plan. Beyond completion of the soil project, this bond will provide security that the Farm Plan will be implemented.

In addition to the security bonds provided to the City, the ALC has the authority to require a performance bond to ensure that all required mitigation and monitoring measures are completed. The bond required by the ALC is also intended to ensure the rehabilitation of the Property in the event the project is not completed. ALC performance bonds and the approved volumes from four previous approvals for projects within the City are as follows:

- \$70,000 17,500m³ (Athwal approved May 2020)
- \$160,000 48,000m³ (City of Richmond approved June 2017)
- \$290,000 140,000m³ (Sixwest Holdings approved Jan. 2017)
- \$500,000 102,080m³ (Sunshine Cranberry Farms approved Jan. 2014)

As per the Permit conditions, security deposits will not be returned until all conditions as stated in the Permit and the ALC approval are satisfied in their entirety, to the satisfaction of the City. This will include confirmation that the Farm Plan has been completed as per a final report from the owner's agrologist-of-record. City staff is to conduct a final inspection and receive confirmation from the ALC that the project has been completed as per ALC approval prior to closing the file.

Alternatives to Council Approval

Should Council not authorize staff to refer the proposal to the ALC for their review and decision; the application will be considered to be rejected. Council may add additional recommendations for ALC consideration and/or conditions within a referral to the ALC, similar to conditions already provided within this report.

Financial Impact

None.

Conclusion

Staff recommends that the soil deposit application for the Property located at 8511 No. 6 Road be authorized for referral to the ALC for the ALC to review and determine the merits of the

August 27, 2020

proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements.

Mike Morin Soil Bylaw Officer, Community Bylaws (8625)

Cultur

Carli Williams, P.Eng. Manager, Business Licence and Bylaws (4136)

Att. 1: Proposed Remediation Report (30 Sept 2012)

- 2: Woodwaste Leachate and Site Drainage Report (14 Dec 2013)
- 3: Farm Plan (11 Aug 2020)
- 4: Letter from Farm Manager re. Farming Background (10 Aug 2020)
- 5: Technical Addendum to Remediation Plan re. Regulatory Updates (30 Jun 2020)
- 6: Technical Memorandum re. Appropriate Imported Soil & Soil Source Sites (30 Jun 2020)
- 7: Farm Plan re. Figure 1 (16 Jun 2020)
- 8: Letter from Owner re. Lease Commitment (12 Aug 2020)
- 9: Letter of Commitment re. Farm Plan Security Bond (10 Aug 2020)
- 10: Drainage Assessment Memo (29 Jun 2020)
- 11: Geotechnical Assessment (10 Oct 2018)
- 12: Soil Drainage & High Water Table Memorandum (30 Jun 2020)
- 13: Technical Memorandum: Agricultural Environmental Management Code (09 Mar 2020)
- 14: Ditch Water Analysis Report (04 Mar 2015)

Proposed Remediation of Land Located at 8511 #6 Road Richmond, B.C.

BCAA Legal: SEC 20 BLK4N RG5W PL 3109 Parcel A, Subsidy Lot 3, (J71246E).

Prepared by:

Sun M Ċ

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and WD2-.

Hubert Timmenga, PhD, P.Ag., CMC Timmenga & Associates Inc 292 E 56 Avenue, Vancouver BC V5X 1R3 htimmenga@telus.net

Prepared for:

Bohan Jiang

September 30, 2012

McTavish Resource & Management Consultants Ltd

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1.0 Introduction

McTavish Resource & Management Consultants Ltd. was retained by Bohan Jiang to determine the cause for the Blueberry Crop failure and develop a remediation plan to allow agricultural production on the land. The farm is located at 8511 #6 Road in Richmond, B.C. The total farm size is 40475 m^2 or 10 acres and is zoned AG1. Approximately 2.5 hectares of the land is planted in Blueberries and $\frac{1}{2}$ of the crop has been a complete failure and the other $\frac{1}{2}$ has marginal growth.

2.0 Site Location

The subject properties are located at 8511 # 6 Road Richmond B.C. The legal description is: SEC 20 BLK4N RG5W PL 3109 Parcel A, Subsidy Lot 3, (J71246E).

2.1 Zoning and Present Land Use

The subject property is 4 hectares and is in the ALR and is zoned AG1. At the present time the owner is attempting to grow Blueberries on the land with limited success.

2.2 Previous Land Use

The use of the land for any agricultural use is severely impeded by the fact that approximately 25 to 30 years ago a previous owner has stripped all the organic soil (peat) from the site and filled it with cedar wood waste and wooden construction debris. This will be discussed in detail in section 3 of this report.

3.0 Soils

Based on existing soil mapping, the soils on the site are in a large polygon of Lulu and Triggs soils. The Lulu soils are composed of partially decomposed organic deposits (peat) varying in depth from 40 cm to 160 cm deep. The underlying soil is fine textured deltaic deposits, either silty clay loam, or silty clay. The Triggs soils are deep (at least 2m) un-decomposed organic deposits composed mainly of sphagnum and other mosses. The underlying soil is medium to moderately fine textured Fraser River deltaic or floodplain sediments.

The on-site soil survey information found that all of the organic soils (peat) on the site had been removed, and that the site was backfilled with cedar wood waste, and wooden construction debris. It is the understanding of the author that approximately 30 years ago the land owner at the time removed all the organic soil (peat) and back filled with wood waste.¹ They then capped the wood waste with 35 to 40 cm of loam to silty loam soil. The soil map aerial photo shown in figure 2 which is from 1980 seems to show a large pile of wood waste at the eastern end of the property which would confirm the time frame that the wood waste was buried.

To determine the extent of the fill and the texture of the soil used to cap the site 12 soil pits were excavated and samples collected for laboratory analysis. The objective of the soil analysis was to determine if pH, Electrical Conductivity, or Sulphur were limiting factors to plant growth in the capping loam/silty loam soil and to determine the macro nutrients that were available for plant growth in the capping soil. In the capping soil (WP 211) the pH, and electrical conductivity were rated as good; pH was slightly acidic (5.9) and the organic matter was 6.0%. A soil sample beneath the fill was taken at site WP205 and on this soil the pH was 4.8 (acidic) and the sulphur content was high at 128 ppm. It is typical for various soils in Delta and Richmond to be acidic and have high sulphur content in subsoil. Plant roots would not reach those subsoil layers. The detailed results for all soil samples are provided in Appendix 1

Based on the soil analysis of the capping soil, there are no obvious limiting factors to growth. It is the opinion of the authors that the plant limiting factor is the shallow depth of the capping soil above the anaerobic wood waste. The present depth of soil above this layer is not deep enough for adequate root development for perennial plants. Roots of the perennial plants would penetrate the wood waste and be affected by its anaerobic conditions. At the present time only (shallow-rooting) annual weeds seem to thrive on the site.

It is important to note that the soils that underlay the wood waste are fine textured and as such have a low saturated hydraulic conductivity (low permeability) and water will move through them very slowly. This has effectively produced a sealed environment that has contained the wood waste in an anaerobic environment, and based on visual inspection inhibited the generation or movement of any wood waste leachate.

¹ Personal communication Mr. Barry Mah

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4.0 Land Capability based on Mapping

The land capability mapping shown in figure 3 indicates that the site before the organic soil was removed was 7:O4W 3:O5WF (O3LW). This means that based on the published mapping without improvement 70% is class O4W with excess wetness as a restriction (O indicates and organic soil). Observation of the adjoining land would indicate that classification Class 4W and 5WF (W being the same for organic and mineral soils) is correct for this site and is described below:² The improved class to 3 LW which is also described below.

- CLASS-4W: Frequent or continuous occurrence of excess water during the growing period causing moderate crop damage and occasional crop loss. Water level is near the soil surface during most of the winter and/or until late spring preventing seeding in some years, or the soil is very poorly drained.
- CLASS 5W: Frequent or continuous occurrence of excess water during the growing period making the land suitable for only perennial forage crops, and/or improved pasture. Water Tevel is near the soil surface until early summer, or the maximum period the water level is less than 20 cm below the soil surface is 6 weeks during the growing period, or the soil is very poorly drained, commonly with shallow organic surface layers. Effective grazing period is longer than 10 weeks.
- CLASS 5F: Includes soils with very severe nutrient imbalances, extreme acidity or alkalinity and/of extremely high levels of carbonates. Fertility status restricts the range of crops to perennial forages or other specially adapted crops such as cranberries. With very intensive, closely controlled and carefully monitored applications of fertilizers and/or other soil amendments, these soils are improvable in crop range, climate permitting. If expected crop range upon improvement is wide the Improved Rating is 2F, otherwise 3F.

² Henk E., & I Cotic. 1983. Land Capability Classification for Agriculture. BC Ministry of Agriculture and BC Ministry of Environment.

- CLASS 03L: Dominantly humic or fibric soil in the 30 to 150 cm depth and/or aquatic muck greater than 5 cm thick in the 100 to 150 cm depth of the profile and/or a cumulo or continuous layer of loamy soil greater than 5 cm thick occurring in the upper 150 cm.
- CLASS 3W: Occasional occurrence of excess water during the growing period causing minor crop damage, but no crop loss, or the occurrence of excess water during the winter months adversely affecting perennial crops. Water level is near the soil surface until mid-spring forcing late seeding, or the soil is poorly and in some cases imperfectly drained, or the water level is less than 20 cm below the soil surface for a continuous maximum period of 7 days during the growing period.

Given the removal of all of the organic soils from the site the land capability improved ratings will not be applicable to this site. It is the author's opinion that a strategy must be developed that will improve the existing site which presently would be classed as 6^3 or 7^4 with the limiting factor being the root restricting layer of anaerobic wood waste. It is not clear if perennial grasses would survive on this site due to the shallow (34cm) soil cap. At the present time a large portion of the site seems only capable of producing annual weeds.

³ Class 6 land is nonarable but is capable of producing native and or uncultivated perennial forage crops.

⁴ Class 7 land has no capability for arable culture or sustained natural grazing.



McTavish Resource & Management Consultants L250

5.0 On Site Observations from Soil Pits

Nineteen soil pits were dug on the site. The pits were located in positions to observe typical soils and depth of wood waste burial on the site. The sampling locations are shown on Figure 1 while Figure 4 shows a typical sample of the wood waste debris found on the site, Figure 5 shows typical depth of soil capping wood waste and Figure 6 shows an example of the cedar shavings (hog fuel) found on the site. Figure 7 shows the undisturbed organic soil from Pit WP 272, in the northwest corner of the property.

All soil pits showed a profile including a cap of fill of various depths overlaying semi decomposed wood waste over non-decomposed wood waste. The border between decomposed and non-decomposed wood waste appeared to be the summer water table for the property, which was at about 1m depth. The winter water table appeared to be at the surface of the soil, with some lower areas being flooded during the winter – according to Ming Wu, the site manager.

Location	Depth of Capping (cm)	Depth of Wood (cm)
WP 202	32	118 (limit of backhoe)
WP 203	30	120 (limit of backhoe)
WP 204	60	140 (limit of backhoe)
WP 205	46	34
WP 206	0	40
WP 207	40	20
WP 208	30	30
WP 209	38	0
WP 210	35	15
WP 211	35	15
WP 212	35	67
WP 213	23	30
WP 268	55	110
WP 269	28	47
WP 270	45	27
WP 271	48	46
WP 272	15	60 organic soil no
		wood
WP 273	30	95 ++ limit of hoe
WP 274	85	40++ limit of hoe
Average	37.4	

Table 1 Depth of Soil Cap and Wood Waste



Figure 4: Typical Wood Debris found buried on the Farm



Figure 5: Cedar Shaving Buried on Site
The capping soil on all pit sites was hand textured and one sample was sent to the laboratory for particle size analysis. Hand texturing indicted the capping soil was loam to silty loam and this was confirmed by the lab analysis as seen in appendix I (detailed soil analysis). The average depth of the capping soil is 33.7 cm and the depth of the wood waste and hog fuel (cedar shavings) varies considerably as shown in Table 1. In locations WP 202 to 204, and 273 and 274 it may have been considerably deeper as the depth in the shown in Table 1 was the maximum depth the excavator could dig. These areas are where the Triggs were located and depths are likely to be much greater than 2m.



Figure 6: Buried Wood waste



Figure 7: Undisturbed Soil Profile

Most of the buried wood waste was in almost fresh condition with no signs of decomposition as can be seen in figure 4 and 6. It appears that the high water table and the soil capping are keeping the wood waste in anaerobic conditions and no microbial

McTavish Resource & Management Consultants Ltd. CNCL – 254 decomposition is taking place. There is no visual indication of toxic leachates being generated from this material. The ditch to the south was visually observed and there were no signs of typical wood waste leachate, and the blueberry plants on property to the south are in healthy condition. For wood waste to generate toxic substances there needs to be oxygen present as seen by the high chemical and biological oxygen demand in studies on generation of leachate from cedar and other wood waste.⁵ ⁶

The blueberry plants on the subject property are stunted or dead due to the lack of adequate soil depth for them to grow in, and possibly through flooding of the property, as alluded to by the Manager. Review of the laboratory analysis of the site soils provided in Appendix I indicate that pH, electrical conductivity and sulphur are within normal parameters. The flooding hypothesis appears plausible for stunted growth. Figure 8 provides contours for the depth of wood waste: red is the 100cm depth contour, orange the 50cm contour and green the 25cm contour. Wood waste filling does not appear to be beyond the property boundaries.



Figure 8: Depth of Wood Waste on Site (contour in cm)

6.0 Site Remediation

There are two options to remediate this site and bring it back into agricultural productivity. One option is to remove the capping soil, remove all the wood waste, fill the site with clean fill and top this with a minimum of 50 cm of high quality topsoil. A second option is to leave the wood waste in place, improve the soil cap by importing and depositing a 50 cm layer of silty clay or silty clay loam to increase the depth of the cap

⁵ Hall, Kne J, et. al. 2005. Water Quality Research Journal of Canada vol. # 4 40 pp 476-483

⁶ Samis, S.C. et.al. 1999. Mitigation of Fisheries Impacts from the Use and Disposal of Wood Residue in British Columbia and the Yukon. Canadian Technical Report of Fisheries and Aquatic Sciences 2296.

and provide additional rooting depth and topping this with a and topping this with a minimum of 50 cm of high quality topsoil, preferably silty loam or loam.

6.1 Option 1 Removal of Wood waste

Removal of the wood waste would require the:

- removal of all irrigation works and irrigation lines
- removal of all vegetation
- stripping of the existing soil cap,
- excavation of the wood waste (this will be in excess of 13,000 m³ as it is not possible to determine the depth of the eastern portion of the property.)
- hauling and disposal of the wood waste
- importing of fill to backfill from wood waste removal (difference between removal is an estimated increase of 20% in compaction of fill vs. the wood waste.
- Importing and spreading a minimum of 50 cm of topsoil or about 12,500 m³ after compaction

Removal would eliminate any long term threat of pollution and provide a suitable site for agricultural production in the future. The negative side of removal is that the disruption of the wood waste may lead to the generation of leachate which is not happening at the present time; the disposal of this material is difficult and it would end up in landfills in the area and there is a significant financial cost to excavate and remove the material.

6.2 Option 2 Leave Wood waste improve Cap and Topsoil

The Richmond, Triggs and Lulu soil complexes found at and around the site consist of peat of various depth and state of decomposition (Richmond: 40 - 160 cm of well decomposed organic matter; Triggs more than 160cm mainly sphagnum moss; and Lulu 40 - 160 cm of partially decomposed organic matter). All are located over moderately to fine textured deltaic deposits.

Formation of a peat soil typically takes place when vegetation grows in stagnant bodies of water such as lakes or cut-off river arms. First, dying water plants accumulate on the bottom followed by remains of reeds, sedges, and later trees. Because of the stagnant water with low oxygen content and a low pH, organic matter is not decomposed and accumulates to fill the complete body of water. This may be followed by a build-up of growth of primarily sphagnum moss that will form a dome with a locally elevated water table, thus forming a sphagnum-peat bog.

Peat bogs typically have an impermeable bottom and water turn-over is rather low. This will deprive the water of oxygen which is used in the decomposition process, and the pH is typically low, around pH 4 or 4.5. When peat is dug from peat bogs and the remaining area is not dewatered, the peat forming process repeats itself. When peat soils are dewatered and cultivated, organic matter is quickly oxidized and the depth of the peat soil rapidly diminishes.

At the subject site, peat has been replaced by wood waste. During the site investigation it was found that is the wood waste had not decomposed to a great extent, likely due to the site conditions that allowed the anaerobic conditions and low water movement to continue. A remediation plan that includes capping, should include measures to keep the peat formation factors in place to preserve the wood waste and prevent the formation of leachate.

6.3 Preferred Option

The preferred option based on our site observations is to leave the wood waste in place and return the land to agricultural production by increasing the depth of the cap by 25 cm and adding a minimum of 75 cm of topsoil.

The wood waste has been buried on this site for at least 30 years and as can be seen in figure 5 and 6, it is in virtually the same condition as when it was buried. The fine textured deltaic deposits that underlay the wood waste and the fine textured soil barrier between the wood waste and the ditches to the south and north has effectively sealed this site⁷. One of the key considerations in keeping the wood waste in an anaerobic condition is to ensure that the ground water is recharged at historical rates, as these have kept the wood waste submerged for most of the year. For this reason it is recommended that the cap depth be increased by 25 cm using silty clay loam or silty clay and not compacting to a state of impermeability. This cap will allow water to move slowly through and assist in the recharge of the water table on the site. There will of course be some recharge from the lateral and vertical movement of water into the site from the natural water table.

On top of this cap a layer of 75 cm of quality topsoil should be applied. The combination of 25 cm of the capping layer and the topsoil will provide between 75 and 100 cm of rooting depth while keeping the wood waste contained in its present anaerobic condition. The added topsoil will act as a small "pre-load" for the site and may compact the wood waste layer. While in the case of wood waste (the pieces of 2x4 seen in one of the pictures) the compaction will be minimal, some of the fine wood waste may be compacted. This will keep the wood waste under water and in the stable, anaerobic state.

The increase of height of the soil will also prevent flooding of the property during the winter wet season, allowing permanent vegetation such as blueberries to survive and other crops such as nursery trees to flourish. A small part of the property has been raised with quality topsoil and now supports vegetable production and some large fruit trees.

⁷ The saturated hydraulic conductivity of these soils will be between 0.42 and 1.41 um/sec

The preferred option would require:

- Removal of all irrigation works including pressure lines and drip hoses
- Removal of all vegetation, either by mowing or uprooting and hauling for disposal, or through digging and saving blueberry plants that are several years old.
- Placing 25 cm of cap
- Placing of 75cm of quality topsoil
- Crowning and ditching where required
- Seed with cover crop and establish soil forming processes
- Installing subsurface drainage where required
- Installing irrigation works where required
- Improve ditch on north side of property and clean the ditch on the south side.

7.0 Summary and Recommendation

Based on the analysis provided in this report it is recommended that the wood waste and debris be left in place and that 25 cm of silty clay loam to silty clay cap be placed on top of the existing soil cap and that 75cm of quality topsoil be placed on top of the soil cap. This strategy will maintain the wood waste in anaerobic conditions and inhibit the production of leachate and improve the land capability to class 2 or 3 which will support a wide range of agricultural crops.

The estimated volume of fill is provided below:

Area of	Fill depth m	m ³	loose	m ³ loose material
proposed fill	_	compacted		
m^2				
Fill – silty				
clay loam or				
silty clay				
2.5 hectares	0.25	6,250	1.25	7,800
Topsoil*				
2.5 hectares	0.75	18,750	1.2	22,500
			compaction	
			factor	
Total Loose				30,300 m ³
Volume Fill				
capping +				
Top Soil				

Table 2 Fill Volume Estimates

Site Management 8.0

Good site management will be critical for the success of the fill operation and the final use of the site for an agricultural production.

The following activities must take place:

- Monitor the removal of irrigation works and vegetation .
- Monitor the incoming fill to ensure that there are is not concrete, asphalt, plastic • or other non-soil materials mixed with the fill
- Monitor to ensure that there are no contaminants in any of the fill brought to the site.
- Monitor to ensure that there is no large woody debris or other non-mineral components in the fill.
- Ensure that the truck wash facility is operating properly and that sediment is removed from wash water before entering waterways.
- Install silt fencing to protect all ditches.

The fill operator has agreed and it is assumed it will be a condition of the permit that a Professional Agrologist will carry out regular monitoring and oversight, and that they will have the authority to stop filling if there are issues with the fill quality or environmental concerns on the site.

8.1 Soil Stockpiling

Since topsoil will be delivered at the same time as mineral fill, it is important that topsoil be stockpiled and managed separately. As well, any excavated organic soil that is being retained on site should also be separately stockpiled. For all topsoil piles the following procedures should be implemented.

- Compaction will be minimized by minimizing vehicle traffic when stockpiling and handling soils when not wet
- Stockpiles will be constructed to heights of 4m or less with 2 H: 1 V slopes.
- The shape of the stockpile should provide for positive drainage (i.e. sufficiently sloped to prevent puddling or ponding), to minimize water infiltration into the pile.
- Peat and topsoil will be stockpiled separate from mineral fill to ensure they are not mixed.

8.2 Sediment Control

- Sediment will be controlled by the installation of silt fences along all watercourses.
- The on-site Agrologist will also make decisions to halt the fill operation of weather conditions are so wet that excess sediment is being produced from the site that the sediment control fences cannot handle.
- All sediment will be removed from truck wash water prior to discharge.

8.3 Dust Control

- All tires will be washed which will reduce dust during dry periods
- Access roads will be watered on a regular basis during dry periods to minimize dust.

8.4 Drainage Management

- The ditch on the north side of the property will need to be widened and deepened to ensure positive drainage of surface water,
- The ditch on the south side of the property should be cleaned.

8.5 Management of Fill Quality

Management of fill quality is critical for the success of this site and for meeting the legal requirements of the ALC and the City of Richmond. This section expands on the comments made in section 8.0.

• There cannot be any fill that has any probability of hydrocarbon or metal contamination. Soil must adhere to Schedule 7 Column III of the Contaminated Sites Regulation. If soil originates from a contaminated site an Approved Soil

Relocation Agreement and authorization from the ALC must be in place. This requires the fill operator to be certain of the origin of all fill.

- There cannot be any concrete, asphalt, plastic or other non granular soil/gravel contaminants in the fill. It is understood that occasionally a piece of asphalt or concrete or other material may be in a load, but is the responsibility of the fill operator to spot this on dumping and remove it prior to spreading of the fill. The on-site staff must be fully briefed and trained on the importance of ensuring no contaminants enter the site.
- If there are more than 50 truck loads originating from a source site the fill should be inspected at the point of origin by a Professional Agrologist prior to entering the fill site.
- On a regular basis (at least once per month) a professional agrologist will with the cooperation of the fill operator dig random test holes to make observations on the quality of the fill.

8.5 Transition to Agriculture

Once the project is completed it is recommended that forage grasses and legumes be planted and harvested for the first two years. This will help establish good soil structure, create macrospores to improve drainage, and improve fertility. After two years the pasture can be cultivated, and a wide range of agricultural crops will be capable of growing on the site.

9.0 References

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Appendix I McTavish Resource & Management Consultants Ltd. **Soil Chemical Analysis**

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Estimated	A REAL PROPERTY AND A REAL PROPERTY A REAL PROPERTY AND A REAL PRO		<u>.</u>		<0.	4 ug/g			TEC	: 11,6 meq/	100g	Na	<30 ppm	
10010000	ة 	3		Ammonium		•	>>			•		-		

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Existing Site Soil from Below Wood Waste Site WP 205

To +1 (804) 514-3322 Ft +1 (804) 514-3323 Et: Surrey@exova.com W/ www.exova.com

Exova #104, 19575-55 A Ave. Surrey, British Columbia V3S 9P9, Carrada

"Nitrate-N "Sulfate-S Deficient Agreement: 36394 Estimated Ibs/acre Marginal Optimum Excess Total lbs/acre 0" - 6" Depth \$ Z, œ 4 Surrey, BC., Canada V4A 2Z4 2858 Bayview Street n/a = not anatysed υ ア ŝ 8 \$ 10 Nutrient anal റ്റ Lime n/a Ammonium Sand n/a Texture n/a Mg ysis (ppm) **0** n/a Silt Q Hand Texture Last Crop: Legal Location: Buffer pH Acres: n/a Ľ n/a n'a Clay œ n/a Mn Crop not provided Ω Est. N Release ß TEC n/a ß BiCarbP л/a n/a Very Acidic Neutral Alkaline Acidic n/a 5.8 PH Arrival Condition: Report Date: Mg ਨਾਂਬ EC(dS/m) OM(%) Very Toxic Caution 0.12 Toxic Good Soil Quality Na n/a Na n/a C:N Ratio Very Low Normal Jun 28, 2012 High Low n/a X Sample# 4102832 n/a

RECOMMENDATIONS FOR BALANCED CROP NUTRITION

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Farm Soll Analysis

Bill To:

Report To:

McTavish Resource & Management Consultants

Client's Sample Id: Grower Name:

Field Id:

McTavish Resource & Management Consultants

Exova #104, 19575-55 A Ave. Surrey, British Columbia V3S 8P8, Canada

T: +1 (604) 514-3322 F: +1 (604) 514-3323 E: Sunry@exova.com W: www.exova.com

Analysis of Cedar Wood-Waste Site WP 204

Exova

#6 Road WP 204 Hog Fuel Ming Wu Disposal Date: Date Received: Report Number: Lot Number: 878074 Jun 26, 2012 Jul 26, 2012 1747014

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Marginal												Acidic	Caution	Low	
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Ibs/acre	100	ī	Sand	49.0 %	Silt	34.0	%	Clay	17.0 %	~	Da 40	7% Mg	8.6% N	a <0.8 %	K 1.2%
Estimated		3	Ammo	nium	0.9	0/gu					FEC 17.	.2 meq/100g	Z	a <30 ppm.	
Ibs/acre ²¹	50 100	2	Lime	3.0 T/ac		Buffer	pH 6:	N		Est.)	V Releas	e n/a	c	N Ratio n/a	
*Nitrate-N **Sulfate-S	n/a = not analyse:														

EXOVO

Capping Soil Site WP 211

CNCL – 266

Woodwaste Leachate and Site Drainage Addendum I

То

Proposed Remediation of Land Located at 8511 #6 Road Richmond, B.C. BCAA Legal: SEC 20 BLK4N RG5W PL 3109 Parcel A, Subsidy Lot 3, (J71246E).

Prepared by:

Sun MCZ

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Prepared for:

Bohan Jiang

December 14, 2013

McTavish Resource & Management Consultants Ltd.

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1.0 Introduction

McTavish Resource & Management Consultants Ltd. was retained by Bohan Jiang to determine the cause for the Blueberry Crop failure and develop a remediation plan to allow agricultural production on the land. That report was submitted to the City of Richmond in September of 2012. The City of Richmond requested further information on the generation of leachate from the wood waste and a drainage plan. This current report provides further information on wood waste leachate and recommended mitigation measures.

2.0 Site Location

The subject properties are located at 8511 No 6 Road Richmond B.C. The legal description is: SEC 20 BLK4N RG5W PL 3109 Parcel A, Subsidy Lot 3, (J71246E).

The street address is 8511 No 6 Road in Richmond, B.C. The total farm size is 40475 m^2 or 10 acres and is zoned AG1. Approximately 2.5 hectares of the land is planted in Blueberries and $\frac{1}{2}$ of the crop has been a complete failure and the other $\frac{1}{2}$ has marginal growth.

2.1 Previous Land Use

The use of the land for any agricultural use is severely impeded by the fact that approximately 25 to 30 years ago a previous owner has stripped all the organic soil (peat) from the site and filled it with cedar wood waste and wooden construction debris. This has been discussed in detail in section 3 of the September 2012 report.

3.0 Recommendations from 2012 Report

The Richmond, Triggs and Lulu soil complexes found at and around the site consist of peat of various depth and state of decomposition (Richmond: 40 - 160 cm of well decomposed organic matter; Triggs more than 160cm mainly sphagnum moss; and Lulu 40 - 160 cm of partially decomposed organic matter). All are located over moderately to fine textured deltaic deposits. Formation of a peat soil typically takes place when vegetation grows in stagnant bodies of water such as lakes or cut-off river arms. First, dying water plants accumulate on the bottom followed by remains of reeds, sedges, and later trees. Because of the stagnant water with low oxygen content and a low pH, organic matter is not decomposed and accumulates to fill the complete body of water. This may be followed by a build-up of growth of primarily sphagnum moss that will form a dome with a locally elevated water table, thus forming a sphagnum-peat bog.

Peat bogs typically have an impermeable bottom and water turn-over is rather low. This will deprive the water of oxygen which is used in the decomposition process, and the pH is typically low, around pH 4 or 4.5. When peat is dug from peat bogs and the remaining area is not dewatered, the peat forming process repeats itself. When peat soils are dewatered and cultivated, organic matter is quickly oxidized and the depth of the peat soil rapidly diminishes.

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At the subject site, peat has been replaced by wood waste. During the site investigation it was found that is the wood waste had not decomposed to a great extent, likely due to the site conditions that allowed the anaerobic conditions and low water movement to continue. A remediation plan that includes capping, should include measures to keep the peat formation factors in place to preserve the wood waste and prevent the formation of leachate.

The preferred option based on site observations is to leave the wood waste in place and return the land to agricultural production by increasing the depth of the fine textured soil cap by 25 cm and adding a minimum of 75 cm of topsoil.

The wood waste has been buried on this site for at least 30 years and it is in virtually the same condition as when it was buried. The fine textured deltaic deposits that underlay the wood waste and the fine textured soil barrier that exists in most locations between the wood waste and the ditches to the south and north has effectively sealed this site¹. One of the key considerations in keeping the wood waste in an anaerobic condition is to ensure that the ground water is recharged at historical rates, as these have kept the wood waste submerged for most of the year. For this reason it is recommended that the cap depth be increased by 25 cm using silty clay loam or silty clay and not compacting to a state of impermeability. This cap will allow water to move slowly through and assist in the recharge of the water table on the site. There will of course be some recharge from the lateral and vertical movement of water into the site from the natural water table.

On top of this cap a layer of 75 cm of quality topsoil should be applied. The combination of 25 cm of the capping layer and the topsoil will provide between 75 and 100 cm of rooting depth while keeping the wood waste contained in its present anaerobic condition. The added topsoil will act as a small "pre-load" for the site and may compact the wood waste layer. While in the case of wood waste (the pieces of 2x4 shown in the 2012 report) the compaction will be minimal, some of the fine wood waste may be compacted. This will keep the wood waste under water and in the stable, anaerobic state.

The increase of height of the soil will also prevent flooding of the property during the winter wet season, allowing permanent vegetation such as blueberries to survive and other crops such as nursery trees to flourish. A small part of the property has been raised with quality topsoil and now supports vegetable production and some large fruit trees.

The preferred option will require:

- removal of all irrigation works including pressure lines and drip hoses;
- removal of all vegetation, either by mowing or uprooting and hauling for disposal, or through digging and saving blueberry plants that are several years old;
- placing 25 cm of cap of fine textured soil;
- placing of 75cm of quality topsoil;

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¹ The saturated hydraulic conductivity of these soils will be between 0.42 and 1.41 um/sec

- crowning and ditching improvements where required;
- seed with cover crop and establish soil forming processes;
- installing irrigation works where required;
- improve ditch on north side of property and clean the ditch on the south side; and
- implement measures to ensure a minimum of a 2 m sealed buffer between the wood waste and the ditches on the north and south of the property. This is a new recommendation.

4.0 Potential for Leachate Generation and Mitigation

Based on visual observations made during 2012 and 2013 there does not appear to be any leachate entering the ditches on the north or south side of the property. To determine the potential impact on the surrounding ditches, on-site observations were made in December of 2013 to determine the distance of buried wood waste to the ditches on the north and south of the property. Figure 1 shows where auguring took place to identify underlying conditions.

4.1 Site Observations December 2013

From the onsite investigation it appears that the former owner of the property only excavated peat and replaced it with wood waste on the property itself and not on the adjoining properties. The west side of the property did not contain wood waste (or only to a very small extent), and in most places the wood waste was at least 2m from the north or the south ditches. However in one location (GPS location 826) wood waste was found close to the north ditch. Along the south ditch there is an area (between GPS location 831 and 832) where the wood waste is near and/or underneath the ditch. The wood waste close to and underneath the ditch was covered with a layer of 20 to 30 cm of clay and the wood waste was virtually in a non-decomposed form. At the south ditch the water level was well above the top of the wood waste.

These observations indicate that no or very little lateral movement of water takes place through the wood waste and into the ditches. It appears that in the current configuration, there is enough of a clay buffer between the wood waste and the ditches to keep the wood waste anaerobic and the ditches unaffected.

4.2 Leachate Risk Management

The rehabilitation plan is geared towards capping the surface of the wood waste to prevent precipitation water from entering this mass. This protection will be enhanced with the crowning of the subsoil and topsoil. Precipitation will move by overland flow and lateral movement through the topsoil towards the ditches. Some downwards percolation is preferred to keep the wood waste in an anaerobic state.

Based on the recent findings; (December 12, 2013 field visit – see Appendix I) there are locations where the wood waste is close to or even underneath the perimeter ditches. In these areas it is recommended that when the project is underway, that wood waste is stripped from near the ditches to a width of 2 m from the ditches and replaced with clay or silty clay to provide

a barrier between the remaining wood waste and the ditch. This will prevent any wood waste leachate from reaching the ditch and thus ensure that the municipal drainage system unaffected. Stripping wood waste and replacing it with clay to form a barrier is only required in a few areas as most of the site it is separated from the ditches by at least 2 m of natural soil.

It is recommended that at the time of project execution the consultants work with the contractor and clearly mark all areas where the 2m buffer is not in place and supervise the removal of wood waste in these areas and the back filling with clay or silty clay.

5.0 Summary and Conclusions Leachate

Extensive sampling of the site (see figure 2) has identified of the extent and the anaerobic condition of the wood waste as described in the September 2012 report and this report. To ensure that leachate is not generated from this site, the following recommendations need to be implemented as part of the process of making the subject property a productive and environmentally safe farm:

- cap with 25 cm of fine texture soil
- add 75 cm of topsoil
- crown the land to facilitate drainage
- ensure a 2m buffer between the woodwaste and the ditches

6.0 Site Drainage

The subject farm presently has a ditch on the north and south side of the property. The north ditch has its flow split with part of the ditch flowing east to the # 6 road ditch part flowing west, connecting to a north south ditch flowing south and connecting with the ditch on the southern border of property.

The south ditch flows to the west from approximately the mid-point of the property and continues into the adjoining property to the west. At the present time these ditches are not functioning properly as grades fluctuate and the ditches are overgrown with vegetation.

It is recommended that the following drainage plan be implemented

- a) Keep the flow direction as is and do minor regarding and clean ditches of water flow constricting vegetation;
- b) Construct a new ditch along the western side of the property if the existing ditch is on the neighbouring property;
- c) During the filling operation ensure that subsoil and topsoil is crowned to enable water to flow from the centre of the property to the ditches on the north and south sides of the property.

These activities will not increase peak flows to the City of Richmond ditches above historical levels as all ditches previously existed (with one replacing the neigbouring ditch), and only needed maintenance and re-grading is taking place

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6.1 New Ditch Elevations

The following section provides details on ditch elevations and flow directions. The purpose is to improve the site drainage by minor regarding and clearing of vegetation and debris that is impeding water flow.

6.1.1 Southern Ditch

The property (like most of Richmond) has very little natural grade and therefore the slope of the ditches have very little gradient. The highest point along the southern ditch is at the culvert invert across from the access road shown on the elevation map in Appendix II. The ditch elevation at this point is 0.81m the ditch slopes from this point to the west to an elevation of 0.21m at the western end of the ditch. From this point it continues to flow to the west into the neigbouring property which has an ESA designation and is considered a Freshwater Wetland.

The southern ditch requires minor regarding to eliminate the topographic fluctuations and make the bottom an even gradient to the west, keeping western bottom of ditch elevation at approximately its present level (See Appendix II). Some ditch widening is recommended to have an average cross section as shown in Appendix II. At the eastern end it will not be possible to maintain 0.50 m ditch depth, however there is little flow at this end of the system and a shallower ditch will be functional.

6.1.2 Northern Ditch

The northern ditch should be graded from approximately the cross section 5 line on the topographic map to have all flow from this point split go east to the #6 road ditch and all flow to the west of this point to drain as it presently does to the west. The water flowing west presently connects with a north south ditch that connects with the south property ditch. The north south ditch seems to be on the neigbouring property and a new ditch that is entirely on the subject property should be installed to connect the north and south ditches. See Appendix III for detailed elevations.

6.1.3 Western Ditch

As described in section 6.1.2 there is a ditch running from north to south along the western property boundary. Based on survey pins observed during the December site visit this ditch seems to be on the neighbouring property. For this reason a new ditch should be installed on the subject property to connect the north and south ditches. Elevations are shown in Appendix IV.

6.1.4 Impact on Western Environmentally Sensitive Area

The southern ditch flows to the west into an Environmentally Sensitive Area (ESA) that is categorized as Fresh Water Wetland (FRWT). By keeping the drainage flow direction as it presently exists on this property the freshwater recharge from the subject property to the ESA will be maintained.

Contraction 1.1 C. Contraction 2. 2. Sec. 1 10 C.C.es 1000 1. 1. TO POPPORT Section 1. (in and the second to of the second second CONCEPTION OF apares (naires ara ara tenego C. S. B. LE 1/ci ines. Necs 2.00 -COLOR DE COLOR CHE STAT -1.5 - 1. A. C. C. and the second second second The second second and the second state of th 10 C 10 2

Figure 1: Auger Sampling Points December 2013

McTavish Resource & Management Consultants Ltd



Figure 2: Sampling Sites 8511 #6 Road

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Appendix I Field Notes

GPS Location	Comments
820	Ditch lower than adjacent land to north
	Property to north is peat/organic soil as seen
	by ditch edge
821	Woodwaste 60 cm below surface
	Greater than 3m away from north ditch
822	Woodwaste 35 cm below surface
	Woodwaste 7.5m from ditch
823	Woodwaste 40 cm below surface
	Woodwaste 4 m from ditch
824	Shallow layer of woodwaste 3m from ditch
825	Auger 2m from ditch no woodwaste, peat only
826	Woodwaste at 15 cm below surface 1m from
	ditch
	0.5 m from ditch only a thin layer of
	woodwaste
827	2m from ditch no woodwaste
828	3m from ditch no woodwaste
829	3m from ditch no woodwaste
830	2m from ditch no woodwaste
831	Woodwaste at 75cm from ditch edge
	Sample in ditch, woodwaste found buried
	below 20 cm clay layer, still anaerobic, no
	sign of leaching or pollution
832	Sample in ditch, woodwaste found buried
	below 20 cm clay layer, still anaerobic, no
	sign of leaching or pollution

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Leave water flow in historical directions

Appendix II

Ditch Elevations and Cross Sections South Ditch

Average Ditch Cross-Section South Ditch





Appendix III 0.30 公会合 9.C) E. West Property + + 20135 + 19.7 **Ditch Elevations North Ditch** Line + + + 0 % 12 붊 New Elevations Ditch Bottom çə Və + 532 232 + % 5 10 भारतंध मुग्र देशा. भारतंध मुग्र देशा. 4 24 24 2 SECTICN + 0.79 + 5 10 中の رې در 194.0 88.0 THE OF PLL + * * + *** + 038 0.78 1 io F 点 (1) + ∰8**+**% + EDGE OF 9**1** 승 51919 11911 0.40 150 2 1 SECTION 4 155-551 1000 ¤___ 22 4 1 T 3.44



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This is a new ditch to be installed of existing ditch is on the neighbouring property. This will be a relative shallow ditch due to the existing bottom of ditch elevations.

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Appendix VEnvironmentally Sensitive Areas



Attachment 3



1081 Canada Ave Duncan, BC V9L 1V2 p. 250.746.5545 f. 250.746.5850 #202 – 2790 Gladwin Road Abbotsford, BC V2T 4S7 p. 604.504.1972 f. 604.504.1912

> info@madrone.ca www.madrone.ca

August 11, 2020

Barry Mah Westwood Topsoil Ltd. 6604 62B Street Delta, BC V4K 5A8 westwoodbarry@mac.com

Dear Mr. Mah,

RE: Requirement of a Farm Plan for 8511 No. 6 Road, Richmond, BC (CD 28808)

Madrone Environmental Services Ltd. ('Madrone') understands that you, Mr. Barry Mah ('the Client'), requires the development of a Farm Plan to facilitate a proposal to import soil onto a parcel located at 8511 No. 6 Road, Richmond, BC ('the Property') for the purpose of remediating the land for crop cultivation. This soil importation proposal will be reviewed by the City of Richmond ('the City'), the City's Food Security and Agricultural Advisory Committee (FSAAC) and the Agricultural Land Commission (ALC).

In an email¹, Mr. Mike Morin, Community Bylaws, City of Richmond, outlined requirements for the Farm Plan which includes a site plan, site description, legal description, zoning and current land use, soils description and unimproved agricultural capability, soil management rationale/improved agricultural capability, recommended agricultural uses and suitable crops, drainage requirements, irrigation requirements, proposed agricultural operation, proposed planting plan and a cost estimate for agricultural improvement. Mr. Morin also commented that although the aforesaid information may be found in other reports specifically prepared for the Property by Qualified Professionals (QPs), the City wants said information consolidated into a single document to better clarify what is planned post-project completion.

This report has been prepared by Daniel Lamhonwah, MES, P.Ag, and reviewed by Thomas R Elliot, PhD P.Ag, P.Geo, of Madrone for the specific purpose of providing the City and the FSAAC with the information required in a summarized manner for review. Please note that this Farm Plan has been informed by reports previously prepared by non-Madrone QPs for the Property. Information available from municipal and provincial sources were used by Madrone for the purpose of corroborating information presented in previous

¹ Email communication addressed to Barry Mah from Mike Morin, Community Bylaws, City of Richmond. Subject: CD 28808 - Outstanding application requirements - Jaing/Barry Mah (21 Apr 2020). Sent on April 21, 2020 12:47 PM.

reports for making applicable updates to the Farm Plan. Madrone did not conduct any field investigations on the Property to specifically inform this report.

1 Introduction

The Client had previously retained McTavish Resource and Management Consultants Ltd. ('McTavish') and Timmenga and Associates Inc. ('Timmenga') to design a remediation plan² ('the Remediation Plan') for the Property, further to which a drainage and leachate management plan³ ('the Drainage and Leachate Plan') and analysis of perimeter ditch water report⁴ ('the Ditch Analysis Report') was developed jointly by these two firms. Since the development of aforementioned plans, Bruce McTavish, former Principal of McTavish, has been employed by the City as a municipal agrologist, thus creating a conflict of interest within the context of City review of the Client's intention for soil importation on the Property. Thus, the Client has retained Madrone to act as QPs for the purpose of finalizing documentation for intended remediation works on the Property for review by the City, FSAAC, and the Agricultural Land Commission (ALC), acting at the QPs during any future council meetings, and monitoring the proposed soil importation works on the Property should they be approved.

2 Site Description

The Property is a 4.05 ha (10 acre) parcel of private land located at the street address 8551 No.6 Road, in Richmond, BC. Information about the Property, as provided by the City⁵, is summarized in Table 1. Recent satellite imagery of the Property (2018) is shown in Figure 1.

3 Current and Previous Land Use

At time of writing, it is Madrone's understanding that the owner of the Property, Mr. Bohan Jiang, is attempting to grow blueberries on the land with limited success. Our understanding is supported by recent satellite imagery provided by the City showing limited agricultural activity for the majority of the Property (~3.0 ha; 7.4 acre), particularly in the centre and western sides of the parcel (Figure 1). As reported in the Remediation Plan, the Property has been severely impeded by removal of native surficial organic soil (peat)

² Proposed Remediation of Land Located at 8511 #6 Road Richmond, B.C. Prepared by McTavish Resource and Management Consultants Ltd. and Timmenga and Associates Inc. Prepared for Bohan Jiang. Dated September 30, 2012.

³ Woodwaste Leachate and Site Drainage Addendum I To Proposed Remediation of Land Located at 8511 #6 Road Richmond, B.C. Prepared by McTavish Resource and Management Consultants Ltd. and Timmenga and Associates Inc. Prepared for Bohan Jiang. Dated December 14, 2013.

⁴ Analysis of Perimeter Ditch Water from Property Located at 8511 #6 Road Richmond, B.C. Prepared by McTavish Resource and Management Consultants Ltd. and Timmenga and Associates Inc. Prepared for Bohan Jiang. Dated March 4, 2015.

⁵ City of Richmond (2019). Richmond Interactive Map. <u>https://maps.richmond.ca/rim/</u>. Accessed April 30, 2020.

from the site, which was replaced with cedar wood waste and, as reported, 'wooden construction debris' with a mineral-soil cap-layer, approximately 25 to 30 years ago by a previous land owner.

PID	005-147-077
Property Roll	025686728
Legal	SEC 20 BLK 4N RG 5W PL NWP3109 Parcel A, Block 4N, Plan NWP3109, Sublot 3, Section 20, Range 5W, New Westminster Land District, (J712 46E)
Richmond Key	162678
Official Community Plan (OCP) Land Use	Agriculture
Official Community Plan (OCP) Environmentally Sensitive Areas (ESAs)	Freshwater Wetland (FRWT)
Environmentally Sensitive Areas (ESAs) Development Permit (DP)	Yes
Agricultural Land Reserve (ALR)	Yes
Agricultural Land Reserve (ALR) Development Permit (DP)	, No
Zoning Development Permit (DP)	No
Flood construction Level (FCL)	3.0 m GSC

TABLE 1. PROPERTY INFORMATION FOR 8511 NO. 6 ROAD, RICHMOND, BC



0 0.0225 0.045 0.09 mi 0 0.0375 0.075 0.15 km

FIGURE 1. SATELLITE IMAGERY OF 8511 NO.6 ROAD OUTLINED IN YELLOW. THE RED SHADED AREA REPRESENTS TO PROPOSED AREA FOR SOIL IMPORTATION. IMAGE PROVIDED BY THE CITY OF RICHMOND AND DATED AS TAKEN IN 2018.

4 Soils Description

Provincial soil mapping⁶ indicates that the area of the Property contains soils of the Lulu soil association. Lulu soils are composed of partially decomposed organic deposits that are between 40 to 160 cm deep with underlying silty clay loam or silty clay deltaic deposits. The provincially mapped Land Capability for Agriculture (LCA) for the Property is Class O4 and contains an excess water (W) limitation and degree of decomposition – permeability (L) limitation.

An on-site soil survey conducted by McTavish and Timmenga in 2012 as reported in the Remediation Plan⁷ found that the organic peat on the Property was removed by a previous landowner (estimated to be between 20 to 30 years ago) and backfilled with cedar wood waste and 'wooden construction debris'. From review of site photographs in the Remediation Plan (specifically Figure 4), Madrone disputes the presence of 'wooden construction debris' and instead identifies the materials present as 'end cuts' which are a standard byproduct of sawmills when cutting feedstock to dimensional lumber. This distinction is of moderate importance as

⁶ Province of British Columbia (2019). BC Soil Information Finder Tool. https://www2.gov.bc.ca/gov/content/environment/air-land-water/land/soil/soil-information-finder. Accessed April 30, 2020.

⁷ Proposed Remediation of Land Located at 8511 #6 Road Richmond, B.C. Prepared by McTavish Resource and Management Consultants Ltd. and Timmenga and Associates Inc. Prepared for Bohan Jiang. Dated September 30, 2012.

construction debris is not suitable fill material as per the *Agricultural Environmental Management Code of Practice⁸* (AEMCoP), while end cuts are a category of wood residue acceptable for use on agricultural land as per the AEMCoP. Hereafter, these materials will be referred to as 'wood residue' to be in line with current regulations. The wood residue layer was backfilled with 35 to 40 cm of loam to silty loam sand by the previous landowner. These activities resulted in subsurface conditions which limit root growth highly acidic, poorly draining and anaerobic subsurface environment due to the natural perched watertable creating the local 'W' agricultural capability limitation, as identified in provincial mapping of Lulu soils.

5 Unimproved Agricultural Capability

Based on the soil and landscape conditions of the Property at time of assessment, the professional opinions of McTavish and Timmenga⁹, the land has an LCA of Class 6 or 7D (D subclass is undesirable soil structure/aeration)¹⁰, with the limiting factor being the root restricting layer of anaerobic wood waste. Note that Class 6 and 7 lands, as defined by the ALC, are unsuitable for cultivation or use of farm machinery, or the soils do not respond to intensive improvement practices. We at Madrone understand that the Property has retained a Class 6 or 7D limitations to LCA because, to our knowledge, no management practices or earthworks have been implemented to improve the site LCA.

6 Soil Importation Rationale and Site Plan

The Remediation Plan developed by McTavish and Timmenga recommends that the wood residue be left in place (and kept at an anaerobic state) and that the land be returned to agricultural production by:

- Removing all irrigation works including pressure lines and drop hoses;
- Removing all vegetation, either by mowing or uprooting and hauling for disposal, or through digging and saving blueberry plants that are several years old;
- Increasing the cap depth by 25 cm with noncompacted permeable silty clay loam or silty clay; and

⁸ Province of British Columbia (2019). Environmental Management Act Agricultural Environmental Management Code of Practice. <u>http://www.bclaws.ca/civix/document/id/complete/statreg/8 2019</u>. Accessed April 30, 2020.

⁹ As reported in the Remediation Plan.

¹⁰ Land in Class 6 provides sustained natural grazing for domestic livestock and is not arable in its present condition. Land is placed in this class because of severe climate, or the terrain is unsuitable for cultivation or use of farm machinery, or the soils do not respond to intensive improvement practises. Some unimproved Class 6 lands can be improved by draining and/or diking. Class 7 land may have limitations equivalent to Class 6 land but they do not provide natural sustained grazing by domestic livestock due to climate and resulting unsuitable natural vegetation. Also included are rockland, other nonsoil areas, and small water-bodies not shown on maps. Some unimproved Class 7 land can be improved by draining or diking. (source: https://www.alc.gov.bc.ca/assets/alc/assets/library/agricultural-capability/agriculture.pdf)
• Adding a minimum of 75 cm of topsoil.

Based on the proposed area of soil important (2.5 ha), the Remediation Plan involves importing \sim 30,000 m³ of soil (silty clay loam or silty clay + topsoil).

McTavish and Timmenga comment that the plan will also prevent flooding of the Property during the wet season and allow permanent vegetation (i.e. blueberries) to survive and nursery plants to flourish. Additional recommendations in this remediation plan includes:

- Crowning and ditching the remediated land where required;
- Seeding the topsoil with cover crop and establishing soil forming processes;
- Installing subsurface drainage where required;
- Installing irrigation works where required; and
- Improving the ditch on the north side of Property and cleaning the ditch on the south side.

A site plan ('the Site Plan') showing the proposed fill for the Property based on McTavish and Timmenga's reporting was developed by Peak Surveying in 2013 and is attached at the end of this Farm Plan developed by Madrone.

In 2018, the Client retained Tony Yam Engineering Ltd. ('Tony Yam') as the geotechnical engineer to evaluate the remediation works proposed by McTavish and Timmenga for the Property. Following a site visit and test pit excavation, Tony Yam provided the following comments in a letter-style report¹¹ prepared for the Client:

- Placing 1.0 m of additional fill over the impacted area (whereby the impacted area refers to the area where organic soils were removed, and wood waste was placed by a previous owner) will not impact the drainage pattern of adjacent areas;
- The weight of additional fill will not impact the stability of adjacent areas; and
- The remediated area is only suitable for agricultural use and is not suitable to support any building structure without further site improvement.

Madrone acknowledges that the importation of soil onto the Property (25 cm of noncompacted permeable silty clay loam or silty clay, and 75 cm) will raise lands on the Property to a similar elevation of adjacent land parcels in the area. This statement is based on a survey prepared by Peak Surveying and provided to Madrone by the Client. The survey, which contains cross sections, point elevations and site plan for the Property, shows point elevations of the adjacent parcel to the left ranging from 1.55 to 1.77 m above sea level (masl).

¹¹ Project No: G18154-00 – Remediation of Farm Land, 8511 No.6 Road, Richmond BC. Prepared by

Tony Yam Engineering Ltd. Prepared for Barry Mah. Dated October 10, 2018.

Point elevations of proposed fill area on the Property generally range from ~ 0.60 to 0.85 masl. Thus, the addition of soil at an average depth of 100 cm (1.0 m) across the proposed fill area would result in the Property being level with surrounding lands.

7 Improved Agricultural Capability

It is the professional opinion of Madrone that following implementation of the Remediation Plan and the recommendations outlined in the next section (*8 Proposed Agricultural Plan*), the proposed soil importation and deposit is **targeting a Class 1 agricultural capability**¹² by selectively receiving soils suitable to that end goal¹³. If the deposited soil is assessed as anything other than a Class 1 agricultural capability upon completion of the project, the farm operator (Mr. Jiang) should endeavour to improve the agricultural limitations through soil amendment, irrigation, or some combination thereof.

8 Proposed Agricultural Plan

8.1 Soil Preparation and Amendments

Following Madrone's review of the Remediation Plan, we have determined that all proposed works and recommendations are appropriate based on the available background information and field survey results detailed in these reports. We would however like to make the following soil preparation and amendment recommendations to supplement the professional opinions expressed by McTavish and Timmenga:

• It is our understanding that peat moss has been removed and recovered from the Property. Peat moss can be used as a soil conditioner and/or amendment on farms, thus we encourage the use of such on the Property to facilitate crop growth. Similarly, any clean wood waste recovered from the Property can be chipped into mulch, composted as per AEMCoP and/or the *Organic Matter Recycling Regulation*¹⁴ (OMRR), and used as a soil conditioner and/or amendment.

¹² Class 1 is defined as land that has no or only very slight limitations that restrict its use for the production of common agricultural crops. Land in Class 1 is level or nearly level. The soils are deep, well to imperfectly drained under natural conditions, or have good artificial water table control, and hold moisture well. They can be managed and cropped without difficulty. Productivity is easily maintained for a wide range of field crops. (source: <a href="https://www.alc.gov.bc.ca/assets/alc/assets/library/agricultural-capability/agriculture_capability/agriculture_capability/agriculture_capability/agriculture_capability/agriculture/ag

¹³ The Remediation Plan prepared by McTavish and Timmenga states that following importation of soil under their recommendations, the agricultural capability of the Property will be improved "to class 2 or 3 which will support a wide range of agricultural crops". It is Madrone's professional opinion that there is potential for the Property to be improved to Class 1 if the receiving soil is suitable.

¹⁴ Province of British Columbia (2019). Environmental Management Act and Public health Act Organic Matter Recycling Regulation.

http://www.bclaws.ca/civix/document/id/complete/statreg/18 2002. Accessed April 30, 2020.

- We encourage that any vegetation removed by mowing or uprooting be composted on-site as opposed to being hauled off-site for disposal. Compost generated on the Property can be used as an additional soil conditioner and/or amendment. Composting is a permitted use on land in the ALR, however are subject to conditions outlined in the *Part 6 Division 2 Agricultural Composting in the Environmental Management Act Agricultural Environmental Management Code of Practice*¹⁵.
- When increasing the cap depth over the wood residue by 25 cm with silty clay loam or silty clay, Madrone recommends grading the surface to facilitate drainage to perimeter ditching.
- Due to the local perched water table, seasonal inundation from flooding and requirement to maintain anaerobic conditions within the historically deposited wood residue through increased thickness of low-permeability silty clay loam/silty clay cap, Madrone recommends installation of widely spaced (~10m) subsurface drainage tile.
- Once the 75 cm of topsoil has been applied to the 25 cm cap, we recommend grading the soils to a 1V:2H slope (1 m vertical, 2 m horizontal) on the north, west and south sides of the soil import area to mitigate slumping along the perimeters.
- Madrone recommends progressive use of fall rye (cereal rye) as a cover crop option for areas completed in the fall or early winter. Fall rye is effective at loosening compact soil, suppressing weeds and adding nitrogen to soil. If cover crop is to be established in the spring, we recommend using buckwheat, clover, annual ryegrass or oats as options.
- Following one to two years of cover cropping, we recommend that the topsoil be tested for nutrient concentrations in the spring, specifically to quantify nitrogen (N), phosphorus (P), potassium (K), boron (B) and magnesium (Mg) as recommended by the *BC Berry Production Guide*¹⁶. It is recommended that 10 to 20 individual samples to a depth of 15 cm be taken from a uniform sample width through the entire 0 to 15 cm soil profile. The *BC Berry Production Guide* contains general recommendations on how to determine how much fertilizer to apply based on nutrient range ratings.
- We further we recommend testing the topsoil pH post placement and adjusting (increasing¹⁷ or reducing¹⁸) the pH range using soil amendments if necessary. 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.

¹⁵ Province of British Columbia (2019). Environmental Management Act Agricultural Environmental Management Code of Practice. <u>http://www.bclaws.ca/civix/document/id/complete/statreg/8 2019</u>. Accessed April 30, 2020.

¹⁶ Province of British Columbia (2012). Berry Production Guide – Beneficial Management Practices for Commercial Growers in British Columbia. <u>https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agriservicebc/production-guides/berries/nutrient_management.pdf</u>. Accessed April 30, 2020.

¹⁷ Anderson, N.P. et al. (2013). Applying Lime to Raise Soil pH for Crop Production (Western Oregon). <u>http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/38531/em9057.pdf</u>. Accessed April 30, 2020.

¹⁸ Horneck, D. et al. (2004). Acidifying Soil for Crop Production West of the Cascade Mountains (Western Oregon and Washington).

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8.2 Suitable Crop and Proposed Planting Plan

Madrone acknowledges that blueberries are a suitable choice following remediation of the Property based on favourable soil conditions (assuming all recommendations are implemented), regional climate and distance to market. Please note that the proposed texture and depth of imported soil would facilitate the growth of crops that typically require deep rooting such as rhubarb, sweet potatoes, tomatoes, pumpkins and asparagus, all of which would require 0.6 to 0.9 m (24 to 36 inches) of soil for optimal growth. Blueberry production is detailed in this Farm Plan because this crop is the preferred choice of the proposed farm operator (8.7 Proposed Agricultural Operator).

Table 2, informed by the Blueberry Production Guide¹⁹ (an online resource) developed by the Province of British Columbia, outlines a planting plan for the proposed blueberry farm. It is anticipated that new plantings will occur in the spring (March) following cover cropping in the previous year. Additional information such as disease control, insect control, weed control and food safety can be found in the aforementioned guide. The guide also contains information pertaining to blueberry varieties and pollination strategies.

Timing	Activity	Plant Care Recommendations		
March	Budding	New plantingsBegin land preparation for fall or next spring plantings		
Late March to Late April	Leaf and flower bud break	 Make first fertilizer application (mid-April) New plantings. Set out new plants as conditions permit (up to mid-May) 		
Late April/May	Blossoming	 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 		
June	Fruit development	Make second fertilizer applications up to mid-JuneIrrigate as necessary		
July	Fruit development and ripening	Monitor soil moisture and irrigate as necessary		
July to September	Harvesting	 Harvest and market fruit. Collect plant tissue samples (mid-July to mid-August) for nutrient analysis Irrigate as needed 		
September	Post-harvest growth	Irrigate as necessary		
October	Post-harvest growth	Continue to prune out and remove diseased wood.		

https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/em8857.pdf. Accessed April 30, 2020.

¹⁹ Province of British Columbia (n.d.). Blueberries. <u>https://www2.gov.bc.ca/gov/content/industry/agriservice-bc/production-guides/berries/blueberries</u>. Accessed April 30, 2020.

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Timing	Activity	Plant Care Recommendations		
		 New plantings. Set out new plants. Best time to plant container stock in coastal areas. 		
November/December	Plants dormant	Apply sawdust mulch, if necessaryOrder bees for the coming season		
January/February	Plants dormant	 Prune beginning after leaf drop. Be sure to remove diseased and dead wood. 		

8.3 Field Layout and Plant Spacing

The following recommendations are outlined in the BC Blueberry Production Guide²⁰:

- Fields should be designed for mechanical harvesting to allow flexibility in future harvesting decisions. Mechanical harvesting requires a minimum of 3 m between the rows. Provide a 4.5 to 5.0 m wide row break every 125 m for unloading harvesters and other machinery. Most harvesters require 7.6 to 9.0 m at the ends of rows (headlands) to turn around.
- The risers or posts for overhead irrigation should be no higher than 2.1 m and placed in the center of the row.
- Plant on raised beds to reduce fruit drop when harvesting mechanically. Beds place the catcher plates nearer to the narrow base of the plant, keeping them in close contact resulting in less fruit drop. Build the beds 20 cm high and 120 cm wide at the base.
- The most commonly used in-row spacing between plants is 90 cm. The number is plants required for this spacing scheme is ~4115 plants per ha or ~1646 plants per acre (depending on variety).

Based on these guidelines, we estimate that the Property can accommodate ~ 50 vertical rows of blueberry plants based on the approximate 250 m length of the proposed soil important area. This includes a row break every 125 m, and an 8 m distance along the perimeter of the growing area to allow room for mechanical harvesters to turnaround. Over the ~ 2.5 ha of proposed soil importation, $\sim 10,000$ to 12,000 blueberry plants are required.

8.4 Drainage Requirements

The Drainage and Leachate Plan developed by McTavish and Timmenga as an addendum to the initial Remediation Plan makes a number of recommendations, which we incorporate to this Farm plan with commentary as follows:

²⁰ Province of British Columbia (n.d.). Blueberries. <u>https://www2.gov.bc.ca/gov/content/industry/agriservice-bc/production-guides/berries/blueberries</u>. Accessed April 30, 2020.

- i. That a 'sealed buffer' (2 m minimum) be placed between the wood residue and ditches on the north and south of the Property to "ensure that leachate is not generated from this site", whereby this site refers to the Property.
 - a. Madrone interprets this recommendation to require the excavation to low permeability native material adjacent to the ditch line, removal of wood residue, and replacement with the fine-texture capping material;
 - b. This approach is not conducive with best practices for setback from sensitive habitats, as outlined in the Federal Fisheries Act S.35 which 'prohibits harmful alteration, disruption or destruction of fish habitat unless authorized (e.g. removing stream side vegetation)';
 - c. These modifications would require a Section 11 working in or about water of the BC Water Sustainability Act;
 - d. Madrone strongly recommends that this recommendation from the Drainage and Leachate Plan be substituted for the modified version contained in section 8.5 of this report (Below).
- Southern ditch: Regrade to eliminate topographic fluctuations and make the bottom (of the ditch) an even gradient to the west; some ditch widening is also recommended;
 - a. Madrone recommends a gradient of 1 2%, with a minimum ditch width of 3m.
 - b. These modifications would require a Section 11 applications for changes in and about a stream – of the BC Water Sustainability Act;
 - c. All works should be conducted during low flow season with full isolation of working area from natural streams;
- iii. Northern ditch: Regrade to have all flow split east and west;
 - a. Madrone recommends an even split of flow between east and west, established through regrading of the ditch bottom to a central crest with a 1 2% gradient descending therefrom;
 - b. These modifications would require a Section 11 applications for changes in and about a stream – of the BC Water Sustainability Act;
 - c. All works should be conducted during low flow season with full isolation of working area from natural streams;
- iv. Western ditch: Install a new ditch to connect the north and south ditches.
 - a. Madrone recommends a 1 2% gradient;
 - b. These modifications would require a Section 11 applications for changes in and about a stream of the BC Water Sustainability Act;
 - c. All works should be conducted during low flow season with full isolation of working area from natural streams;

Madrone otherwise agrees with the recommendations contained in the Drainage and Leachate Plan developed by McTavish and Timmenga.

8.5 Update of Drainage and Leachate Plan Recommendation

A follow-up Ditch Analysis Report by McTavish and Timmenga, saw ditch water sampled and analyzed. Laboratory results indicated that "the quality of the ditch water of the lateral drainage ditches on the subject property and in the main City of Richmond ditch is not affected by wood waste leachate and is not toxic to fish" whereby subject property refers to the Property.

Therefore, we, Madrone, do not see a requirement to further laterally encapsulate the existing wood residue provided that:

- i. The existing cap layer is enhanced with additional thickness, as recommended, and extended out to a 5 m buffer of the streamside area; and
- ii. The subsurface drain tile is installed atop the cap layer so as to rapidly convey subsurface water toward the perimeter ditches without infiltration to the wood residue.

By pursuing the above course of action, there will be limited water flux through the wood residue from precipitation. Further, influx of water from the perimeter ditches will not change from the preceding 20 - 30 years wherefrom it has been demonstrated there is little/no influence from such, as evidenced through analytic testing.

We do not have any additional contributions to the drainage plan.

8.6 Irrigation Requirements

The Remediation Plan developed by McTavish and Timmenga did not include detailed information regarding irrigation requirements and planning for the Property, thus we at Madrone have provided the required details and resources for irrigation in this section of the Farm Plan. The monthly and annual irrigation demand for the intended blueberry farm on the Property was estimated using the *BC Agriculture Water Calculator*²¹ (Table 3). The soil type selected was silty clay loam which conforms to the recommended imported soil texture in the Reclamation Plan. The irrigation season was selected to be from the start of May to the end of September (153 days). Climactic data and growing season were automatically generated by the calculator based on the location of the Property. Note that the *BC Agriculture Water Calculator* does not take into account climate change (rising air surface temperatures resulting in changes to evapotranspiration), thus irrigation estimates reflect current climactic conditions.

Guidelines for irrigation best management practices can be found in the *BC Irrigation Management Guide*²². Typically, blueberry plants on commercial farms are irrigated using a sprinkler or drip system. We recommend using a drip system because water is applied directly to the root zone, better water control and distribution uniformity compared to a sprinkler system, and the ability for fertigation and other chemical

²¹ BC Agriculture Water Calculator (n.d.). BC Agriculture Water Calculator. <u>http://bcwatercalculator.ca/agriculture</u>. Accessed May 1, 2020.

²² Province of British Columbia (2005). BC Irrigation Management Guide. <u>https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/water/irrigation/irrigation-management-guide</u>. Accessed May 1, 2020.

application. For drip irrigation systems, it is recommended that one irrigation line is installed per row with 1.9 L per hour (0.5 gallons per hour) emitters every 30.5 cm (12 inches)²³.

Month	Irrigation demand (sprinkler system)	Irrigation demand (drip system)
May	620 m ³	490 m ³
June	1990 m ³	1560 m ³
July	2730 m ³	2130 m ³
August	2080 m ³	1630 m ³
September	740 m ³	580 m ³
Total	8160 m ³	6390 m ³

TABLE 3. IRRIGATION REQUIREMENT ESTIMATES

8.7 Proposed Agricultural Operator

It is Madrone's understanding that the proposed agricultural operator for the blueberry farm is the owner of the Property, Mr. Bohan Jiang. It is assumed that Mr. Jiang will be responsible for the management decisions in operating the proposed agricultural operation (blueberry farm) on the Property. Management decisions pertinent to blueberry farming (and farming in general) involve planting, harvesting, marketing and sales, and making capital purchases and other financial decisions²⁴.

9 Agricultural Improvement Cost and Revenue Estimate

A cost estimated developed by Madrone for the proposed blueberry farm's establishment (Year 1) is presented in Table 4. We estimate the total cost for establishment to be \$2,050 to \$171,350 (median total cost is \$86,700). Please note that estimating costs of farming is largely speculative and depends on the size of farm, the intended use of the farm products (i.e., for personal consumption, for sale via farmer's markets, road stands or u-pick, or a mix several of these factors), experience with farming, and whether the agricultural operator owns basic farm equipment and/or machinery such as a mechanical berry harvester which can cost between \$80,000 to \$120,000 used. Access to farm labour is also critical and may dictate which crops to grow if labour cannot be sourced at specific harvest windows. There are many other costs to consider, including material such as packing crates, a container for temporary cool storage, harvest tools and fencing supplies. We have not included these in the establishment cost table as such detail may result in excessively complicated and extensive cost tables.

 ²³ United States Department of Agriculture (2011). Irrigation Guidelines for Better Blueberry Production.
 <u>http://extension.missouri.edu/blueberry/documents/Shared_Documents/MOBBSchool/MOBBSch</u>

²⁴ Government of Canada (2019). Farm operation – definition. <u>https://www23.statcan.gc.ca/imdb/p3Var.pl?Function=Unit&Id=103167</u>. Accessed May 1, 2020. As estimated in 8.3 Field Layout and Plant Spacing, over the ~2.5 ha of proposed soil importation, ~10,000 to 12,000 blueberry plants are required. If each plant following maturation can produce 5 to 20 lbs of blueberries²⁵, there is a potential yield of 60,000 to 240,000 lbs per annum barring any major disease, weather or pest-related growing restrictions. Blueberry plants take a minimum of 2 to 3 years to mature for fruit production, and at least 7 years before full maturation (optimal growing). Assuming that the price of blueberries is \$2.50 CAD/lb²⁶, there is the potential for gross venue²⁷ of ~\$150,000 CAD 2 to 3 years after farm establishment (Years 3 and 4). According Statistics Canada²⁸, the average operating profit margin for fruit and tree nut farming in 2017 was 15.8 cents, resulting in a net profit for the proposed blueberry farm of ~\$24,000 CAD 2 to 3 years after initial establishment. By Year 8, there is the potential for up to ~\$95,000 CAD net profit with optimal fruit yield (20 lbs/plant) and/or market conditions.

Activity	Description of Work	Units	Unit Costs	Total (\$CAD, 2020 estimated)
	Importation of clean, silty clay loam ²⁹ and topsoil for remediation	Remediation would require ~30,000 m ³ (39,238.5 yd ³) of imported soil	\$60 to \$80 tipping fee per truckload; typical dump truck has a capacity of 10 yd ³	\$240,000 to \$320,000
Soil importation	Ongoing monitoring and reporting by Professional Agrologist as required by the ALC and the City of Richmond (generally per 3,000 m ³)	At minimum 10 visits required for 30,000 m ³ of imported soil, to meet ALC monitoring requirements	\$500 per monitoring visit and report	\$5000

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²⁵ Blue Grass Blueberries (2020). Small Farm Business Opportunity – How to Profit From Blueberry Sales? <u>https://bluegrassblueberries.com/small-farm-business-opportunity-how-to-profit-fromblueberry-sales/</u>. Accessed May 4, 2020.

²⁶ Note that price of berries can vary based on variety and quality. Indicate price assumes general market cost for premium berries for high-demand varieties.

²⁷ Gross venue is intermediate earnings figure before all expenses are included for farm operations including labour, soil amendments, machinery, irrigation, fuel, taxes etc.

²⁸ Statistics Canada (2019). Chart 2 Average operating profit margin, by farm type, Canada, 2017. <u>https://www150.statcan.gc.ca/n1/daily-quotidien/190329/cg-c002-eng.htm</u>. Accessed May 4, 2020.

²⁹ Soil texture is readily found in the Richmond area therefore, trucking distances are anticipated to be small.

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Activity	Description of Work	Units	Unit Costs	Total (\$CAD, 2020 estimated)
	Earthworks costs including project management, load inspector (on Site), machine / labour costs, fuel and traffic management	Costs take into consideration complete development of the soil deposit area (~2.5 ha)	Estimated at \$23,000 to \$27,000/acre (\$50,000 to \$60,000/ha) based on other projects of similar nature and location	\$100,000 to \$120,000
	Tractor purchase (one-time)	1 tractor for field preparation and ongoing farm maintenance	\$35,000 to \$50,000 per machine ^A ; used tractor, diesel- powered; includes costs of periodic maintenance	\$40,000 to \$55,000
	Plowing or tilling field, applying manure and/or fertilizer, mulch application, fence construction, bed construction	Estimated 2 months of labour from 1 farm worker	\$14.60/hr ^B x 40 hr/week x 2 months	\$4600
Post-importation land preparation and pre-planting preparation	Soil testing - nutrients and pH	Laboratory fees at AGAT Laboratories: Nutrients 5 package - \$160/soil sample (includes pH and environmental handling and compliance fee)°	 \$160/soil sample x 4 soil samples \$500 minimum consultant time to collect samples, report results 	\$1200
	Tractor use during pre- planting preparation	Estimated 50 hours of machine time Fuel consumption - 4L/hr Diesel cost - Richmond price, \$1.10/L °	4 L/hr x 50 hr = 200 L 200 L x \$1.10/L	\$220
	Erosion and sediment control implementation such as silt fencing installation, gravel road rehabilitation and possible wheel wash installation	Material and installation costs	\$5000 to \$10,000	\$5000 to \$10,000

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Activity	Description of Work	Units	Unit Costs	Total (\$CAD, 2020 estimated)
Irrigation system (drip)	Purchase and installation by hired farm labourers, accounted for above; one-time cost (until replacement needed due to age, wear and tear)	\$1/m planted Length of vertical row (80) x # of rows (50 to 55) = 4000 to 4400 m of drip irrigation	\$1/m x 4000 to 4400 m	\$4000 to \$4400
Plant purchase	Purchase juvenile blueberry plants	10,000 to 12,000 plants required	\$4/1.5-year-old blueberry starter plant	\$40,000 to \$48,000
Soil amendment**	75 lbs per acre of 18- 9-9 of granular fertilizer is applied twice Year 1 ^D	Soil import area is ~7.0 acres ~1100 lbs (550 lbs x 2 applications) of fertilizer is required	40 lb bag is ~\$100 CAD ^E	\$2750
Pest management consultant	Retention of a pest management consultant prior to seeding of either crop to test soil and prescribe biological controls (if organic farming, assuming no applications of chemical controls, or pesticides)	10 to 20 hours consultant time, plus travel for initial consultation, soil testing and reporting recommendations. Cost of biological controls unknown.	\$150 per hour consultant time (Professional Agrologist)	\$3000
Maintenance of crop during growing and harvesting	Mechanical harvester (one-time)	1 mechanical harvester for blueberry harvesting	\$80,000 to \$125,000 per machine ^F ; used harvester, diesel- powered; includes costs of periodic maintenance	\$85,000 to \$125,000
	Mechanical harvester operator and general farm maintenance (e.g., fertilizer application, irrigation, weeding, pruning, fruit quality control, fruit preparation for sales, new plantings)	Estimated 4 months of labour from 2 farm workers	\$14.60/hr ^B x 40 hr/week x 4 months x 2 workers	\$18,700

Activity	Description of Work	Units	Unit Costs	Total (\$CAD, 2020 estimated)
Application fee	If the proposal is forwarded to the ALC by the City of Richmond	One-time application fee to the ALC	\$1500	\$1500
Other service and reporting costs from Qualified Professional (QP)	Final topographic survey	Includes travel, field time, equipment fees, report writing, map and/or survey development (if applicable), senior review and report formatting	\$2000 to \$4000	\$2000 to \$4000
	Final geotechnical report (if required)		\$2000 to \$4000	\$2000 to \$4000
	Final closure report from Professional Agrologist		\$3000 to \$4000	\$3000 to \$4000
Estimated total cost for farm establishment without revenue from tipping fees				\$317,950 to \$411,350
Estimated total cost for farm establishment <u>with</u> revenue from tipping fees				\$2050 to \$171,350 (median total cost is \$86,700)

Green text represents revenue from tipping fees Red text represents capital costs for farm establishment (Year 1)

 * based on information from other soil importation projects in the area

** does not include the cost to increase or decrease soil pH with lime, sphagnum peat, elemental sulfur, aluminum sulfate, iron sulfate, acidifying nitrogen, and organic mulches; these includes additional costs following soil testing

Cost estimation sources

^A Used tractor sales: https://www.countrytractor.ca/default.asp?page=xPreOwnedInventory and

https://www.islandtractors.com/default.asp?page=xPreOwnedInventory

^B BC minimum wage by June 1, 2020: https://www2.gov.bc.ca/gov/content/employment-business/employment-standards-advice/employment-standards/wages/minimum-wage

^c Average diesel cost: https://www.gasbuddy.com/GasPrices/British%20Columbia/Richmond

^p Standard blueberry fertilizer blend: http://files.tlhort.com/product_info/3855-standard_blueberry_blend_18-9-9.pdf

^E 40 lb bag 18-9-18: https://www.domyown.com/contec-dg-18918-fertilizer-40-lb-p-21463.html

F Used blueberry harvester sale: https://www.marketbook.ca/listings/farm-equipment/for-

sale/list/category/300103/specialty-crop-equipment-harvesters-grape-berry

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BARRY MAH FARM PLAN FOR 8511 NO. 6 ROAD, RICHMOND, BC PAGE 18 AUGUST 11, 2020

10 Closure

By following the recommendations contained in previous reports for the Property, and incorporating any modifications thereto as contained within this Farm Plan, we are confident in establishing a robust agriculturally capable land base (targeted as Class 1 by selectively receiving suitable soil) on which the Farm Operator can pursue blueberry production. We also anticipate that, should recommendations be followed, the existing wood residue on the Property will maintain a low level of decomposition, therefore generating limited amounts of leachate with no considerable impact to surrounding aquatic resources or environmental receptors.

Sincerely,

MADRONE ENVIRONMENTAL SERVICES LTD.

*This is a digitally sign the official manually sign ument

Daniel Lamhonwah, PhD candidate, MES, P.Ag Environmental Scientist, Professional Agrologist

*This is a digitally signed duplicate of the official manually signed an 3039 lon T. ELLIOI

Thomas R Elliot, PhD, P.Geo, P.Ag Hydrogeologist, Professional Agrologist

MADRONE ENVIRONMENTAL SERVICES LTD.

August 10th, 2020

To: Mike Morin Soil Bylaw Officer City of Richmond 6911 No.3 Road Richmond, B.C V6Y 2C1

Dear Mike,

As per my agricultural, farming, and nursery experience.

Before founding Garden in Gardens, I worked at Garden City Greenhouses on 9460 Cambie Road from 1995 to 2004 as a manager where I was in charge of all farming and landscaping operations. During this time, I have managed numerous blueberries and vegetable farms from inception to completion

In 2004, I founded my business Garden in Gardens, where our retail operations have supplied trees and plants to the lower mainland for over fifteen years. On our agricultural side, we have successfully completed and managed over 6 farms, with a majority of them being blueberry farms. We have managed these farms from beginning to end, from site/land prep, ploughing, crop sourcing, planting, to fertiliser application. Our services also include the continual maintenance and operations of these farms in which we are presently managing several blueberry farms.

When Mr Bo Han Jiang purchased the land in 2005, we were contacted to oversee Mr Jiang's blueberry operations. In 2006, we prepared the site, set up irrigation, placed sawdust, planted around 8000 blueberry bushes and fertilized all plants. It was noticed that the following winter, roughly 1000 blueberries plant died due to the high water table. For the following 3 years, we replanted roughly 1000 blueberries plants annually. After that, we continued to maintain the land but did not replant the blueberries as it was not economically feasible to do so.

In 2010, we consulted with numerous other blueberry farmers and we were all told that the land was too low and that the water table was too high. This is later reaffirmed by the Madrone Environmental Services LTD report dated June 30th, 2020.

Soil conditioners were not used; however, it is important to note that the application of soil amendment on cedar wood waste (imported by the previous owner after the removal of native surficial organic soil), in addition to the high water table, would unlikely yield a successful outcome. It's evident that importing soil is the only practical solution to address both these problems.

In 2012, Mr Barry Mah was contacted to import soils onto the parcel.

In 2016, when only roughly 500 plants were remaining from the initial 8000 bushes, the remaining bushes were moved to the west of the house where the elevation is the same as the house due to peat removal from the home construction. These plants have been monitored and no further blueberry bushes have died.

~U/

Quan Ming Wu 7600 No.5 Road Richmond, B.C V6Y 2V2

Attachment 5



1081 Canada Ave Duncan, BC V9L 1V2 p. 250.746.5545 f. 250.746.5850 #202 – 2790 Gladwin Road Abbotsford, BC V2T 4S7 p. 604.504.1972 f. 604.504.1912

> info@madrone.ca www.madrone.ca

June 30, 2020

Barry Mah Westwood Topsoil Ltd. 6604 62B Street Delta, BC V4K 5A8 westwoodbarry@mac.com

Dear Mr. Mah,

RE: Technical Addendum to Remediation Plan for 8511 No. 6 Road, Richmond, BC (CD 28808)

Madrone Environmental Services Ltd. ('Madrone'), acting as the qualified professionals (QPs) retained by you, Mr. Barry Mah ('the Client'), was asked by Mr. Mike Morin¹, Community Bylaws, City of Richmond ('the City'), to respond to commentary² from City staff regarding updates to technical requirements in a Remediation Plan³ ('the Plan' or 'Plan') developed for 8511 No. 6 Road, Richmond, BC ('the Property') to be in line with recent regulatory changes that have been enacted (by the BC Ministry of Environment and the Agricultural Land Commission) since the original Plan was completed in 2012.

This addendum has been prepared by Daniel Lamhonwah, MES, P.Ag, and reviewed by Jessica Stewart, P.Ag., P.Geo, of Madrone for the specific purpose of updating the Plan's technical requirements. The section numbers referred to below are in the original Plan.

Under section 8.4 Drainage Management, we recommend the following updates:

• In-stream works should be completed in compliance with the BC Water Sustainability Act⁴ (WSA), under guidance from a Qualified Environmental Professional (QEP), with adherence to applicable

¹ Email communication addressed to Barry Mah from Mike Morin, Soil Bylaw Officer, Community Bylaws, City of Richmond. Subject: CD 28808 - Outstanding application requirements (o6 Dec 2019). Sent on Friday, December 6, 2019, 15:04.

² Food Security and Agricultural Advisory Committee meeting minutes. Held Thursday, September 12, 2019 (7:00 PM). M.2.004. Richmond City Hall.

³ McTavish and Timmenga (2012). Proposed Remediation of Land Located at 8511 #6 Road Richmond, B.C. Prepared by McTavish Resource and Management Consultants Ltd. and Timmenga and Associates Inc. Prepared for Bohan Jiang. Dated September 30, 2012.

⁴ Province of British Columbia (2020). Water Sustainability Act Water Sustainability Regulation B.C. Reg. 36/2016. Last amended December 17, 2019 by B.C. Reg. 278/2019. <u>http://www.bclaws.ca/civix/document/id/crbc/crbc/36_2016</u>. Accessed April 20, 2020.

"wildlife timing windows". Timing guidelines for works in and about watercourses to limit risk of negative impacts to aquatic organisms specific to the Lower Mainland Region is provided by the BC Ministry of Environment⁵.

• Any disturbed banks of the ditches should be stabilized/re-vegetated to limit ongoing erosion following works on the Property.

Under section 8.5 Management of Fill Quality, we recommend the following updates:

- Imported soil to the Property should meet applicable agricultural land standards under the BC Contaminated Site Regulations (BC CSR) Schedule 3.1, Part 1 Numerical Soil Standards, Column 4 Agricultural (AL)⁶.
- Imported soil to the Property should not contain Prohibitive Fills as defined in Section 36 of the Agricultural Land Commission Act Agricultural Land Reserve Use Regulation⁷.
- All soil import source sites should be approved by a QEP prior to soil removal from the source site and deposition on the Property. The QEP should be knowledgeable in the fields of contaminated sites and invasive species management. Each shipment origin, truckload, and end location must be tracked and available upon request from the City. This is an updated City of Richmond requirement.

Madrone has the capacity and experience to fulfil the role(s) of QEP described in the above recommendations, particularly with contaminated sites and invasive species management, to ensure that the quality of imported soil (i.e. also referred to as fill) meets provincial standards. Please contact the undersigned authors should there be any questions regarding the contents of this addendum and/or for discussions regarding Madrone's QEP services to facilitate the Plan.

http://www.bclaws.ca/civix/document/id/complete/statreg/30_2019#section36. Accessed April 30, 2020.

⁵ BC Ministry of Environment (2006). Guidelines for Reduced Risk Instream Work Windows Ministry of Environment, Lower Mainland Region (March, 2006). <u>https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/working-aroundwater/work windows low main.pdf</u>. Accessed April 20, 2020.

⁶ Province of British Columbia (2020). Environmental Management Act Contaminated Sites Regulation Schedule 3.1 [includes amendments up to B.C. Reg. 13/2019, January 24, 2019]. <u>http://www.bclaws.ca/civix/document/id/complete/statreg/375_96_07</u>. Accessed April 20, 2020.

⁷ Agricultural Land Commission Act (2020). Agricultural Land Commission Act Agricultural Land Reserve Use Regulation.

PAGE 3 JUNE 30, 2020

Sincerely,

MADRONE ENVIRONMENTAL SERVICES LTD.

*This is a digitally signed official manually sig ment

Daniel Lamhonwah, PhD candidate, MES, P.Ag Environmental Scientist, Professional Agrologist

*This is a digitally signed duplicate of the

Jessica Stewart, BSc, P.Ag, P.Geo Professional Geoscientist, Professional Agrologist

Attachment 6



1081 Canada Ave Duncan, BC V9L 1V2 p. 250.746.5545 f. 250.746.5850 #202 – 2790 Gladwin Road Abbotsford, BC V2T 4S7 p. 604.504.1972 f. 604.504.1912

> info@madrone.ca www.madrone.ca

June 30, 2020

Barry Mah Westwood Topsoil Ltd. 6604 62B Street Delta, BC V4K 5A8 westwoodbarry@mac.com

Dear Mr. Mah,

RE: Appropriate Imported Soil and Soil Source Sites for 8511 No. 6 Road, Richmond, BC (CD 28808)

Madrone Environmental Services Ltd. ('Madrone'), acting as the qualified professionals (QPs) retained by you, Mr. Barry Mah ('the Client'), was asked by Mr. Mike Morin¹, Community Bylaws, City of Richmond ('the City'), to respond to commentary² from City staff regarding the use of "alluvial soil" for proposed soil importation projects. This memo, prepared by Daniel Lamhonwah, MES, P.Ag, and reviewed by Jessica Stewart, P.Ag., P.Geo, of Madrone discusses why restricting soil importation to solely alluvial soils puts strong limitations on sourcing soil for the project and furthermore, may result in the importation of suboptimal textures. The proposal is intended to remediate the property and improve the existing agricultural capability.

Alluvium is defined³ as loose, unconsolidated soil or sediment that has been eroded, reshaped by water in some form, and redeposited in a non-marine setting. Soils originating from alluvial parent material (alluvial soils) do not necessarily have physical properties that would make them favourable for agriculture because of the variable texture (from sandy gravel to silty clay) which is dependent on source and exact forming process. Fine textured alluvial soils, such as those that are predominantly composed of silts and clays, can limit the movement of water through the soil profile and possibly created elevated watertables, therefore limiting the growth of certain crops. Thus, if the soil importer acts upon the directive to only import alluvial to a receiving site under the assumption that alluvial soils the best method to preserve and/or improve agricultural capability

³ GeoTech.org (n.d.). Dictionary of Geologic Terms <u>https://web.archive.org/web/20110501155938/http://www.geotech.org/survey/geotech/dictiona.h</u> <u>tml</u>. Accessed April 30, 2020.

¹ Email communication addressed to Barry Mah from Mike Morin, Soil Bylaw Officer, Community Bylaws, City of Richmond. Subject: CD 28808 - Outstanding application requirements (o6 Dec 2019). Sent on Friday, December 6, 2019, 15:04.

² Food Security and Agricultural Advisory Committee meeting minutes. Held Thursday, September 12, 2019 (7:00 PM). M.2.004. Richmond City Hall.

without taking into account the texture of the alluvial soil, this action may result in undesired subsurface drainage conditions.

The physical properties of native soils on the Property must also be taken into consideration when determining the type and source of soils for importation to reclaim the land as to not impact the conveyance of surface water. Based on existing mapping⁴, the Property is in an area containing Triggs soils, characterized by deep (at least 2 m) un-decomposed organic deposits composed mainly of sphagnum and other mosses. The on-site soil survey information for the Property found that all the organic soils (peat) on the site had been removed⁵. Using fine textured alluvial soils, such as silts and clays, to reclaim the removed Triggs soils is likely to cause undesirable surface drainage conditions on the Property, particularly infiltration-excess overland flow during precipitation events, which may impact neighboring parcels downslope.

Furthermore, the importation of alluvial soils commonly found in the Richmond area, including Blundell⁶ and Delta⁷ soils which are characterized by subsoil salinity (conductivity > 4 dS m⁻¹), may introduce an undesirable salinity limitation (Class N limitation) that may not have existed on a receiving site. Salinity limitations are difficult to improve.

To conclude, it is our qualified professional opinion that soil importation projects, with the intent of preserving agricultural capability at receiving sites, should not be limited to the use of alluvial soils. We recommend that the City imposes a condition that considers the physical and chemical properties of the soil proposed to be imported instead of restricting the imported soil to a deposition method and/or soil parent material type. This would likely reduce completion time of the proposed soil importation projects because it would increase the potential number of soil source sites available to the applicant. The ALC has recently advised through information bulletin 7 (in March of 2019) that "the Commission will not consider fill placement activities that would extend beyond two years."⁸

Please contact the undersigned authors should there be any questions regarding the contents of this memo.

⁴ Province of British Columbia (2020). BC Soil Information Finder Tool. <u>https://www2.gov.bc.ca/gov/content/environment/air-land-water/land/soil/soil-information-finder</u>. Accessed April 17, 2020.

⁵ McTavish and Timmenga (2012). Proposed Remediation of Land Located at 8511 #6 Road Richmond, B.C. Prepared by McTavish Resource and Management Consultants Ltd. and Timmenga and Associates Inc. Prepared for Bohan Jiang. Dated September 30, 2012.

⁶ Canadian Soil Information Service (2013). Description of soil BCBNLpsad~A (BLUNDELL). <u>http://sis.agr.gc.ca/cansis/soils/bc/BNL/psad~/A/description.html</u>. Accessed April 17, 2020.

⁷ Canadian Soil Information Service (2013). Description of soil BCDLTansadN (DELTA). <u>http://sis.agr.gc.ca/cansis/soils/bc/DLT/ansad/N/description.html</u>. Accessed April 17, 2020.

⁸ Agricultural Land Commission (2019). Information Bulletin o7 Soil or Fill Uses in the ALR. <u>https://www.alc.gov.bc.ca/assets/alc/assets/legislation-and-regulation/information-</u> <u>bulletins/information_bulletin_07_soil_or_fill_uses_in_the_alr.pdf</u>. Accessed April 30, 2020.

BARRY MAH

RE: APPROPRIATE IMPORTED SOIL AND SOIL SOURCE SITES FOR 8511 NO. 6 ROAD

PAGE 3 JUNE 30, 2020

Sincerely,

MADRONE ENVIRONMENTAL SERVICES LTD.

*This is a digitally sign official manually ment

Daniel Lamhonwah, PhD candidate, MES, P.Ag Environmental Scientist, Professional Agrologist

*This is a digitally signed duplicate of the aled document.

Jessica Stewart, P.Ag, P.Geo Professional Geoscientist, Professional Agrologist

Attachment 7

*Raised area identified in blue



0 0.0225 0.045 0.09 mi 0 0.0375 0.075 0.15 km

FIGURE 1. SATELLITE IMAGERY OF 8511 NO.6 ROAD OUTLINED IN YELLOW. THE RED SHADED AREA REPRESENTS TO PROPOSED AREA FOR SOIL IMPORTATION. IMAGE PROVIDED BY THE CITY OF RICHMOND AND DATED AS TAKEN IN 2018.

Attachment 8

August 12th, 2020

To Whom It May Concern,

Mr Quan Ming Wu has been working on my property since I purchased my property in 2005. Upon the post-completion of the project should it be approved; I intend to sign a minimum 10-year lease with Mr Wu to allow him to farm and grow blueberries and vegetables on the parcel.

Bo Han Jiang 8511 No.6 Road Richmond, B.C V6W 1E3

August 10th, 2020

To: Mike Morin Soil Bylaw Officer City of Richmond 6911 No.3 Road Richmond, B.C V6Y 2C1

Should the soil deposit proposal be formally approved at the upcoming FSAAC meeting, I (Quan Ming Wu) will voluntarily submit a \$30,000 performance bond as a guarantee to implement and complete the Farm Plan, to be returned upon completion of the farm plan.

JUM (

Quan Ming Wu 7600 No.5 Road Richmond, B.C V6Y 2V2



June 29, 2020

2020-1091

Madrone Environmental #202 - 2790 Gladwin Rd Abbotsford, BC V2T 4S7

Attention: Daniel Lamhonwah

Reference:Review of Site Drainage Report8511 #6 Road, Richmond, BC

Out of the Box Engineering (OOTBE) has been asked to review the site drainage recommendations stated in the *Woodwaste Leachate and Site Drainage Addendum I To Proposed Remediation of Land Located at 8511 #6 Road Richmond B.C.* report prepared by McTavish Resource & Management Consultants Ltd. (McTavish) and dated December 14, 2013. It is our understanding that the property is planned to be used for vegetable farming and prior to this being successful, remediations are necessary to the site conditions in order to establish a proper growing medium and allow for proper storm water drainage from the site.

A site visit and meeting with the property manager (Barry Mah) was done on June 17, 2020. The condition of the site appeared to be similar to that stated in the 2013 report. The site is overgrown, has visible wood pieces scattered throughout, and has areas with visible wetland plants.

In reference to the site drainage, McTavish's report recommends the site be cleared of excess vegetation and the slopes/ditches be repaired. It is to be ensured that all ditches are located on the subject site. The report states that the recommended changes will not increase peak flows. Also, the direction of flows and discharge locations will not be altered.

OOTBE finds that the site drainage recommendations in McTavish's report appear to be reasonable and should allow for adequate storm water drainage from the site, without altering peak flow conditions. If required, OOTBE can perform an additional site visit when contacted following the works to review the conformance of the site drainage.

Please note that only drainage recommendations in the report were reviewed by OOTBE. Other topics were not reviewed as they are out of our scope of expertise.

CNCL – 312

If there are any questions, please do not hesitate to contact the undersigned.

Regards,

Collin S. Johnson, P.Eng.



Out of the Box Engineering (DBA 0772308 BC LTD) Box 274 Agassiz PO, Agassiz, BC VOM 1A0 604-819-9809 / ootbe2013@gmail.com



Project No.: G18154-00

October 10, 2018

c/o Barry Mah

Dear Sir:

Re: Owner – Bohaw Jiang Remediation of Farm land 8511 No.6 Road Richmond, B.C.

We have retained by Mr. Mah, agent of the subject property (8511 No.6 Road, Richmond) as the geotechnical engineer to evaluate the remediation works proposed by McTavish Resource and Management Consultants Ltd. (MRMCL) for the above-mentioned address. Our scope of work is limited to the geotechnical aspect of the project. For this, we obtain and reviewed reports prepared by MRMCL including the site drainage plans.

The site is located on the west side of No.6 Road and is approximately 360 m south of Blundell Road. Site frontage along No.6 Road is 94 m and site depth is 410 m. There is an existing house along the front section of the site next to No.6 Road. The remaining of the site is vacant. We understand organic soils (peat) were removed in the mid-section of the site and the excavated area was filled with wood wastes. For remediate this section of the site so it can be used for agriculture usage, MRMCL has proposed to deposit up to 0.75m of topsoil, over 0.25m of un-compacted silty fill over the existing ground surface of the impacted area.

We visit the site on September 28, 2018. We noted the impacted area (area requires remediation is 4 to 5 feet lower than the adjacent properties to the east and the west. At the time of our site visit, two pits were put down in the impacted area. Both of the test pits encountered an existing fill, several inches thick, over wood wastes, 4 to 5 feet (1.2 to 1.5 m) thick, over a silty clay deposit to the depth of excavation. Groundwater was encountered in all test pits at approximately 1 foot (0.3m) from the existing ground surface.

Based on the test pit excavation and our observation, followings are our comment.

- 1. As the impacted area is 4 to 5 feet (1.2 to 1.5m) lower than the adjacent areas, placing of 3.3 feet (1.0 m) of additional fills over the impacted area will not impact the drainage pattern of adjacent areas (finishing elevation of the impacted area is lower than the adjacent areas).
- 2. Weight of the additional fills will be approximately 250 psf (2 feet of topsoil and one foot of silty clay). Placing of fills will not impact stability of adjacent areas as the impacted area is not less than 6 m away from adjacent properties.
- 3. The remediated area is only suitable for agricultural use and is not suitable to support any building structure without further site improvement.

Should you have any questions regarding the above or if we can be of further assistance, please call.

Yours truly,

TONY YAM ENGINEERING LTD.,

Per. GUAN Zhao Guan, M.A.Sc., P.Eng GINES 200/A

TONY YAM ENGINEERING LTD.

Attachment 12



1081 Canada Ave Duncan, BC V9L 1V2 p. 250.746.5545 f. 250.746.5850 #202 – 2790 Gladwin Road Abbotsford, BC V2T 4S7 p. 604.504.1972 f. 604.504.1912

> info@madrone.ca www.madrone.ca

June 30, 2020

Barry Mah Westwood Topsoil Ltd. 6604 62B Street Delta, BC V4K 5A8 westwoodbarry@mac.com

Dear Mr. Mah,

RE: Soil Drainage and High Water Table at 8511 No. 6 Road, Richmond, BC (CD 28808)

Madrone Environmental Services Ltd. ('Madrone'), acting as the qualified professionals (QPs) retained by you, Mr. Barry Mah ('the Client'), was asked by Mr. Mike Morin¹, Community Bylaws, City of Richmond ('the City'), to respond to commentary² from City staff regarding whether at 8511 No. 6 Road, Richmond, BC ('the Property') can be 'bermed and pumped' rather than being filled with imported soil to address the drainage limitations to agricultural productivity.

Existing information indicates that Property is affected by groundwater and not flood water (i.e., from watercourses). Based on provincial mapping, the native soils in the Property area is the Lulu soil series (classified as a *Terric Mesisol*) which is an organic soil characterized by very poor drainage³. According to The Canadian Soil Information Service⁴, excess water is present in Lulu soils for the greater part of the year with groundwater flow and subsurface flow being the major water sources. These soil conditions were reported by McTavish and Timmenga⁵ whereby a locally elevated water table was observed during field assessment.

¹ Email communication addressed to Barry Mah from Mike Morin, Soil Bylaw Officer, Community Bylaws, City of Richmond. Subject: CD 28808 - Outstanding application requirements (o6 Dec 2019). Sent on Friday, December 6, 2019, 15:04.

² Food Security and Agricultural Advisory Committee meeting minutes. Held Thursday, September 12, 2019 (7:00 PM). M.2.004. Richmond City Hall.

³ Province of British Columbia (2020). BC Soil Information Finder Tool. <u>https://www2.gov.bc.ca/gov/content/environment/air-land-water/land/soil/soil-information-finder</u>. Accessed April 16, 2020.

⁴ CanSIS (2013). Description of soil BCLULd~~~~A (LULU). http://sis.agr.gc.ca/cansis/soils/bc/LUL/d~~~~/A/description.html. Accessed April 16, 2020.

⁵ McTavish and Timmenga (2012). Proposed Remediation of Land Located at 8511 #6 Road Richmond, B.C. Prepared by McTavish Resource and Management Consultants Ltd. and Timmenga and Associates Inc. Prepared for Bohan Jiang. Dated September 30, 2012.

PAGE 2 JUNE 30, 2020

This report described the border between the decomposed and non-decomposed wood waste⁶ to be the summer water table which was at about 1 m depth. The winter water table appeared to be at the surface of the soil, with some lower areas being inundated during the winter.

In previous communication with Mr. Morin, Jessica Stewart, P.Ag, P.Geo and Thomas R Elliot, PhD, P.Ag, P.Geo of Madrone prepared a technical memorandum titled *Significance of the Code of Practice for Agricultural Environmental Management (AEM Code) for low-lying agricultural land in the City of Richmond*. Because drainage issues on the Property is affected by groundwater and not flood water, we believe that the aforementioned technical memorandum addresses the questions posed by the City re: berming and pumping. For your convenience, the memorandum is attached to this memo.

Please contact the undersigned authors should there be any questions regarding the contents of this memo.

Sincerely,

MADRONE ENVIRONMENTAL SERVICES LTD.

*This is a digitally sign official manually sign

Daniel Lamhonwah, PhD candidate, MES, P.Ag Environmental Scientist, Professional Agrologist

*This is a digitally signed duplicate of the

Jessica Stewart, P.Ag, P.Geo Professional Geoscientist, Professional Agrologist

⁶ According to McTavish and Timmenga (2012), approximately 20-30 years ago the previous landowners stripped the native organic soils and replaced them with cedar wood waste and wooden construction debris. This is referred to as 'wood waste' in reports for the property.



1081 Canada Ave p. 250.746.5545 f. 250.746.5850

#202 – 2790 Gladwin Road Duncan, BC V9L 1V2 Abbotsford, BC V2T 4S7 p. 604.504.1972 f. 604.504.1912

> info@madrone.ca www.madrone.ca

March 9, 2020

Mr. Michael Morin, Soil Bylaw Officer & Planning and Development City of Richmond

Dear Mr. Morin

Re: Technical Memorandum: Significance of the Code of Practice for Agricultural Environmental Management (AEM Code) for low-lying agricultural land in the City of Richmond

INTRODUCTION

Madrone Environmental Services Ltd. (Madrone) is a multi-disciplinary scientific consulting firm with offices in both the Fraser Valley (Abbotsford) and Duncan, B.C. Since 2009, agrologists at our firm have prepared land capability assessments, soil deposit assessments (for both non-farm use and farm-use soil deposition on ALR Land), farm plans¹, and reclamation plans (including soil testing for contaminants, invasive species screening, fill removal plans) for landowners of properties in the City of Richmond (CoR, or 'the city'). Most, if not all, of these properties have been in the Agricultural Land Reserve (ALR).

Madrone continues to work with CoR planners and bylaw officers on such projects as a consultant and agent for applications by the respective landowners. Recently, Thomas Elliot, P.Ag. of Madrone has been engaged with the city in interpreting the significance of a new provincial regulation called the Code of Practice for Agricultural Environmental Management (AEM Code).

The AEM Code came into effect on February 28, 2019 and applies to all agricultural operations in the province². We emphasize that this applies to agricultural <u>operations</u> - not all agricultural land in the ALR has agricultural operations conducted on site (i.e. the land is completely fallow with no nutrient inputs, or the operation on site is not defined as an applicable agricultural operation in the AEM Code – the exact definition

¹ Madrone's first agricultural-related project in the City of Richmond was a farm plan prepared for the Shia Muslim Community of B.C. (8580 No. 5 Road, Richmond).

² https://www2.gov.bc.ca/gov/content/environment/waste-management/industrialwaste/agriculture Agricultural Environmental Management. Province of B.C. Accessed January 28, 2020

MICHAEL MORIN TECHNICAL MEMORANDUM - AEM CODE

is in this memo, below). This code replaces the former Agricultural Waste Control Regulation (AWCR) for the province.

We (Jessica Stewart, P.Ag. and Thomas Elliot PhD, P.Ag.) at Madrone believe that the AEM Code should be considered when reviewing soil deposit applications for properties in the ALR, specifically, properties that are low-lying with little topographic relief and are subject to **high water tables**. We emphasize that there are instances in which properties subject to excess wetness (which is a defined agricultural limitation in the Land Capability Classification for Agriculture in B.C. MOE Manual 1)³ but are not on designated floodplains. In an effort to disambiguated, the City of Richmond Flood Plain Designation and Protection Bylaw No. 8204 defines a floodplain⁴ as:

"Floodplain means a lowland area, whether or diked or floodproofed, which, by reasons of land elevation, is susceptible to flooding from an adjoining watercourse, river, ocean, lake or other body of water, and that is designated as flood plain in Part 1 of this bylaw"

Whereas lands with excess wetness are resulting from a regionally high water table, either as a result of low elevation or due to a low-permeability soil-layer below ground, resulting in water that percolates through the soil and causes limitations to planting-season (i.e. early) machine access to the lands; ability to realize two crop-rotations within the prevalent climatic conditions in City of Richmond that allow for such; and also survivability of perennial crops.

The excess wetness experienced on these properties (due to high water tables) results in agricultural limitations that we believe can be improved by placement of a mineral soil layer to elevate the growing medium (which is typically, salvaged topsoil native to the property). The significance of the AEM Code to this stance is described as follows.

AEM CODE – PURPOSE AND SECTIONS OF NOTE

The AEM Code is a new regulation that falls under the Environmental Management Act (the 'Act')⁵. According to an expert with the British Columbia Organic Grower (Journal for The Certified Organic Associations of B.C.)⁶, it was developed as the old code (the Agricultural Waste Control Regulation, AWCR)

³ <u>https://www.alc.gov.bc.ca/assets/alc/assets/library/agricultural-</u> <u>capability/land capability classification for agriculture in bc 1983.pdf</u> Land Capability Classification for Agriculture in British Columbia. MOE Manual 1. Accessed January 28, 2020

⁴ <u>https://www.richmond.ca/_shared/assets/Bylaw 8204_0410201225280.pdf</u> Bylaw 8204 Flood plain designation and protection bylaw. City of Richmond. Accessed January 28, 2020

⁵ <u>http://www.bclaws.ca/civix/document/id/complete/statreg/03053_00</u> Environmental Management Act. BC Laws. Accessed January 28, 2020

⁶ <u>http://bcorganicgrower.ca/2019/09/ask-an-expert-a-new-agricultural-environmental-management-regulation/</u> Ask An Expert: A New Agricultural Environmental Management Regulation. Published: September 1, 2019. Accessed January 28, 2020

was believed to be too vague for farm operators to follow and was not adequately protecting the environment. This expert with the Ministry of Environment & Climate Change Strategy (MoECSS) further stated:

"The new regulation includes provisions that aim to: ensure watercourses and groundwater are protected through proper storage and use of manure, other nutrient sources, and other materials, such as wood residue; prevent water quality impacts from contaminated run-off; prohibit direct discharges into watercourses; require nutrient management planning; allow for increased monitoring in high-risk areas; provide clear compliance expectations for agricultural operators for setbacks, storage, and nutrient applications; and, require record-keeping."

The AEM Code therefore ensures that agricultural practices do not impact drinking water, watercourses, air, or public health. According to the AEM Code⁷:

"...for the purpose of minimizing the introduction of waste into the environment and preventing adverse impacts to the environment and human health, this code requires persons to use environmentally responsible and sustainable agricultural practices when carrying out agricultural operations described in subsection (3)"

Section 2 (2) This code applies to an agricultural operation described in subsection (3) that is carried out in British Columbia

(a) on

(i) an agricultural land base that is owned, rented or leased, and managed, by the person who carries out the agricultural operation, and

(ii) land that is not zoned for residential purposes, and

(b) primarily for the purpose of distributing agricultural products to other persons, whether

(i) directly or indirectly,

(ii) with or without a fee, or

(iii) on a commercial or non-commercial basis.

Section 2 (3) Subject to subsection (4), the following are agricultural operations for the purposes of this code:

(a) rearing and keeping livestock or poultry, and growing and harvesting agricultural products, for

(i) consumption or use by humans, including as food, fibre or fuel,

(ii) use as animal feed,

⁷ <u>http://www.bclaws.ca/civix/document/id/complete/statreg/8_2019#division_d1e5540</u> Code of Practice For Agricultural Environmental Management. BC Laws. Accessed January 28, 2020

(iii) use as breeding stock or to produce seedlings or flowers,

(iv) use in landscaping or for ornamental purposes, in the case of plants, or

(v) work or recreational purposes, in the case of horses;

(b) storing

(i) nutrient sources and agricultural by-products, and

(ii) the primary products of livestock, poultry, insects, plants and fungi;

(c) carrying out agricultural composting processes;

(d) applying nutrient sources to land;

- (e) washing, grading or packaging agricultural products, if carried out on the same agricultural land base as the livestock or poultry were reared or kept or the agricultural products were grown or harvested;
- (f) disposing of or incinerating mortalities and processing wastes, if carried out on the same agricultural land base as the livestock or poultry were reared or kept;
- (g) operating equipment in relation to

(i) an activity referred to in this subsection, or

(ii) other activities in relation to agriculture, other than processing primary products beyond the activities described in paragraph (e).

Section 2 (4) The following are **not** agricultural operations for the purposes of this code:

- (a) aquaculture and activities described in subsection (3) that are carried out in respect of aquaculture;
- (b) soil blending operations that bring manure, sand or other materials onto a parcel of land for the purpose of producing soil for use other than on that parcel.

Therefore, there are properties in the ALR that are not agricultural operations under the AEM Code. The majority of the Lower Mainland (including the entirety of Richmond) is identified as a High-Risk Area⁸ under

⁸https://governmentofbc.maps.arcgis.com/apps/MapSeries/index.html?appid=c16cde73574c43da87 7674f423304ae9 High Precipitation Areas Map Tool. Government of B.C. Accessed January 28, 2020

the AEM Code due to high precipitation, which is defined as 600 mm or more of precipitation between October 1st and April 30th.

The AEM Code stipulates that:

"a person must <u>not</u> apply nutrient sources to land:

- (a) in a high-precipitation area during the period that begins on November 1 and that ends on February 1 of the next year,
- (b) during strong, divergent windy conditions, unless the nutrient sources are applied
 - (i) below the soil surface, or
 - (ii) under a crop canopy having a height of at least 8 cm,
- (c) during storm events, or periods of short-term intense or high rainfall, or
- (d) during any high-risk conditions that are identified by a director under this Part and are relevant to the application of nutrient sources to land.
- (2) A person must not apply nutrient sources, other than wood residue, to land in a highprecipitation area during February, March or October unless both of the following conditions are met:
 - (a) the nutrients are needed by, and will be available to, the intended crop;
 - (b) a risk assessment is made in accordance with subsection (4) before application begins.
- (3) Without limiting subsection (2), a person may apply nutrient sources to bare soil in a high-precipitation area in the fall only if the following conditions are met:
 - (a) a crop is planted before the winter non-growing season begins;
 - (b) the application is to medium or fine-textured soils with a low risk of leaching;
 - (b) the nutrients will not enter a watercourse or go below the seasonal high water table.
- (4) A person must prepare a risk assessment, in writing and in the form and manner required by a director,
 - (a) for each field to which nutrient sources are to be applied, and
 - (c) considering the special circumstances of the high-precipitation area and any high-risk conditions.

[am. B.C. Reg. 8/2019, App. 3.]

Therefore, there are limitations to applying nutrients to land in high precipitation areas, including in the City of Richmond. The application window is smaller than elsewhere in the province where annual precipitation is not as high.

Furthermore, in Division 4, Nutrient Application and Management of the AEM Code, Section 49:

- (1) A person must not apply nutrient sources to land
 - (a) on which there is standing water or water-saturated soil,
 - (b) on ground in which the top 5 cm of soil is frozen so as to be impenetrable to manuallyoperated equipment,
 - (c) on a field having at least 5 cm of ice or snow over at least 50% of its area, or
 - (d) at a rate of application, under meteorological, topographical or soil conditions, or in a manner, that may cause nutrient sources or contaminated runoff, leachate or solids to enter a watercourse⁹, cross a property boundary or go below the seasonal high water table.
- (2) A person must not apply to land a material described in any of paragraphs (e) to (g) of the definition of "nutrient source" unless the material is treated, provided, used or produced, as applicable, in accordance with this code and the applicable regulation referred to in those paragraphs.

This requirement under the AEM code, combined with high precipitation in Richmond, further limits windows for nutrient applications that may be necessary for an agricultural operation.

SIGNIFICANCE OF THE AEM CODE TO COR AGRICULTURAL LAND

Based on our experience assessing the agricultural capability of agricultural land in the CoR, and subsequently preparing soil deposit plans to elevate properties subject to excess wetness¹⁰, we have determined the following:

⁹ Such as a ditch – the CoR defines all ditches in the city as watercourses.

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- 1 There are several areas within CoR that are not subject to seasonal floodwaters (i.e. the classic definition of floodplain), but are generally low-lying (1 to 5 m above sea level), with fine-texture subsoil (such as silty clay loams) or bedrock which prevents vertical drainage into the subsurface;
- 2 The lack of vertical drainage coupled to the regionally high water table in the low-lying areas results in poor conveyance (i.e. local drainage) of water **out** of these areas which is not otherwise improvable through installation of subsurface drain-tiles due to said drain-tile outfalls being **below** the water table; and
- **3** Pump-works may supress the local elevation of water table, however the water will be required to be pumped to an area that will:
 - a. Receive the waters and not impact other agricultural lands; and
 - b. Receive the waters and not allow them to be communicated back to the field via subsurface or displacement within the regional drainage works.

Unfortunately, pump works are generally suitable for bermed (or dyked) areas, such as floodplains, whereby the inundation/excess water is not congruent with the regional high water table. In many circumstances within the CoR, the issue is more so related to high water table and regional conveyance rather than point-specific short-duration inundation-water sources (i.e. flooding during the late spring freshet of the Fraser River) that pumping is ideally suited to resolve.

With a known issue of regionally high water tables and the AEM Code disambiguation below, Dr. Elliot's interpretation is that land application of nutrient sources within certain land-parcels of CoR will be disallowed (under the AEM Code) until such time as the high water table does not allow direct transmission of nutrient sources/nutrient to adjacent watercourses, which – in some circumstances – would result in the land parcel and agricultural operation falling under one or more of the following categories:

- A. A complete mismatch of nutrient application timing window with crop needs (common case);
- B. A disallowance of nutrient application during the early planting season (moderate case);
- C. An outright disallowance of nutrient application during the growing season (worst case);

If only Category A is applicable, then the land is not suited to grow the operational crop or the crop will be limited to one rotation when two or more is possible based on all other factors, and the question then reverts to the standard soil importation decision making process. If Category B and C are applicable, then the portion of land determined to be limited by the excess water condition is essentially sterilized for agriculture –forcing importation of soil as the only reasonable pathway toward improving agricultural capability (due to either ineffectiveness of other options, as described in our Determinations 1 - 3 above).

The next question is how to distinguish what restrictions are resulting from AEM Code based on field-based evidence. For example, Madrone prepared a Land Capability for Agriculture assessment for an ALR property in the CoR to determine the type of agricultural limitation(s) that exist on Site. From that assessment, we found the native Lulu Soil Series (an organic Terric Mesisol – formed in areas of high groundwater and low

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conveyance) overlies dense, fine-grained deltaic sediments (silt, clay). This essentially forms 'a bathtub' under the whole area.

Therefore, since the area described in the above example is not subject to seasonal floodwater (i.e. Fraser River freshet) and is instead subject to **seasonal high water table** (Land Capability Classification for Agriculture, LCA Class 'W' limitation), the AEM Code applies and limits application of nutrient sources to Category A (timing mismatch) and potentially C (complete disallowance) circumstances as indicated above, whereas Category B does not apply due to the intended perennial crops (that by definition, live for more than two years and after harvest, do not need to be replanted every year).

We believe that there are lands in the ALR which would benefit greatly from importation of soil so long as adequate (if not excessive, to account for Changing Climate) compensation of regional drainage capacity (through enlarged ditching requirements, such as installation of canals instead of ditches) is included in the process as a requirement.

Such a tactic would still result in increased (productive) agricultural lands, and increased capability for agriculture of said lands, while addressing the most common objection to soil importation, which is that regional drainage/flooding will be negatively impacted.

MINISTRY OF ENVIRONMENT & CLIMATE CHANGE STRATEGY RESPONSE

Dr. Thomas Elliot, P.Ag. has requested input from Margaret Crowley, M.Sc., P.Ag. with the Ministry of Environment & Climate Change Strategy (MoECCS). Ms. Crowley is one of the authors of the AEM Code.

Her perspective, as interpreted from written correspondence to Dr. Elliot, is that:

- Inundation due to flooding does not discount application of nutrient sources (fertilizers, compost, wood residue, etc.), which allows for continued use of floodplains as agricultural lands;
- Seasonal high water table at, near or above ground surface **would however**, restrict land application of nutrient sources both during times of water table above ground surface (which is not surprising, as fertilizing standing water isn't effective), but also during period of generally high water table whereby precipitation/infiltration/dispersion would result in direct transmission of nutrients to groundwater/nearby watercourse.

CONCLUSIONS

The Code of Practice for Agricultural Environmental Management in a regulation under the Environmental Management Act. The regulation was made law in the province in February of 2019. As such, it is less than one year old and may not be a familiar regulation to consultants nor to municipal staff tasked with a preparing and reviewing relevant development applications in the ALR, respectively.

CNCL – 324 MADRONE ENVIRONMENTAL SERVICES LTD.
MICHAEL MORIN TECHNICAL MEMORANDUM - AEM CODE PAGE 9 MARCH 9, 2020

Dr. Thomas Elliot of Madrone has reviewed the AEM Code and has found that the combination of high precipitation in the municipality of Richmond (which results in it being defined as a High Risk Area according to AEM Code criteria) and high seasonal water tables in many low-lying agricultural areas (that are not necessarily located on floodplains) results in very narrow windows for nutrient applications for agricultural operators of said lands.

In instances where agricultural operators and landowners wish to improve excess wetness due to high seasonal water tables by raising their land via soil importation, we believe special consideration should be made by the CoR of how the AEM Code may impact that particular property (and the proposed agricultural operation, if not pre-existing).

Prepared by:

*This

Jessica Stewart, P.Ag., P.Geo. on behalf of:

CC *This is a digitally signed dup 3030 official manually signed and lon

Thomas Elliot, PhD, P.Ag., P.Geo.

Attachment 13



1081 Canada Ave Duncan, BC V9L 1V2 p. 250.746.5545 f. 250.746.5850 #202 – 2790 Gladwin Road Abbotsford, BC V2T 4S7 p. 604.504.1972 f. 604.504.1912

> info@madrone.ca www.madrone.ca

March 9, 2020

Mr. Michael Morin, Soil Bylaw Officer & Planning and Development City of Richmond

Dear Mr. Morin

Re: Technical Memorandum: Significance of the Code of Practice for Agricultural Environmental Management (AEM Code) for low-lying agricultural land in the City of Richmond

INTRODUCTION

Madrone Environmental Services Ltd. (Madrone) is a multi-disciplinary scientific consulting firm with offices in both the Fraser Valley (Abbotsford) and Duncan, B.C. Since 2009, agrologists at our firm have prepared land capability assessments, soil deposit assessments (for both non-farm use and farm-use soil deposition on ALR Land), farm plans¹, and reclamation plans (including soil testing for contaminants, invasive species screening, fill removal plans) for landowners of properties in the City of Richmond (CoR, or 'the city'). Most, if not all, of these properties have been in the Agricultural Land Reserve (ALR).

Madrone continues to work with CoR planners and bylaw officers on such projects as a consultant and agent for applications by the respective landowners. Recently, Thomas Elliot, P.Ag. of Madrone has been engaged with the city in interpreting the significance of a new provincial regulation called the Code of Practice for Agricultural Environmental Management (AEM Code).

The AEM Code came into effect on February 28, 2019 and applies to all agricultural operations in the province². We emphasize that this applies to agricultural <u>operations</u> – not all agricultural land in the ALR has agricultural operations conducted on site (i.e. the land is completely fallow with no nutrient inputs, or the operation on site is not defined as an applicable agricultural operation in the AEM Code – the exact definition

¹ Madrone's first agricultural-related project in the City of Richmond was a farm plan prepared for the Shia Muslim Community of B.C. (8580 No. 5 Road, Richmond).

² <u>https://www2.gov.bc.ca/gov/content/environment/waste-management/industrial-waste/agriculture</u> Agricultural Environmental Management. Province of B.C. Accessed January 28, 2020

MICHAEL MORIN TECHNICAL MEMORANDUM - AEM CODE

is in this memo, below). This code replaces the former Agricultural Waste Control Regulation (AWCR) for the province.

We (Jessica Stewart, P.Ag. and Thomas Elliot PhD, P.Ag.) at Madrone believe that the AEM Code should be considered when reviewing soil deposit applications for properties in the ALR, specifically, properties that are low-lying with little topographic relief and are subject to **high water tables**. We emphasize that there are instances in which properties subject to excess wetness (which is a defined agricultural limitation in the Land Capability Classification for Agriculture in B.C. MOE Manual 1)³ but are not on designated floodplains. In an effort to disambiguated, the City of Richmond Flood Plain Designation and Protection Bylaw No. 8204 defines a floodplain⁴ as:

"Floodplain means a lowland area, whether or diked or floodproofed, which, by reasons of land elevation, is susceptible to flooding from an adjoining watercourse, river, ocean, lake or other body of water, and that is designated as flood plain in Part 1 of this bylaw"

Whereas lands with excess wetness are resulting from a regionally high water table, either as a result of low elevation or due to a low-permeability soil-layer below ground, resulting in water that percolates through the soil and causes limitations to planting-season (i.e. early) machine access to the lands; ability to realize two crop-rotations within the prevalent climatic conditions in City of Richmond that allow for such; and also survivability of perennial crops.

The excess wetness experienced on these properties (due to high water tables) results in agricultural limitations that we believe can be improved by placement of a mineral soil layer to elevate the growing medium (which is typically, salvaged topsoil native to the property). The significance of the AEM Code to this stance is described as follows.

AEM CODE – PURPOSE AND SECTIONS OF NOTE

The AEM Code is a new regulation that falls under the Environmental Management Act (the 'Act')⁵. According to an expert with the British Columbia Organic Grower (Journal for The Certified Organic Associations of B.C.)⁶, it was developed as the old code (the Agricultural Waste Control Regulation, AWCR)

³ <u>https://www.alc.gov.bc.ca/assets/alc/assets/library/agricultural-</u> <u>capability/land capability classification for agriculture in bc 1983.pdf</u> Land Capability Classification for Agriculture in British Columbia. MOE Manual 1. Accessed January 28, 2020

⁴ <u>https://www.richmond.ca/_shared/assets/Bylaw 8204_0410201225280.pdf</u> Bylaw 8204 Flood plain designation and protection bylaw. City of Richmond. Accessed January 28, 2020

⁵ <u>http://www.bclaws.ca/civix/document/id/complete/statreg/03053_00</u> Environmental Management Act. BC Laws. Accessed January 28, 2020

⁶ <u>http://bcorganicgrower.ca/2019/09/ask-an-expert-a-new-agricultural-environmental-management-regulation/</u> Ask An Expert: A New Agricultural Environmental Management Regulation. Published: September 1, 2019. Accessed January 28, 2020

was believed to be too vague for farm operators to follow and was not adequately protecting the environment. This expert with the Ministry of Environment & Climate Change Strategy (MoECSS) further stated:

"The new regulation includes provisions that aim to: ensure watercourses and groundwater are protected through proper storage and use of manure, other nutrient sources, and other materials, such as wood residue; prevent water quality impacts from contaminated run-off; prohibit direct discharges into watercourses; require nutrient management planning; allow for increased monitoring in high-risk areas; provide clear compliance expectations for agricultural operators for setbacks, storage, and nutrient applications; and, require record-keeping."

The AEM Code therefore ensures that agricultural practices do not impact drinking water, watercourses, air, or public health. According to the AEM Code⁷:

"...for the purpose of minimizing the introduction of waste into the environment and preventing adverse impacts to the environment and human health, this code requires persons to use environmentally responsible and sustainable agricultural practices when carrying out agricultural operations described in subsection (3)"

Section 2 (2) This code applies to an agricultural operation described in subsection (3) that is carried out in British Columbia

(a) on

(i) an agricultural land base that is owned, rented or leased, and managed, by the person who carries out the agricultural operation, and

(ii) land that is not zoned for residential purposes, and

(b) primarily for the purpose of distributing agricultural products to other persons, whether

(i) directly or indirectly,

(ii) with or without a fee, or

(iii) on a commercial or non-commercial basis.

Section 2 (3) Subject to subsection (4), the following are agricultural operations for the purposes of this code:

(a) rearing and keeping livestock or poultry, and growing and harvesting agricultural products, for

(i) consumption or use by humans, including as food, fibre or fuel,

(ii) use as animal feed,

⁷ <u>http://www.bclaws.ca/civix/document/id/complete/statreg/8 2019#division d1e5540</u> Code of Practice For Agricultural Environmental Management. BC Laws. Accessed January 28, 2020

(iii) use as breeding stock or to produce seedlings or flowers,

(iv) use in landscaping or for ornamental purposes, in the case of plants, or

(v) work or recreational purposes, in the case of horses;

(b) storing

(i) nutrient sources and agricultural by-products, and

(ii) the primary products of livestock, poultry, insects, plants and fungi;

(c) carrying out agricultural composting processes;

(d) applying nutrient sources to land;

- (e) washing, grading or packaging agricultural products, if carried out on the same agricultural land base as the livestock or poultry were reared or kept or the agricultural products were grown or harvested;
- (f) disposing of or incinerating mortalities and processing wastes, if carried out on the same agricultural land base as the livestock or poultry were reared or kept;
- (g) operating equipment in relation to

(i) an activity referred to in this subsection, or

(ii) other activities in relation to agriculture, other than processing primary products beyond the activities described in paragraph (e).

Section 2 (4) The following are **not** agricultural operations for the purposes of this code:

- (a) aquaculture and activities described in subsection (3) that are carried out in respect of aquaculture;
- (b) soil blending operations that bring manure, sand or other materials onto a parcel of land for the purpose of producing soil for use other than on that parcel.

Therefore, there are properties in the ALR that are not agricultural operations under the AEM Code. The majority of the Lower Mainland (including the entirety of Richmond) is identified as a High-Risk Area⁸ under

⁸https://governmentofbc.maps.arcgis.com/apps/MapSeries/index.html?appid=c16cde73574c43da87 7674f423304ae9 High Precipitation Areas Map Tool. Government of B.C. Accessed January 28, 2020

the AEM Code due to high precipitation, which is defined as 600 mm or more of precipitation between October 1^{st} and April 30^{th} .

The AEM Code stipulates that:

"a person must <u>not</u> apply nutrient sources to land:

- (a) in a high-precipitation area during the period that begins on November 1 and that ends on February 1 of the next year,
- (b) during strong, divergent windy conditions, unless the nutrient sources are applied
 - (i) below the soil surface, or
 - (ii) under a crop canopy having a height of at least 8 cm,
- (c) during storm events, or periods of short-term intense or high rainfall, or
- (d) during any high-risk conditions that are identified by a director under this Part and are relevant to the application of nutrient sources to land.
- (2) A person must not apply nutrient sources, other than wood residue, to land in a highprecipitation area during February, March or October unless both of the following conditions are met:
 - (a) the nutrients are needed by, and will be available to, the intended crop;
 - (b) a risk assessment is made in accordance with subsection (4) before application begins.
- (3) Without limiting subsection (2), a person may apply nutrient sources to bare soil in a high-precipitation area in the fall only if the following conditions are met:
 - (a) a crop is planted before the winter non-growing season begins;
 - (b) the application is to medium or fine-textured soils with a low risk of leaching;
 - (b) the nutrients will not enter a watercourse or go below the seasonal high water table.
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[am. B.C. Reg. 8/2019, App. 3.]

Therefore, there are limitations to applying nutrients to land in high precipitation areas, including in the City of Richmond. The application window is smaller than elsewhere in the province where annual precipitation is not as high.

Furthermore, in Division 4, Nutrient Application and Management of the AEM Code, Section 49:

- (1) A person must not apply nutrient sources to land
 - (a) on which there is standing water or water-saturated soil,
 - (b) on ground in which the top 5 cm of soil is frozen so as to be impenetrable to manuallyoperated equipment,
 - (c) on a field having at least 5 cm of ice or snow over at least 50% of its area, or
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- (2) A person must not apply to land a material described in any of paragraphs (e) to (g) of the definition of "nutrient source" unless the material is treated, provided, used or produced, as applicable, in accordance with this code and the applicable regulation referred to in those paragraphs.

This requirement under the AEM code, combined with high precipitation in Richmond, further limits windows for nutrient applications that may be necessary for an agricultural operation.

SIGNIFICANCE OF THE AEM CODE TO CoR AGRICULTURAL LAND

Based on our experience assessing the agricultural capability of agricultural land in the CoR, and subsequently preparing soil deposit plans to elevate properties subject to excess wetness¹⁰, we have determined the following:

⁹ Such as a ditch – the CoR defines all ditches in the city as watercourses.

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- 1 There are several areas within CoR that are not subject to seasonal floodwaters (i.e. the classic definition of floodplain), but are generally low-lying (1 to 5 m above sea level), with fine-texture subsoil (such as silty clay loams) or bedrock which prevents vertical drainage into the subsurface;
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- A. A complete mismatch of nutrient application timing window with crop needs (common case);
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If only Category A is applicable, then the land is not suited to grow the operational crop or the crop will be limited to one rotation when two or more is possible based on all other factors, and the question then reverts to the standard soil importation decision making process. If Category B and C are applicable, then the portion of land determined to be limited by the excess water condition is essentially sterilized for agriculture –forcing importation of soil as the only reasonable pathway toward improving agricultural capability (due to either ineffectiveness of other options, as described in our Determinations 1 - 3 above).

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Therefore, since the area described in the above example is not subject to seasonal floodwater (i.e. Fraser River freshet) and is instead subject to **seasonal high water table** (Land Capability Classification for Agriculture, LCA Class 'W' limitation), the AEM Code applies and limits application of nutrient sources to Category A (timing mismatch) and potentially C (complete disallowance) circumstances as indicated above, whereas Category B does not apply due to the intended perennial crops (that by definition, live for more than two years and after harvest, do not need to be replanted every year).

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MINISTRY OF ENVIRONMENT & CLIMATE CHANGE STRATEGY RESPONSE

Dr. Thomas Elliot, P.Ag. has requested input from Margaret Crowley, M.Sc., P.Ag. with the Ministry of Environment & Climate Change Strategy (MoECCS). Ms. Crowley is one of the authors of the AEM Code.

Her perspective, as interpreted from written correspondence to Dr. Elliot, is that:

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CONCLUSIONS

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MICHAEL MORIN TECHNICAL MEMORANDUM - AEM CODE PAGE 9 MARCH 9, 2020

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Prepared by:



Jessica Stewart, P.Ag., P.Geo. on behalf of:

*This is a digitally signed dup 3030 official manually signed an

Thomas Elliot, PhD, P.Ag., P.Geo.

MADRONE ENVIRONMENTAL SERVICES LTD.

Analysis of Perimeter Ditch Water from Property Located at 8511 #6 Road, Richmond, BC

BCAA Legal: SEC 20 BLK4N RG5W PL 3109 Parcel A, Subsidy Lot 3, (J71246E)

Richmond File # 12-624176

Prepared for:

Bohan Jiang

Prepared by:

Bun MCZ

Bruce McTavish, MSc MBA, PAg, RPBio. McTavish Resource & Management Consultants Ltd. 2858 Bayview St. Surrey, B.C. V4A 3Z4 bmct@intergate.ca

and

Hubert Timmenga, PhD, PAg, CMC Timmenga & Associates Inc 292 E 56 Avenue, Vancouver BC V5X 1R3 htimmenga@telus.net

March 4 2015

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1.0 Introduction

The following report is the final report in a series of reports prepared by McTavish Resource & Management Consultants Ltd. on the property located at 8511 No 6 Road in Richmond BC. The series of reports are to provide information to the City of Richmond and the Agricultural Land Commission with respect to an application to import fill and topsoil onto the subject property. The following documents have been submitted to the City of Richmond:

- Original fill application was submitted in October 25, 2012 including supporting Agrologist's report;
- Reply letter from the City of Richmond December 13, 2012:
- Report on site drainage and leachate submitted December 14, 2013;
- Letter on wheel wash procedures submitted on December 15, 2013; and
- Letter on road access submitted February 5, 2014.

This report contains the water sampling results from the surrounding ditches as requested by the City of Richmond as part of due diligence review for the proposal import fill and topsoil to the subject property This property contains historic buried wood waste that is estimated to be at least 30 years old. The remediation plan proposes to further cap the buried wood waste with topsoil and to direct surface run-off water to the municipal ditch system along No 6 Road.¹ The City of Richmond was concerned that any seepage from the historic buried wood waste would enter the municipal drainage system.

The site contains wood waste varying in depth of over 3 m at the east side of the property to 0.5m at the west side as shown during previous excavation and soil testing that was performed by McTavish Management and Consulting Ltd. The historic wood waste is covered with a layer of 0.2 - 0.5m of topsoil. The previous excavation results showed that the wood waste was virtually non-decomposed indicating that it is kept waterlogged in stagnant low oxygen water and was well preserved. An access road is present alongside the north lateral ditch and may restrict water flow to that ditch due to soil compaction.

Wood waste can exude leachate when water is percolating through it. Wood waste leachate is toxic to fish (Samis et. al, 1999)², has a high chemical oxygen demand and contains tannins and lignin (Tao et.al.

¹ McTavish B., H. Timmenga, 2012. Proposed Remediation of Land Located at 8511 #6 Road Richmond, BC. ² Samis, S.C, S.D Liu, B.G. Wernick and M.D. Nassichuk, 1999. Mitigation of fisheries impacts from the use and disposal of wood residue in British Columbia and the Yukon. Can. Tech. Rep. Fish. Aquat. Sci. 2296: viii and 91p. Part 1: <u>http://www.for.gov.bc.ca/hfd/library/ffip/Samis_SC1999_pt1.pdf;</u> Part 2: <u>http://www.for.gov.bc.ca/hfd/library/ffip/Samis_SC1999_pt2.pdf</u>.

McTavish Resource & Management Consultants Ltd.

2005).³ Both COD and tannins and lignin have been implicated in fish toxicity (Samis et.al., 1999). Metals have not been reported as an issue in wood waste leachate (Frankowski, 2000).⁴

2.0 Methodology

In order to check whether wood waste leachate was affecting the water in the lateral drainage ditches and to compare water quality in these ditches with the quality of water in the main City of Richmond ditch draining the area, water samples were taken in December 2014, during the Lower Mainland's wet period. Samples were analysed for the parameters that are characteristic for wood waste leachate. Emphasis was given to the potential toxicity of such leachate.

Samples were taken for the following tests:

- Fish toxicity (pass-fail test);
- Chemical oxygen demand;
- Tannins and lignins; and
- Total metals.

All sample analyses were performed by Maxxam Laboratories in Burnaby BC.

3.0 Results

Sampling took place December 8, 2014. The site was dry, and the lateral ditches to the north and south of the property contained water that was clear but yellow-brown in colour. The ditches contained organic matter in the form of grass and leaves. Both ditches appear stagnant at the time of sampling, and water smelled anaerobic. Dissolved Oxygen in these ditches appeared low at 1.6 and 2.4mg/Ł (see Maxxam Reports in Appendix I). The main drainage ditch to the west of No 6 Road was also sampled, both up-stream and down-stream of the subject property, beyond the existing drains of the lateral drainage ditches from the subject property. The main City of Richmond ditch flows north to south along the west side of No. 6 Road. Water in the City of Richmond ditch was clear and light yellow-brown in colour. The ditch contained organic matter and green plant growth. The dissolved oxygen was moderate at 4.9 and 5.8 mg/L.

The following results were obtained from the ditch water sampling. Results were compared with the wood waste leachate characteristics outlined in Tao et al, 2005. While Tao lists a range of concentrations for differently aged wood waste, we have selected the values of aged wood waste leachate (5 year old) as a comparison.

³ Tao W., Ken J.Hall, A Masbough, K Frankowiski, and Sheldon J.B. Duff, 2005. Characterization of Leachate from a Woodwaste Pile. Water Quality Research Journal of Canada, Vol 40. No4:476-483. <u>https://www.cawa.,</u> <u>q.ca/journal/temp/article/279.pdf</u>

⁴ Frankowsski, K.A., 2000. The Treatment of Wood Leachate Using Constructed Wetlands. MSc Thesis University of British Columbia. <u>https://circle.ubc.ca/handle/2429/10463</u>

Parameter	North Ditch on Subject Property	South Ditch On Subject Property	No. 6 Road Ditch Up-stream of Subject Property	No. 6 Road Ditch Down- stream of Subject Property	Typical wood waste leachate (5 year old pile; Tao et al, 2005)
Fish toxicity	pass	pass	pass	pass	Fail
COD	199	171	67	70	3908
Tannin/Lignin	9.09	8.18	4.04	3.65	1100

Table 1 Primary Ditch Water Quality Parameters

 b_i

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Table 2 Total Metals in Water Samples

I III III IIII IIII IIII IIIII IIIIII IIII	
Sampling Date 2014/12/08 10:30 2014/12/08 2014/12/08 2014/12/08	
Onits NORTH SOUTH OPSTREAM DOWNSTREAM	KDL
	0 50
Iotal Hardness (CaCO3) mg/L 129 75.7 60.0 64.4	0,50
Iotal Aluminum (Al) Ug/L 868 791 752 647	3,0
Total Antimony (Sb) Ug/L <0.50 <0.50 <0.50	0,50
Total Arsenic (As) ug/L 3.08 1.24 1.21 1.29	0.10
Total Barium (Ba) ug/L 36.8 27.6 25.4 24.8	1,0
Total Beryllium (Be) ug/L <0.10 0.11 <0.10	0.10
Total Bismuth (Bi) ug/L <1.0 <1.0 <1.0	1,0
Total Boron (B) ug/L <50 <50 <50	50
Total Cadmium (Cd) ug/L 0.063 0.037 0.138 0.111	0.010
Total Chromium (Cr) ug/L 2.7 1.8 1.7 1.6	1,0
Total Cobalt (Co) ug/L 5.79 2.22 5.15 5.03	0.50
Total Copper (Cu) ug/L 5.19 12.6 6.03 5.76	0.50
Total Iron (Fe) ug/L 9330 4990 1310 1280	10
Total Lead (Pb) ug/L 1.20 1.44 0.66 0.56	0.20
Total Lithium (Li) ug/L <5.0 <5.0 <5.0	5.0
Total Manganese (Mn) ug/L 746 275 109 145	1.0
Total Mercury (Hg) ug/L <0.050 <0.050 <0.050	0.050
Total Molybdenum (Mo) ug/L <1.0 <1.0 <1.0	1.0
Total Nickel (NI) ug/L 12.3 4.9 11.1 11.6	1.0
Total Selenium (Se) ug/L 0.25 0.12 0.10 <0.10	0.10
Total Silicon (SI) ug/L 11700 7990 5580 5140	100
Total Silver (Ag) ug/L <0.020 <0.020 <0.020	0,020
Total Strontlum (Sr) ug/L 167 105 78.3 91.4	1.0
Total Thallium (TI) ug/L <0.050 <0.050 <0.050 <0.050	0.050
Total Tin (Sn) ug/L <5.0 <5.0 <5.0 <5.0	5.0
Total Titanium (Ti) ug/L 20.7 11.7 7.0 5.6	5.0
Total Uranium (U) ug/L 0.12 <0.10 0.14 0.14	0.10
Total Vanadium (V) ug/L. 7.4 <5.0 <5.0 <5.0	5.0
Total Zinc (Zn) ug/L 24.8 14.8 26.6 67.9	5.0
Total Zirconium (Zr) ug/L 0.83 <0.50 <0.50 0.52	0.50
Total Calcium (Ca) mg/L 31.9 20.6 15.3 16.1	0.050
Total Magnesium (Mg) mg/L 11.9 5.89 5.28 5.88	0.050
Total Potassium (K) mg/L 7.20 4.74 5.97 7.15	0.050
Total Sodium (Na) mg/L 17.7 3.57 5.33 6.72	0.050
Total Sulphur (S) mg/L 18.3 4.8 9.6 13.4	3.0

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Table 3 Guidelines for Total Metals in Water

	Units	CCME Irrigation ⁵	CCME Livestock	Canada Drinking Water ug/L ⁶	Exceed?
Calculated Parameters					
Total Hardness (CaCO3)	mg/L				
Total Metals by ICPMS					
Total Aluminum (Al)	ug/L	5000	5000		
Total Antimony (Sb)	ug/L			6	
Total Arsenic (As)	ug/L	100	25	10	
Total Barium (Ba)	ug/L			1000	
Total Beryllium (Be)	ug/L				
Total Bismuth (Bi)	ug/L				
Total Boron (B)	ug/L		5000		
Total Cadmium (Cd)	ug/L	5.1	80	5	
Total Chromium (Cr)	ug/L	8/4.9	50/50	50	
Total Cobalt (Co)	ug/L	50	1000		
Total Copper (Cu)	ug/L	200-1000	500-5000		
Total Iron (Fe)	ug/L	5000			North ditch likely due to natural conditions
Total Lead (Pb)	ug/L	200	100	10	
Total Lithium (Li)	ug/L	2500			
Total Manganese (Mn)	ug/L	200			North/south likely due to natural conditions
Total Mercury (Hg)	ug/L		3	1	
Total Molybdenum (Mo)	ug/L		500		
Total Nickel (Ni)	ug/L	200	1000		
Total Selenium (Se)	ug/L		50	50	
Total Silicon (Si)	ug/L				
Total Silver (Ag)	ug/L			· .	
Total Strontium (Sr)	ug/L				
Total Thallium (TI)	ug/L				
Total Tin (Sn)	ug/L				
Total Titanium (Ti)	ug/L				
Total Uranium (U)	ug/L	10	200	20	
Total Vanadium (V)	ug/L	100	100		
Total Zinc (Zn)	ug/L		50,000		
Total Zirconium (Zr)	ug/L				

⁵ Water Quality Guidelines for the Protection of Agriculture - CCME current document. <u>http://st-ts.ccme.ca/en/index.html</u> accessed December 19, 2014

⁶ Guidelines for Canadian Drinking Water Guidelines – current table. <u>http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/sum_guide-res_recom/index-eng.php#t2</u> accessed December 19, 2014

Total Calcium (Ca)	mg/L		
Total Magnesium (Mg)	mg/L		
Total Potassium (K)	mg/L		
Total Sodium (Na)	mg/L		
Total Sulphur (S)	mg/L		

4.0 Discussion

- 1) Ditch water in the lateral ditches and in the No 6 Road drainage ditch is not toxic to fish.
- 2) The COD in all ditch water is well below that in aged wood waste leachate; No guidelines for COD have been set.
- 3) The colour of the water in both lateral ditches and in the main City of Richmond drainage ditch is yellow brown, which is to be expected in an area with natural peat deposits and in stagnant ditches.
- 4) The tannins and lignin concentration in all ditch water is well below the typical values for aged wood waste leachate. Tannins and lignins are well below the BC Drinking water working criteria of 400ug/L, ⁷ but none is listed in the BC Approved Water Quality Guidelines.⁸
- 5) All metals in ditch water are below the Canada Drinking Water standard. Only iron and manganese may be over the irrigation or livestock guidelines, however samples reflect total metals, not dissolved metals, which typically are lower. The iron and manganese may be related to clay particles in the water sample or to the soil on the property that may be naturally high in iron or manganese. Metals are not typically related to wood waste leachate.

5.0 Conclusion

Sampling results have shown that the quality of the ditch water of the lateral drainage ditches on the subject property and in the main City of Richmond ditch is not affected by wood waste leachate and is not toxic to fish.

⁷ Nagpal, N.K., L.W. Pommen, L.G. Swain, 2006. A Compendium of Working Water Quality Guidelines for British Columbia. BC Ministry of Environment, Science and Information Branch – Water Quality. http://www.env.gov.bc.ca/wat/wg/BCguidelines/working.html Accessed December 22, 2014.

⁸ http://www2.gov.bc.ca/gov/topic.page?id=044DD64C7E24415D83D07430964113C9

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Appendix I Laboratory Results

Maxiam

RESULTS OF RAINBOW TROUT 96 HR LC50 @ 100%

Success Through Sciences

Client : Client Broject N	ent : 9844 Corporate Client - Maxxam Burnaby Job Number: B4B12								B4B1245		
Clent Project N	ame & Numb	217									
96 hrs LC50 % v	ro]/vo] (95% C	L): >100 (N/A)	Statistica	Method:	Visual						
Sample Name :	NORT	н									
Description:		dark amber						Sample	Number:	LI1685	-04
Sample Collecte	ed:	Dec 08, 2014 1	0:30 AM	Sampling	Method :		N/A	Site Co	llection:	N/A	
Sample Collecte	ad By:	N/A		Volume Re	eceived:		1 x 20CB	Temp.	Upon Arriva	al: 11 °C	Storage: 1-7 °C
Sample Receive	d;	Dec 08, 2014 0	2:00 PM	pH:			5.7	Dissolv	ed Oxygen	; 1.6 mg	/L
Analysis Start :		Dec 09, 2014 1	2:30 PM	Temperat	ure:		14.9 °C	Sample	e Conducta	nce: 283 µS	/cm²
Concentration	Temperature (°C)	Temperature (°C)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (mg/L)	pН	рH	Conductivity uS/cm²	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	
% vol/vol	Initial	96 hrs	Initial	96 hrs	Initial	96 hrs	Initial	96 hrs	96 hrs	96 hrs	
0	15.2	15.0	10.0	9.6	7.1	7.2	36	0	0	0	
100	14.9	15.0	7.2	9.6	6.0	7.8	280	0	0	0	
<u>Comments :</u>	At test initiat appeared an	ion the fish in 1 d behaved norr	00% conce nalily.	entration w	ere surfaci	ng and ł	ad slow respir	ration. For	the remain	der of the t	est all fish
Culture/Contro	I/Dilution Wa	ter	Burnaby N	lunicipal De	echlorinate	d Water	······				
Hardness (EDTA	(Method):		20 mg/L C	aťØ ₄		Otl	ner parameter	s avallable	on request	L.	
Test Condition	£		Test con	centration	; 0,	100 %1	vol/vol)				
Organisms per 1	Vessel :	10		Test Tempe	erature :	15 ±	±1'C	Solution [Depth :		>15 cm
Total # of Organ	nisms Used :	20		Pre-aeratio	n Time :	60 s	ոյս՝	Rate of Pr	re-aeration	:	6.5±1 mL/min/L
Test Volume :		15 L		Vessel Volu	ime :	201		Test pH A	djusted:		No
Loading Density	/ :	0.33 g/	L	Photoperio	d:	16:8	3 (light: dark)				
Test Organism	i Ra	inbow Trout	Oncorhynd	hus mykiss) Sourc	e;	Lyndon Fish H	atcheries li	nc.		······
Culture Tempe	rature :	15±2°C	W	/eight (Mea	n) +- SD :	0.5	50 ± 0.13 g	Leng	th (Mean)	+- SD :	4.01 ± 0.35 cm
Culture Water I	Renewal :	≥ 11/min/kg	fish W	eight (Rang	(e):	0.3	85 - 0.82 g	Leng	th (Range)	:	3.50–4.70 cm
Culture Photop	eriod :	16:8 (light: d	lark)					% M	ortality with	hin 7 days :	0.25%
Feeding rate ar	nd frequency :	daily: 1	L-5% bioma	ass of trout.							
Reference cher	nical:			Zinc			Test Date:			Nov 17.	2014
Test Endpoint 9	6 hrs LC50 (95	% confidence i	nterval) :	0.16	(0.13, 0.20) mg/L	Statistical N	iethod :		Untrim Kärber	ned Spearman-
Historical Mean	1C50 (warnin	g limits) :		0.11	(0.05, 0.24) mg/L	Concentrati	on: 0,0.04	,0.08,0.16,	0.32,0.64 m	g/L
Test Method		Maxxar	n's BBY2SC	0P-00004 is	based on t	he lates	t versions of E	PS 1/RM/9	, EPS 1/RM	/13, and EP	S 1/RM/50.
Method Deviati	ions :	None.									
Note: The r	esults contain	ed in this repor	t refer only	/ to the test	ing of the :	samples	submitted. Thi	s report ma	ay not be re	eproduced,	except in its
Analyst :	Michael Bras	sil	voror ale								
		A .									
	ftt	mala									
Verified By :	Kimberly Tar	naki, BBY QA Co	oordinator					I	Date:	Dec 17, 2	014 01:21 PM

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RESULTS OF RAINBOW TROUT 95 HR LC50 @ 100%

Client: 9844 Corporate Client - Maxxam Burnaby Job Number: B4B1245 Client Project Name & Number: Test Result: 96 hrs LC50 % vol/vol (95% CL): >100 (N/A) Statistical Method: Visual Sample Name : SOUTH Description: Sample Number: 111686-04 dark amber Sample Collected: Dec 08, 2014 10:30 AM Sampling Method : N/A Site Collection: N/A Sample Collected By: 1 x 20CB N/A Volume Received: Temp.Upon Arrival: 11 °C Storage: 1-7 °C Sample Received: Dec 08, 2014 02:00 PM pH: 5.5 Dissolved Oxygen: 2.4 mg/L Analysis Start : Dec 09, 2014 12:30 PM 14.8 'C Sample Conductance: 166 µS/cm² Temperature : Dissolved Dissolved Atypical Conductivity Temperature Temperature Mortality Mortality Concentration Oxygen Oxygen pН pН Rehavior ('C) (°C) uS/cm² (#) (%) (#) (mg/L) (mg/L) % vol/vo) Initial 96 hrs Initial 96 hrs lnitial 96 hrs Initial 96 hrs 96 hrs 96 hrs 0 15.2 15.0 36 0 10.0 9.6 7.1 7.2 0 0 100 14.9 15.1 7.1 9.6 5.8 7.7 164 0 0 0 Comments : At test initiation the fish in 100% concentration were surfacing, and had slow respiration, For the remainder of the tests all fish appeared and behaved normally. Burnaby Municipal Dechlorinated Water Culture/Control/Dilution Water 20 mg/L CaCO₃ Hardness (EDTA Method): Other parameters available on request. Test Conditions Test concentration : 0,100 (% vol/vol) Organisms per Vessel : 10 Test Temperature : 15±1°C Solution Depth : >15 cm Total # of Organisms Used : 20 Pre-aeration Time : 60 min. Rate of Pre-aeration : 6.5±1 mL/min/L Test Volume ; 15 L Vessel Volume : Test pH Adjusted: 20L No Loading Density : 0.33 g/L Photoperiod : 16:8 (light: dark)

Test Organism :	Rainbow Trout (Oncorh	ynchus mykiss) Source :	Lyndon Fish Hat	cheries Inc.	
Culture Temperature :	15 ± 2 °C	Weight (Mean) +- SD :	0.50 ± 0.13 g	Length (Mean) +- SD :	4.01 ± 0.35 cm
Culture Water Renewal :	≥ 1L/min/kg fish	Weight (Range) :	0.35 – 0.82 g	Length (Range) :	3.50 - 4.70 cm
Culture Photoperiod :	16:8 (light: dark)			% Mortality within 7 da	ys; 0.25%
Feeding rate and frequen	cy : daily: 1-5% bio	omass of trout.			
Reference chemical:		Zinc	Test Date:	Nov	17, 2014
Test Endpoint 96 hrs LC50	(95% confidence interval)	; 0.16 (0.13, 0.20) m	ng/L Statistical Me	thod : Unt Kāri	rimmed Spearman- ber
Historical Mean LC50 (war	ming limits) :	0.11 (0.06, 0.24) m	ng/L Concentration	a : 0,0.04,0.08,0.16,0.32,0.1	64 mg/L

Test Method Maxxam's BBY2SOP-00004 is based on the latest versions of EPS 1/RM/9, EPS 1/RM/13, and EPS 1/RM/50. Method Deviations : None,

The results contained in this report refer only to the testing of the sample submitted. This report may not be reproduced, except in its Note: entirety, without the written approval of the laboratory.

Michael Brassil Analyst :

Wenali

Verified By :

Kimberly Tamaki, BBY QA Coordinator

Date:

Dec 17, 2014 01:22 PM

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RESULTS OF RAINBOW TROUT 96 HR LC50 @ 100% Success Through Science* Client: 9844 Corporate Client - Maxxam Burnaby Job Number: B4B1245 Client Project Name & Number: Test Result: 96 hrs LC50 % vol/vol (95% CL): >100 (N/A) Statistical Method: Visual Sample Name : UPSTREAM LI1687-04 light amber Sample Number: Description: Sample Collected: Dec 08, 2014 10:30 AM Sampling Method : N/A Site Collection: N/A Sample Collected By: N/A Volume Received: 1 x 20CB Temp.Upon Arrival: 11 °C Storage: 1-7 °C Sample Received: Dec 08, 2014 02:00 PM pH: 5.6 Dissolved Oxygen: 4.9 mg/L Analysis Start : Dec 09, 2014 12:10 PM Temperature : 14.9 °C Sample Conductance: 135 µS/cm² Dissolved Dissolved Atypical Temperature Conductivity Mortality Temperature Mortality Concentration рH вH Oxygen Oxygen Behaviou (°C) (°C) uS/cm² (%) (#) (#) (mg/L)(mg/l) % voi/vol Initial 96 hrs Initial 95 hrs Initial 96 hrs Initial 96 hrs 96 hrs 96 hrs 0 15.2 15.0 10.0 9.6 7.1 72 36 0 0 Ø 100 15.1 15.2 7.1 9.4 5.9 7.5 134 0 0 0 All fish appeared and behaved normally during the test. <u>Comments :</u> Culture/Control/Dilution Water Burnaby Municipal Dechlorinated Water Hardness (EDTA Method): 20 mg/L CaCO₃ Other parameters available on request. Test Conditions Test concentration : 0,100 (% vol/vol) Organisms per Vessel : 10 Test Temperature : 15±1 °C Solution Depth : >15 cm 20 6.5±1 mL/min/L Total # of Organisms Used : Pre-aeration Time : 40 min. Rate of Pre-aeration : Test Volume : 15 L Vessel Volume : Test pH Adjusted: 201 No Loading Density : 0.33 g/L Photoperiod : 16:8 (light: dark) Lyndon Fish Hatcheries Inc, Rainbow Trout (Oncorhynchus mykiss) Source : Test Organism : 0,50±0,13 g Culture Temperature : 15±2 °C Weight (Mean) +- SD : Length (Mean) +- SD : 4.01 ± 0.35 cm 0.35 - 0.82 g3.50-4.70 cm **Culture Water Renewal :** ≥ 11/min/kg fish Weight (Range) : Length (Range) : **Culture Photoperiod :** 16:8 (light: dark) % Mortality within 7 days : 0.25% daily: 1-5% biomass of trout. Feeding rate and frequency : Nov 17, 2014 Reference chemical: Zinc Test Date: Test Endpoint 96 hrs LC50 (95% confidence interval) : Untrimmed Spearman 0.16 (0.13, 0.20) mg/L Statistical Method : Kärber Historical Mean LC50 (warning limits) : 0.11 (0.05, 0.24) mg/L Concentration: 0,0.04,0.08,0.16,0.32,0.64 mg/L Test Method Maxxam's BBY2SOP-00004 is based on the latest versions of EPS 1/RM/9, EPS 1/RM/13, and EPS 1/RM/50. **Method Deviations :** None. The results contained in this report refer only to the testing of the sample submitted. This report may not be reproduced, except in its Note: entirety, without the written approval of the laboratory. Analyst: Michael Brassil Kemala Verified By : Kimberly Tamaki, BBY QA Coordinator Date: Dec 17, 2014 01:24 PM

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RESULTS OF RAINBOW TROUT 96 HR LC50 @ 100%

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•*											
Client :	9844	Corporate	e Client - M	laxxam Buri	naby				lop	Number:	B4B1245
Client Project N	lame & Numbe	er:									
Test Result:											
96 hrs LC50 % v	iol/vot (95% Cl	l): >100 (N/A)	Statistica	Methods	Visual						
Sample Name :	DOW	VSTREAM									
Description:		light amber						Sample	Number:	Li1688	-04
Sample Collecto	≥d;	Dec 08, 2014 1	0:30 AM	Sampling I	Method :		N/A	Site Co	llection:	N/A	
Sample Collecto	ed By:	N/A		Volume Re	eceived:		1 x 20CB	Temp.l	Jpon Arriva	al: 11 °C	Storage: 1-7 °C
Sample Receive	ed:	Dec 08, 2014 0	2:00 PM	pH:			5.7	Dissolv	ed Oxygen	: 5.8 mg	ı∕L
Analysis Start :		Dec 09, 2014 1	2:00 PM	Temperate	ure :		14.9 °C	Sample	Conducta	nce: 152 µS	/cm 2
Concentration	Temperature (°C)	Temperature (°C)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (Ing/L)	рН	рН	Conductivity uS/cm²	Mortality (II)	Mortality (%)	Atypical Behaviour (#)	
% vol/vol	Initial	96 hrs	Initial	96 hrs	tnitial	95 hrs	Initial	96 hrs	96 hrs	96 hrs	
0	15.2	15.0	10.0	9.6	7.1	7.2	36	0	0	0	
100	15.1	15.2	7.3	9.4	6.1	7.5	151	0	0	0	1
Comments :	All fish appea	red and behav	ed normall	y during the	e test.		L			l	1
Culture/Contro	/Dilution Wat		Burnaby N	unicipal De	chlorinate	d Wate	•				
Hardness (FDTA	Method):	<u></u>	20 mg/l. C	1011101pa1 D0 9CO	cintormate		er narameter	s available	on request		
		· · · · · · · · · · · · · · · · · · ·						5 dvallable	onrequest		
Test Condition:	<u>s</u>		Test con	centration :	: 0,	100 (%)	/ol/vol)				
Organisms per V	Vessel :	10		Test Temps	erature :	15 5	:1°C	Solution I	Depth :		>15 cm
Total # of Organ	tisms Used :	20		Pre-aeratio	n Time :	30 r	nin.	Rate of Pr	e-aeration	:	6.5±1 mL/min/L
lest volume :		151		vessel volu	ime:	201	At	lest pH A	djusted:		No
Loading Density	/:	U.33 g/	L	Photoperio	a ;	16:0	(light: dark)				
Test Organism	: Ra	inbow Trout (Oncorhync	hus mykiss	Sourc	e:	Lyndon Fish H	atcheries in	IC.		
Culture Temper	rature ;	15±2 °C	W	eight (Mea	n}+-SD:	0.5	50±0,13 g	Leng	th (Mean)	+- SD :	4.01 ± 0.35 cm
Culture Water	Renewal :	≥1L/min/kg	fish W	eight (Rang	;e):	0,3	15—0.82 g	Leng	th (Range)	1	3.50 – 4.70 cm
Culture Photop	eriod :	16:8 (light: c	lark)	. .				% Mo	ortality with	hin 7 days :	0.25%
reeding fate an	a frequency :	daily: 3	-5% bioma	iss of trout.							
Reference cher	nical:			Zinc			Test Date:			Nov 17,	2014
Test Endpoint 9	6 hrs LC50 (95	% confidence i	nterval) :	0.16	(0.13, 0.20) mg/L	Statistical N	lethod :		Untrim Kärber	med Spearman-
Historical Mean	LC50 (warning	g limits) :		0.11	(0.06, 0.24) mg/L	Concentrati	on : 0,0.04	,0.08,0.16,	0.32,0.64 m	ng/L
Test Method		Маххал	n's BBYZSQ	P-00004 1s	based on t	he lates	t versions of E	PS 1/RM/9	EPS 1/RM	/13, and EP	S 1/RM/50.
Method Devlati	onsi	None.									
Note: The r	esults containe	ed in this report	t refer only	to the test	ing of the s	ample s	ubmitted. Thi	s report ma	y not be re	eproduced,	except in its
entire Analust :	ety, without th Michael Bras	e Written aprro ril	val of the l	aboratory,							
VII 6 1 4 5 1	1411444444										
	KA	Imali									
Verified By :	Kimberly Tan	naki, BBY QA Co	ordinator					I)ate:	Dec 17, 2	014 01:28 PM

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Your C.O.C. #: G102417

Attention:Hubert Timmenga Timmenga & Associates 292 E 56 Ave Vancouver, BC CANADA V5X 1R3

> Report Date: 2014/12/17 Report #: R1718510 Version: 1 - Final

CERTIFICATE OF ANALYSIS

<u>MAXXAM IOB #: B4B1245</u> Received: 2014/12/08, 14:00

Sample Matrix: Water # Samples Received: 4

Encryption Koy

		Date	Date		
Analyses	Quantity	Extracted	Analyzed	Laboratory Method	Analytical Method
COD by Colorimeter	4	2014/12/09	2014/12/10	BBY6SOP-00024	SM 22 5220 D m
Hardness Total (calculated as CaCO3)	4	N/A	2014/12/17	BBY7SOP-00002	EPA 6020a R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	2014/12/08	2014/12/17	BBY7SOP-00002	EPA 6020A R1 m
Elements by CRC ICPMS (total)	4	2014/12/11	2014/12/16	BBY7SOP-00002	EPA 6020A R1 m
Rainbow Trout 96 hr LC50 @ 100%	4	N/A	2014/12/09	BBY250P-00004	EPS 1/RM/13 m
Tannin & Lignin (Total)	4	N/A	2014/12/11	BRN SOP-00221 R1.0	SM-5550 B

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Share all ner Stance Aktor 19 Dec 2014 11:18:03-08:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager. Shanaz Akbar, Project Manager Ernail: SAkbar@maxcan.ca Phone# [604] 734 7276

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signaturies", as per section 5.30.2 of ISO/JEC 17625:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total Cover Pages : 1 Page 1 of 7

Maxxam Analytics International Corporation o/a Maxam Analytics Burnaby: 4606 Canada Way VSG 1KS Telephone(604) 734-7276 Fav(604) 731-2326



Maxxam Job #: B4B1245 Report Date: 2014/12/17

Timmenga & Associates

Success Through Sciences

Maxxam ID		LI1685	L/1686	LI1687	LI1688		
Complian Data		2014/12/08	2014/12/08	2014/12/08	2014/12/08		
agaithing nace		10:30	10:30	10:30	10:30		
COC Number		G100417	G100417	G100417	G100417		
	Units	NORTH	SOUTH	UPSTREAM	DOWNSTREAM	RDL	QC Batch
Demand Parameters							
Chemical Oxygen Demand	mg/L	199	171	67	70	10	7747711
MISCELLANEOUS	,						
Tannins and Lignins	mg/L	9.09	8.18	4.08 (1)	3.65	0.10	7750831
Rainbow Trout Bioassay					••••••••••••••••••••••••••••••••••••••		
LC50	% vol/vol	ATTACHED	ATTACHED	ATTACHED	ATTACHED	N/A	7756260
RDL = Reportable Detection L	imit						
N/A = Not Applicable							
(1) Matrix Spike invalid due to	o high sampl	e concentration.					

RESULTS OF CHEMICAL ANALYSES OF WATER

Max <u>a</u>m

Maxxam Job #: B4B1245 Report Date: 2014/12/17

Success Through Science»

Timmenga & Associates

Maxam 1D		L11685	LI1686	LI1687	LJ1688			
Sampling Date		2014/12/08	2014/12/08	2014/12/08	2014/12/08			
Sambring pare		10:30	10:30	10:30	10:30			
COCNumber		G100417	G100417	G100417	G100417			
	Units	NORTH	SOUTH	UPSTREAM	DOWNSTREAM	RDL	QC Batch	
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	129	75.7	60.0	64,4	0.50	7746841	
Total Metals by ICPMS	•					.		
Total Aluminum (Al)	ug/L	868	791	752	647	3.0	7750767	
Total Antimony (Sb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	7750767	
Total Arsenic (As)	ug/L	3,08	1.24	1.21	1.29	0.10	7750767	
Total Barium (Ba)	ug/L	36.8	27.6	25.4	24.8	1.0	7750767	
Total Beryllium (Be)	ug/L	<0.10	<0.10	0.11	<0.10	0.10	7750767	
Total Bismuth (Bi)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	7750767	
Total Boron (B)	ug/L	<50	<50	<50	<50	50	7750767	
Total Cadmium (Cd)	ug/L	0.063	0.037	0.138	0.111	0.010	7750767	
Total Chromium (Cr)	ug/L	2.7	1.8	1.7	1.6	1.0	7750767	
Total Cobalt (Co)	ug/L	5.79	2.22	5.15	5.03	0,50	7750767	
Total Copper (Cu)	ug/L	5.19	12.6	6.03	5.76	0.50	7750767	
Total Iron (Fe)	ug/L	9330	4990	1310	1280	10	7750767	
Total Lead (Pb)	ug/L	1.20	1.44	0.66	0.56	0.20	7750767	
Total Lithium (Li)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	7750767	
Total Manganese (Mn)	ug/L	746	275	109	145	1.0	7750767	
Total Mercury (Hg)	ug/L	<0.050	<0.050	<0.050	<0,050	0.050	7750767	
Total Molybdenum (Mo)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	7750767	
Total Nickel (Ni)	ug/L	12.3	4.9	11.1	11.6	1.0	7750767	
Total Selenium (Se)	ug/L	0.25	0,12	0.10	<0.10	0.10	7750767	
Total Silicon (Si)	ug/L	11700	7990	5580	5140	100	7750767	
Total Silver (Ag)	ug/L	<0.020	<0.020	<0.020	<0.020	0.020	7750767	
Total Strontium (Sr)	ug/L	167	105	78.3	91.4	1.0	7750767	
Total Thallium (TI)	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	7750767	
Total Tin (Sn)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	7750767	
Total Titanium (Ti)	ug/L	20.7	11.7	7.0	5,6	5.0	7750767	
Total Uranium (U)	ug/L	0.12	<0.10	0.14	0.14	0.10	7750767	
Total Vanadium (V)	ug/L	7.4	<5.0	<5.0	<5.0	5.0	7750767	
Total Zinc (Zn)	ug/L	24,8	14.8	26.6	67,9	5.0	7750767	
Total Zirconium (Zr)	ug/L	0.83	<0.50	<0,50	0.52	0,50	7750767	
Total Calcium (Ca)	mg/L	31.9	20.6	15.3	16,1	0.050	7746842	
Total Magnesium (Mg)	mg/L	11.9	5.89	5.28	5.88	0.050	7746842	
Total Potassium (K)	mg/L	7.20	4.74	5.97	7.15	0.050	7746842	
Total Sodium (Na)	mg/L	17.7	3.57	5.33	6.72	0.050	7746842	
Total Sulphur (S)	mg/L	18.3	4.8	9.6	13.4	3.0	7746842	
RDL = Reportable Detection L	init							

CSR TOTAL METALS IN WATER (WATER)

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Marzam Anelytics International Corporation of a Alasonic Analytics Burnaby: 4606 Canada Way VSG 1K5 Telephone(604) 734-7276 Fax(604) 731-2346

Max am

Maxxam Job #: B4B1245 Report Date: 2014/12/17 Timmenga & Associates

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1 11.3°C

Results relate only to the items tested.

Page 4 of 7 Mawam Analytics anismistional Corporation of a Mauzan Analytica Barraby: 4666 Casada Way VS G 115 Telephone(604) 734-7376 Fax\004) 731-2356

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OUALITY ASSURANCE REPORT

Məlrix Spike Spiked Blank Method Blank RPD QC Batch Parameter Date % Recovery | QC Limits % Recovery QCLimits Vakie Units Value (%) QC Limits 7747711 Chemical Oxygen Demand 2014/12/10 95 80-120 107 80-120 <10 mg/L NC 20 7750767 Total Aluminum (Al) 2014/12/16 107 80~120 116 80-120 <3.0 ug/L NC 20 7750767 Total Antimony (Sb) 2014/12/16 109 80-120 112 80-120 <0.50 ug/L NC 20 2014/12/16 7750767 Total Arsenic (As) 100 80-120 105 80-120 <0.10 og/L NC 20 7750767 Total Barium (Ba) 2014/12/16 80-120 102 104 80 - 120 <1.0 КC 20 ug/L 7750767 Total Beryllium (Be) 2014/12/15 104 80-128 105 80-120 <0.10 NC 20 ug/L 7750767 Total Bismuth (Bi) 2014/12/16 108 80~120 103 80~120 <1.0 NC 20 ug/L 7750767 Total Boron (8) 2014/12/16 <50 ug/L NC 20 7750767 Total Cadmium (Cd) 2014/12/16 103 60-120 102 80-120 <0.010 ug/L NC 20 Total Chromlum (Cr) 2014/12/16 7750767 112 80-120 101 80-120 <1.0 NC Ug/L 20 7750767 Total Cobalt (Co) 2014/12/16 105 80 - 120 80-120 20 100 <0.50 NC ug/L 7750767 Total Copper (Cu) 2014/12/15 105 80 - 120 110 80-120 <0.50 ug/L NC 20 7750767 Total Iron (Fe) 2014/12/16 NC 80-120 113 80-120 <10 ug/L 11 20 7750767 Total Lead (Pb) 2014/12/16 107 80-120 103 80-120 <0.20 ug/Լ NC 20 7750767 Total Ulhium (U) 2014/12/15 80~120 102 102 80-120 <5.0 NC 20 ug/L 7750757 Total Manganese (Mn) 2014/12/15 NC 80~120 80-120 <1.0 20 108 5,9 ug/L 7750767 Total Mercury (Hg) 2014/12/16 113 80 - 120 114 80-120 <0.050 ug/L 7750767 Tatel Malybdenum (Mo) 2014/12/16 104 80-120 115 80-120 <1.0 ug/L NC 20 7750767 Total Nickel (NI) 2014/12/15 104 80-120 105 80 - 120 <1.0 ug/L NC 20 7750767 Total Selenium (Se) 2014/12/16 98 80-120 NC 103 80~120 <0.10 ug/L 20 7750767 Total Silicon (Si) 2014/12/16 <100 13 20 ug/L Total Silver (Ag) 7750767 2014/12/16 90 80-120 92 80-120 <0.020 NC 20 ug/L 7750767 Total Stronburn (Sr) 2014/12/16 NC 80-120 104 80 - 120 <1.0 ug/L 10 20 7750767 Total Thailium (TI) 2014/12/16 100 80-120 92 80-120 <0.050 Ug/L NC 20 2014/12/16 7750757 80-120 Total Tin (Sn) 107 114 80-120 NC <5.0 ug/L 20 7750767 Total Titanium (TI) 2014/12/16 80-120 84 80-120 20 99 <5.0 NC ug/L 7750767 Total Uranium (U) 2014/12/16 105 80-120 100 80-120 <0.10 NC 20 ug/L 7750767 Total Vanadium (V) 2014/12/16 103 80-120 98 80-120 <5.0 υg/L NC 20 7750767 Tatal Zinc (Zn) 2014/12/16 NC 80~120 101 80-120 <5.0 Ug/L NC 20 7750767 Total Zirconium (Zr) 2014/12/16 <0.50 ug/L NC 20

Page S of 7

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Timmenga & Associates



QUALITY ASSURANCE REPORT(CONT'D)

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Timmenga & Associates

Report Date: 2014/12/37										
			Matrix	Spike	Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QCLimits	Value	Units	Value (%)	QC Limits
7750831	Tennins and Lignins	2014/12/11	NC	80~120	95	8Q-12Q	<0.10	mg/L	0.78	20
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.										
Matrix Spite: A sample to which a known amount of the analyte of Interest has been added. Used to evaluate sample matrix Interference.										
Spiked Blank: A blank matrix sample to which a known amount of the enalyte, usually from a second source, has been added. Used to evaluate method accuracy.										
Method Blank: A blank matrix containing all respents used in the analytical procedure. Used to identify laboratory contamination.										
NC (Matrix Spite): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spited amount was too small to permit a relative recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).										
NG (Bupicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or dupicate was too low to permit a reliable RPD calculation (one or both samples < Sx RDL).										

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\$4 1/3y 152 2 13 Telephone(164) 734-7278 Fra(464/731-2324

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Company Manie: TIUMCA GA & ASSOC ADDRY Marray Contact Marray: TIUMCA GA & ASSOC ADDRY Marray Contact Marray: HUBCH_TIMMENOA Midvin D. 2012 ESTO ADDR Unrod Marray Prove / Fave, Prove / Stalls Prove / Stalls Prove / Fave, Prove / Stalls Prove / Stalls Prove / Fave, Prove / Stalls Prove / Stalls	Hepon To: HUbert TIM MCHAH no bog -321 - 1242 holim Hengt & delus ket	PO 8: Occubio 8: Polyes 9: Polyes 9: Polyes 9: Locator. Surgest 0: Surgest 0: Surg
CSIN		
Sampio Idontification I NORTH II ON WATER IN BUILDING 2 JOUTH II ON WATER IN BUILDING 3 UP STREEM TONG WATER AM 4 DOWNSNEAM II ON TARK AND 5 DOWNSNEAM II ON TARK AND 5 DOWNSNEAM II ON TARK		
		B4B1245 B4B1245

McTavish Resource & Management Consultants Ltd.

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RESOLUTION

WHEREAS:

- A. The City of Richmond has recently invested in the purchase and installation of cameras for placement at 110 intersections and wishes to expand the program; and
- B. Regulations have been imposed by the Privacy Commissioner for BC on the intersection camera program as the result of which the resolution on pictures taken by such cameras has been set very low to prevent identification of vehicle license plate numbers and/or personnel occupying the vehicles, thus reducing the use of the images for the purpose of full timely criminal investigation and/or providing evidence in court; and
- C. In the region, there have been a number of incidents of gang-related violence involving fatal shootings while using motor vehicles in the commission of the offences and the consequent threat to personal safety; and
- D. These incidents demonstrate the potential use of intersection cameras and the resulting images for successful, timely investigation and prosecution of violent offenders; and
- E. The members of any level of government are charged with ensuring the safety of citizens;

THEREFORE BE IT RESOLVED THAT a letter be written to the Solicitor General for the Province of BC with copies to Richmond MLAs seeking a meeting, as soon as possible, to address the issue of undue regulation on the use of intersection cameras in public places and the images generated including:

- a. Appropriate use of high resolution images on such devices including for the purposes of criminal investigation and prosecution; and
- b. Judicial or other oversight on the use of the images to prevent misuse.

Bylaw 9788



Richmond Zoning Bylaw 8500 Amendment Bylaw 9788 (RZ 17-778570) 10011 Seacote 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 of the following area and by designating it "COMPACT SINGLE DETACHED (RC2)".

P.I.D. 009-228-535 Lot 12 Section 36 Block 4 North Range 6 West New Westminster District Plan 23314

2. This Bylaw may be cited as "Richmond Zoning Bylaw 8500, Amendment Bylaw 9788".

FIRST READING

A PUBLIC HEARING WAS HELD ON

SECOND READING

THIRD READING

OTHER CONDITIONS SATISFIED

ADOPTED

_	NOV 2 7 2017	CITY OF RICHMOND
_	DEC 1 8 2017	
	DEC 1 8 2017	APPROVED
	DEC 1 8 2017	by Director or Solicitor
_	MAY 1 0 2021	DR

MAYOR

CORPORATE OFFICER



Bylaw 9981



Richmond Zoning Bylaw 8500 Amendment Bylaw 9981 (ZT18-818164) 5660 Parkwood Way

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

- 1. Richmond Zoning Bylaw 8500, is amended by appending the following text to section 10.7.4.1 of the "Vehicle Sales (CV)" zone:
 - "e) 0.84
 5660 Parkwood Place
 P.I.D. 029-514-037
 Lot 3 Section 5 block 4 North Range 5 West New Westminster District Plan
 EPP47268 Except Part in Plan EPP78324"
- 2. This Bylaw may be cited as "Richmond Zoning Bylaw 8500, Amendment Bylaw 9981".

FIRST READING	JAN 28 2019	CITY OF RICHMOND
PUBLIC HEARING	FEB 1 9 2019	APPROVED by
SECOND READING	FEB 1 9 2019	APPROVED by Director
THIRD READING	FEB 1 9 2019	R
MINISTRY OF TRANSPORTATION APPROVAL	JUN 1 4 2019	
OTHER CONDITIONS SATISFIED	MAY 1 7 2021	
ADOPTED		

MAYOR

CORPORATE OFFICER







Richmond Zoning Bylaw 8500 Amendment Bylaw 10082 (RZ 17-763712) 9571, 9591, 9611, 9671 Steveston Highway & 10831 Southdale 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 of the following area and by designating it **"LOW DENSITY TOWNHOUSES (RTL4)".**

P.I.D. 003-885-208
Lot 138 Section 34 Block 4 North Range 6 West New Westminster District Plan 36731
P.I.D. 007-371-977
Lot 139 Section 34 Block 4 North Range 6 West New Westminster District Plan 36731
P.I.D. 007-371-985
Lot 140 Section 34 Block 4 North Range 6 West New Westminster District Plan 36731
P.I.D. 004-984-897
Lot 1 Section 34 Block 4 North Range 6 West New Westminster District Plan 15745
P.I.D. 004-113-934

Lot 2 Section 34 Block 4 North Range 6 West New Westminster District Plan 15745

2. This Bylaw may be cited as "Richmond Zoning Bylaw 8500, Amendment Bylaw 10082".

FIRST READING	SEP 2 3 2019	CITY OF RICHMOND
A PUBLIC HEARING WAS HELD ON	OCT 2 1 2019	APPROVED by
SECOND READING	OCT 2 1 2019	APPROVED by Director or Solicitor
THIRD READING	OCT 2 1 2019	
OTHER CONDITIONS SATISFIED	MAY 1 2 2021	
ADOPTED	•	

MAYOR

CORPORATE OFFICER




Minutes

Development Permit Panel Wednesday, May 12, 2021

Time: 3:30 p.m.

Place: Remote (Zoom) Meeting

Present: Cecilia Achiam, Chair Peter Russell, Director, Sustainability and District Energy James Cooper, Director, Building Approvals

The meeting was called to order at 3:30 p.m.

Minutes

It was moved and seconded That the minutes of the meeting of the Development Permit Panel held on April 28, 2021 be adopted.

CARRIED

1. DEVELOPMENT PERMIT 18-829082 (REDMS No. 6616241 v. 5)

APPLICANT:	Forest International Real Estate Investment Company Ltd.		
PROPERTY LOCATION:	10231, 10251, 10351, 10371, 10391, 10395 and 10397 No. 2 Road		

INTENT OF PERMIT:

- 1. Permit the construction of 22 townhouse units at 10231, 10251, 10351, 10371, 10391, 10395 and 10397 No. 2 Road on a site zoned "Low Density Townhouses (RTL4); and
- 2. Vary the provisions of Richmond Zoning Bylaw 8500 to reduce the front yard setback along No. 2 Road from 6.0 m to 4.83 m.

Applicant's Comments

Jiang Zhu, Imperial Architecture, with the aid of a visual presentation (copy on file, City Clerk's office), provided background information on the proposed development, including among others, its site context, design rationale, site layout, building elevations and sections, façade treatments, and building materials and colours, highlighting the following:

- three three-storey buildings are proposed at the front (along No. 2 Road) and five two-storey buildings in duplex form are proposed along the rear of the site;
- the end unit of the three-storey building adjacent to the south property line has been stepped down to two-storeys to provide an appropriate transition to the adjacent single-family homes;
- a separate utility building is proposed which includes an electrical room and garbage and recycling room;
- the proposed development includes four ground-level secondary suites and two convertible units;
- a single driveway provides vehicle access to the site from No. 2 Road and a northsouth internal drive aisle is proposed;
- there is a statutory right-of-way over the internal drive aisle to provide shared access and connection to future developments to the north and south of the subject site;
- a front yard setback variance is proposed along No. 2 Road to increase the rear yard setback;
- a side-by-side double car garage is proposed for all units;
- two colour schemes are proposed including a cold tone and a warm tone;
- proposed building materials include, among others, durable materials such as natural brick and hardie panels; and
- the proposed shared outdoor amenity area is centrally located.

Meredith Mitchell, M2 Landscape Architecture, provided an overview of the main landscape features of the project, noting that (i) alternating conifer and deciduous trees are proposed along the streetscape, (ii) each unit will either have a front or rear private outdoor space which includes a yard with a patio, shade tree and planting, (iii) permeable paving treatment is proposed for the driveway and along the entire internal drive aisle, with vehicle and pedestrian circulation areas separated through different paving patterns, (iv) landscaping is proposed around the utility building, and (v) a pedestrian walkway is provided at the driveway entry and along the south side of the subject site to provide pedestrian access to the interior of the site.

In addition, Ms. Mitchell noted that (i) trees and pockets of planting are proposed along the internal drive aisle, (ii) seven trees and a hedgerow in good condition located on neighbouring properties to the west will be retained and protected, (iii) a stepped yard system is proposed on the rear yards of majority of back units to provide protection to existing trees to be retained and enhance the usability of rear yards, (iv) the shared outdoor amenity includes, among others, a children's play area, a feature tree, a seating and barbeque area, a bike rack, lawn area and planting, (v) a low retaining wall and perimeter fencing is proposed along the north property line, and (vi) a low retaining wall with wood fencing on top is proposed along a portion of the south property line.

In reply to queries from the Panel, Mr. Zhu and Ms. Mitchell acknowledged that (i) a texture change in permeable paving treatment at the corner of the driveway and internal drive aisle is intended to provide traffic calming, (ii) there is adequate turning radius for garbage and recycling trucks at the corner of the driveway and internal drive aisle to access future developments to the north and south of the subject site, (iii) the applicant is committed to achieve the City requirements for the width of the entry doors for the convertible units, (iv) the patios at the rear yards of convertible units are accessible to people in wheelchairs, (v) signage will be installed to assist in wayfinding and provide identification to individual front entries of rear units, (vi) appropriate measures including installation of tree protection barriers will be installed to protect existing trees to be retained, (vii) the unit walkways and patios for the front units have been designed to be accessible, and (viii) the corners on the third floor of the front buildings have been recessed to break down their massing.

In reply to further queries from the Panel, Mr. Zhu noted that (i) the project's lighting plan includes installation of exterior downward focused wall-mounted lighting and bollard lighting which will not cause light pollution, (ii) air source heat pumps will be installed at the back of the rear units and on the roof of the front units, and (iii) landscaping will be installed to provide screening for the air source heat pumps on the ground level of the rear units.

It was noted that in addition to landscaping, the applicant will consider installing a solid acoustic barrier for the heat source heat pumps at ground level. Staff was then directed to work with the applicant to investigate opportunities to provide the proposed acoustic barrier.

Staff Comments

Wayne Craig, Director, Development, noted that (i) there is a Servicing Agreement associated with the project which include the construction of a new sidewalk and boulevard along the No. 2 Road frontage, (ii) the Servicing Agreement also includes the installation of a channelized median within the driveway letdown to ensure that vehicle entry/exit is limited to right-in/right-out, (iii) the proposed front yard setback variance would provide a larger rear yard setback and allow the retention of trees and hedges along the west property line, (iv) the distance from the back of curb to the building face would be approximately eight meters, and (v) an acoustical report was provided by the applicant confirming that the units will achieve Canada Home and Mortgage Corporation (CHMC) noise standards.

In reply to a query from the Panel, Mr. Craig confirmed that the proposed development achieves the grandfathering provision for Energy Step Code approved by Council.

Gallery Comments

None.

Correspondence

None.

Panel Discussion

Panel Decision

It was moved and seconded

That a Development Permit be issued which would:

- 1. permit the construction of 22 townhouse units at 10231, 10251, 10351, 10371, 10391, 10395 and 10397 No. 2 Road on a site zoned "Low Density Townhouses (RTL4); and
- 2. vary the provisions of Richmond Zoning Bylaw 8500 to reduce the front yard setback along No. 2 Road from 6.0 m to 4.83 m.

CARRIED

2. Date of Next Meeting: May 27, 2021

3. Adjournment

It was moved and seconded *That the meeting be adjourned at 4:16 p.m.*

CARRIED

Certified a true and correct copy of the Minutes of the meeting of the Development Permit Panel of the Council of the City of Richmond held on Wednesday, May 12, 2021.

Cecilia Achiam Chair Rustico Agawin Committee Clerk



Report to Council

То:	Richmond City Council	Date:	May 18, 2021
From:	Joe Erceg Chair, Development Permit Panel	File:	01-0100-20-DPER1- 01/2021-Vol 01
Re:	Development Permit Panel Meeting Held on January 15, 2020 and January 13, 2021		

Staff Recommendation

- 1. That the recommendation of the Panel to authorize the issuance of:
 - a) a Development Permit (DP 18-818161) for the property located at 5660 Parkwood Way; and
 - b) a Development Permit (DP 20-896138) for the property located at 9571, 9591, 9611, 9671 Steveston Highway and 10831 Southdale Road;

be endorsed and the Permits so issued.

pe Erce

Joe Erceg ' Chair, Development Permit Panel (604-276-4083)

WC/SB:blg

Panel Report

The Development Permit Panel considered the following items at its meetings held on January 15, 2020 and January 13, 2021.

<u>DP 18-818161 – CHRISTOPHER BOZYK ARCHITECTS LTD. – 5660 PARKWOOD WAY</u> (January 15, 2020)

The Panel considered a Development Permit (DP) application to permit the construction of a new 9,052.25 m² (96,447 ft²) three-storey vehicle dealership with a mezzanine and roof top parking on a site zoned "Vehicle Sales (CV)". Variances are included in the proposal for increased building height, reduced on-site loading spaces and reduced landscaping abutting a road along portions of the south and west property lines.

Architect, Stephen Price, of Christopher Bozyk Architects Ltd.; Robert Harrison, of Cowell Auto Group; and Landscape Architect, Kristin Defer, of Connect Landscape Architecture, provided a brief presentation, including:

- The proposed three-storey building includes, among others, spaces for automotive service, sales, administrative offices, two levels of shared customer and employee parking, and inventory storage.
- The proposed landscaping requirement variance along portions of the south and west property lines is consistent with existing automobile dealerships in the area.
- Street trees with planting underneath are installed within portions of the right-of-way (ROW) along the south property line.
- The proposed building height variance will increase the car dealership's capacity for inventory storage and reduces the demand for off-site use of industrial space.
- The proposed building height is comparable to other developments within the Richmond Auto Mall.

In reply to Panel queries, the project team advised that: (i) the proposed roof-mounted solar panels are part of Volkwagen's green initiatives and could supply an average of approximately 10 percent the building's daily energy requirements; (ii) on a sunny day, the solar panels could provide approximately one-half of the building's energy requirement; (iii) the provision of solar panels will be subject to a legal agreement on title; (iv) the proposed sloped landscape berm will reduce the apparent building mass on the north side and a portion of the west side and creates additional buffer between pedestrians and the building; (v) the landscape berm provides a landscape feature for the prominent northwest corner of the subject site and screens the service area on the ground floor; (vi) irrigation is provided for the entire landscaping on the subject site; (vii) on-site stormwater collection is not provided; (viii) lawns are not provided on the site; (ix) soft landscaping is extended onto the boulevard on City property; (xi) one electric vehicle (EV) charging station for two vehicles is proposed for shared customer and employee use and subject to a legal agreement on title; (xii) the applicant is planning to install five additional EV charging stations that are accessible to the public; and (xiii) the applicant anticipates that when the car dealership becomes operational, at least two dual EV charging stations servicing a total of four vehicles would be provided on-site.

Discussion ensued regarding the exact number of publicly accessible EV charging stations that would actually be provided for the project and the Chair advised that the applicant clarify its intention with staff prior to Council consideration of the subject application.

Staff noted that: (i) there is a Servicing Agreement associated with the project for frontage improvements along the City property adjacent to the site; (ii) the proposed building height variance is consistent with the information presented at the Public Hearing; (iii) similar building height and loading space variances have been previously granted to other automobile dealerships in the area; and (iv) the applicant will provide a contribution to the City's Public Art fund.

In reply to Panel queries, staff confirmed that: (i) a number of recent developments within the Richmond Auto Mall have exceeded the 12 m maximum building height requirement; (ii) the proposed building height variance will allow a higher utilization of the subject site and free up existing industrial lands elsewhere in the City; and (iii) the significant distance of the site from Richmond Nature Park, the limited use of glazing along the building's frontage, and the project's strategic landscaping mitigate the potential for bird strikes on the building.

The Panel expressed support for the project, noting that the project design will allow a more intensive use of the subject site and free up the City's industrial lands.

The Panel then directed staff to work with the applicant to clarify the exact number of EV charging stations accessible to the public that the applicant would actually provide when the project becomes operational.

No correspondence was submitted to the Development Permit Panel regarding the application.

Subsequent to the meeting, the applicant updated their plans to confirm that when the project becomes operational there will be six EV charging stations accessible to the public on the main level, which will serve a total of eight electric vehicles.

The Panel recommends the Permit be issued.

<u>DP 20-896138 – CLO VENTURES K2 LTD. – 9571, 9591, 9611, 9671 STEVESTON</u> <u>HIGHWAY AND 10831 SOUTHDALE ROAD</u> (January 13, 2021)

The Panel considered a Development Permit (DP) application to permit the construction of 20 townhouse units on a site zoned "Low Density Townhouses (RTL4)". A variance is included in the proposal for reduced minimum exterior side yard setback to Steveston Highway.

Architect, Jiang Zhu, of Imperial Architecture, and Landscape Architect, Meredith Mitchell, of M2 Landscape Architecture, provided a brief presentation, including:

- The proposal includes three-storey units located along Steveston Highway and two-storey rear units in compliance with the City's Arterial Road Land Use Policy.
- The three-storey units will be stepped down to two storeys at the southwest and southeast corners of the subject site.

- A significant Sycamore Maple tree at the back (north side) of the subject site will be retained and protected and integrated into the proposed common outdoor amenity area.
- The north façade of the two-storey rear units facing the neighbouring single-family homes will be articulated to provide visual interest.
- The front elevation of buildings along Steveston Highway includes, among others, bay windows, pitched roofs, and gable roofs.
- Potential shadowing will not impact adjacent developments as indicated in the shadow study.
- The project includes three secondary suites and two convertible units.
- An Agricultural Land Reserve (ALR) landscaped buffer will be installed along the south property line.
- Permeable paving treatment is proposed at the driveway entry, portions of the internal drive aisle, and outdoor parking spaces.
- The rear yards of back units will be slightly raised to provide usable space.
- The low retaining walls along the east property line will be landscaped to provide screening and visual interest from the street.
- Perimeter drainage and an irrigation system will be installed.
- The existing grade around the tree protection zone will be maintained and cantilevered building footing will be utilized for the building adjacent to the retained tree.
- The common outdoor amenity area is fully accessible and barrier-free and includes, among others, play equipment and natural play elements.
- Community gardens will be provided on-site as an additional shared outdoor amenity area.
- Deciduous and Evergreen planting are proposed along the north property line to provide a landscaped buffer to adjacent single-family homes.

Staff noted that: (i) the project includes three secondary suites; (ii) there is a Servicing Agreement associated with the project for frontage works along Steveston Highway and Southdale Road, including the installation of a physical barrier on the driveway entrance to ensure a right-in/right-out only vehicle movement; (iii) the proposed exterior side yard setback variance was identified at rezoning stage; (iv) the proposed setback variance to the exterior side yard, which functions as a front yard along Steveston Road, will result in an increased rear yard setback and accommodate the retention of the significant tree; (v) the setback from back of curb to building face is approximately 8.5 m; (vi) the applicant has provided an acoustical report indicating that the project will achieve CMHC noise standards; (vii) the project will achieve BC Energy Step Code 3; and (viii) the design of the ALR landscaped buffer is consistent with Ministry of Agriculture guidelines.

In reply to Panel queries, staff acknowledged that: (i) a substantial landscape security for the project and an arborist's contract for works conducted within the tree preservation zone will be required; and (ii) the project's arborist is required to be present on-site to supervise any work within the tree preservation area.

In reply to a Panel query, Jiang Zhu and Meredith Mitchell: (i) reviewed the proposed locations of the air source heat pumps, noting that the units will be screened and the acoustical report indicates that they comply with the City's Noise Bylaw requirements; and (ii) confirmed that the Ministry of Agriculture guidelines include restrictions on plant species allowed to be planted on the ALR buffer.

No correspondence was submitted to the Development Permit Panel regarding the application.

The Panel expressed support for the project, noting that the project was well presented and the retention of the significant tree and the proposed planting along the ALR buffer will enhance the landscaping for the project.

The Panel recommends the Permit be issued.