

AGENDA

REGULAR MEETING OF COUNCIL

Monday, April 15, 2019

7:00 p.m.

Council Chamber, Municipal Hall

355 West Queens Road,

North Vancouver, BC

Council Members:

Mayor Mike Little

Councillor Jordan Back

Councillor Mathew Bond

Councillor Megan Curren

Councillor Betty Forbes

Councillor Jim Hanson

Councillor Lisa Muri



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REGULAR MEETING OF COUNCIL

7:00 p.m.
Monday, April 15, 2019
Council Chamber, Municipal Hall,
355 West Queens Road, North Vancouver

AGENDA

BROADCAST OF MEETING

- Online at <http://app.dnv.org/councillive/>

CLOSED PUBLIC HEARING ITEMS NOT AVAILABLE FOR DISCUSSION

- Bylaw 8262 – OCP Amendment 1923 Purcell Way
- Bylaw 8263 – Rezoning 1923, 1935, 1947 and 1959 Purcell Way
- Bylaw 8369 – Rezoning 1015 Marine Drive

1. ADOPTION OF THE AGENDA

1.1. April 15, 2019 Regular Meeting Agenda

Recommendation:

THAT the agenda for the April 15, 2019 Regular Meeting of Council for the District of North Vancouver is adopted as circulated, including the addition of any items listed in the agenda addendum.

2. PUBLIC INPUT

(limit of three minutes per speaker to a maximum of thirty minutes total)

3. PROCLAMATIONS

4. RECOGNITIONS

4.1. Certificate of Appreciation

- Grouse Mountain Rescue

4.2. 2019 Heritage Awards and Design Excellence Awards

5. DELEGATIONS

6. ADOPTION OF MINUTES

6.1. April 1, 2019 Regular Council Meeting

p. 11-22

Minutes: April 1, 2019
Attachment A: Bruce Tout

Recommendation:

THAT the minutes of the April 1, 2019 Regular Council meeting are adopted.

6.2. March 5, 2019 Public Meeting

p. 23-26

Minutes: April 5, 2019

Recommendation:

THAT the minutes of the March 5, 2019 Public Meeting are received.

7. RELEASE OF CLOSED MEETING DECISIONS

8. COUNCIL WORKSHOP REPORT

9. REPORTS FROM COUNCIL OR STAFF

With the consent of Council, any member may request an item be added to the Consent Agenda to be approved without debate.

If a member of the public signs up to speak to an item, it shall be excluded from the Consent Agenda.

Recommendation:

THAT items _____ are included in the Consent Agenda and be approved without debate.

9.1. Maplewood Fire & Rescue Centre

p. 29-49

File No. 02.0720/Firehall 2

Report: Fire Chief & General Manager – Engineering, Parks & Facilities, March 20, 2019

Appendix A: Other Site Considered

Appendix B: Site

Appendix C: Excerpts from Environment Related Reports

Recommendation:

THAT the March 20, 2019 joint report from the Fire Chief and General Manager – Engineering Parks & Facilities entitled Maplewood Fire & Rescue Centre is received for information.

9.2. Delbrook Lands 2019 Planning and Engagement Process

p. 51-61

File No. 13.6440.01/000.000

Report: Community Planner, Manager – Parks and Manager – Strategic Communications, March 26, 2019

Recommendation:

THAT staff is directed to proceed with the process outlined in the April 5, 2019 joint report from the Community Planner, Manager – Parks and Manager – Strategic Communications entitled Delbrook Lands 2019 Planning and Engagement Process;

AND THAT Council select the extent of the local neighbourhood consultation area from the options below:

- a. A 100m radius from the Delbrook Lands;
- b. A 200m radius from the Delbrook Lands; OR,
- c. An alternate notification area as determined by Council.

9.3. Handsworth School Track and Field

p. 63-67

File No.

Report: Manager – Parks, March 25, 2019

Attachment 1: Architectural Drawings Handsworth Track

Recommendation:

THAT the March 25, 2019 report of the Manager – Parks entitled Handsworth School Track and Field is received for information.

9.4. Development Permit 79.18 – 1044 Edgewood Road (Handsworth Secondary School)

p. 69-198

File No. 08.3060.20/079.18

Report: Development Planner, April 3, 2019

Attachment A: DP 79.18 with Attached Drawings

Attachment B: Facilitator Report

Attachment C: Streamside Protection DPA report prepared by Diamond Head Consulting dated April 24, 2018 (updated February 12, 2019)

Attachment D: Protection of the Natural Environment DPA Report prepared by Diamond Head Consulting dated April 25, 2018 (updated January 24, 2019)

Attachment E: Wildfire Hazard DPA Report with appendix removed prepared by Diamond Head Consulting dated May 5, 2018 (updated January 22, 2019)

Attachment F: Slope Hazard Assessment Report with appendix removed prepared by EXP Services Inc. dated November 27, 2018

Attachment G: Arborist excerpt prepared by BC Plant Health Care Inc. dated October 25, 2018 (updated November 19, 2018 & February 21, 2019)

Recommendation:

THAT Development Permit 79.18, for the construction of a new Handsworth Secondary School, is ISSUED.

9.5. 2019 Centennial Bursary Trust Fund

p. 199-200

File No.

Report: General Manager – Finance & Technology/CFO, March 28, 2019

Recommendation:

THAT bursaries are awarded to seven students from the District of North Vancouver in the amount of \$775 per bursary.

9.6. Grant Funding Application – District Hall Zone Control Optimization p. 201-204
File No. 02.0740.10/000.000

Report: Energy Manager & Revenue Officer, April 5, 2019

Recommendation:

THAT the District Hall Zone Control Optimization Project and the application for grant funding through the *Investing in Canada Infrastructure Program Green Infrastructure – CleanBC Communities Fund* is supported;

AND THAT the District of North Vancouver commits to its share (\$200,000) of the total project cost of \$700,000 to be funded through the Infrastructure Reserve;

AND THAT the 2019-2023 Financial Plan be amended prior to year-end to reflect the project.

9.7. UBCM Resolution: Change the Requirements for Public Notification p. 205-223
File No.

Report: Councillor Lisa Muri, March 22, 2019

Attachment 1: UBCM Resolution

Attachment 2: Staff Report, February 23, 2015

Recommendation:

THAT the UBCM resolution regarding Change the Requirements for Public Notification attached to the March 22, 2019 report of Councillor Muri is supported;

AND THAT the resolution is to be forwarded to the UBCM for consideration as a resolution at the 2019 UBCM Convention.

9.8. UBCM Resolution: Legal Aid Funding p. 225-227
File No.

Report: Councillor Jim Hanson, March 18, 2019

Attachment 1: UBCM Resolution

Recommendation:

THAT the UBCM resolution regarding Legal Aid Funding attached to the March 18, 2019 report of Councillor Hanson is supported;

AND THAT the resolution is to be forwarded to the UBCM for consideration as a resolution at the 2019 UBCM Convention.

9.9. Naming of New Streets in Lions Gate Village p. 229-248
File No. 01.0380.20/074.000

Report: Interim Manager – Community Planning

Attachment 1: Naming Selection Criteria and Procedures Policy

Attachment 2: Lions Gate Village Naming the ‘Living Street’ – Survey Suggestions, February 2019

Attachment 3: Lions Gate Lane – Street Naming Bylaw 8372, 2018

Recommendation:

THAT “Lions Gate Lane Street Naming Bylaw 8372, 2018” is given FIRST, SECOND and THIRD Readings.

10. REPORTS

10.1. Mayor

10.2. Chief Administrative Officer

10.3. Councillors

10.4. Metro Vancouver Committee Appointees

10.4.1. Industrial Lands Strategy Task Force – Councillor Back

10.4.2. Housing Committee – Councillor Bond

10.4.3. Aboriginal Relations Committee – Councillor Hanson

10.4.4. Regional Parks Committee – Councillor Muri

10.4.5. Liquid Waste Committee – Mayor Little

10.4.6. Mayors Board – Mayor Little

10.4.7. Mayors Committee – Mayor Little

10.4.8. Mayors Council - TransLink – Mayor Little

10.4.9. Performance & Audit Committee – Mayor Little

10.4.10. Zero Waste Committee – Mayor Little

11. ANY OTHER BUSINESS

12. ADJOURNMENT

Recommendation:

THAT the April 15, 2019 Regular Meeting of Council for the District of North Vancouver is adjourned.

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MINUTES

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**DISTRICT OF NORTH VANCOUVER
REGULAR MEETING OF COUNCIL**

Minutes of the Regular Meeting of the Council for the District of North Vancouver held at 7:00 p.m. on Monday, April 1, 2019 in the Council Chambers of the District Hall, 355 West Queens Road, North Vancouver, British Columbia.

Present: Acting Mayor B. Forbes
Councillor J. Back
Councillor M. Bond
Councillor M. Curren
Councillor J. Hanson
Councillor L. Muri

Absent: Mayor M. Little

Staff: Mr. D. Stuart, Chief Administrative Officer
Mr. G. Joyce, General Manager – Engineering, Parks & Facilities
Mr. D. Milburn, General Manager – Planning, Properties & Permits
Mr. J. Gordon, Manager – Administrative Services
Mr. S. Carney, Section Manager, Transportation Engineering Services
Mr. W. Maskall, Section Manager - Natural Parkland
Ms. A. Reiher, Confidential Council Clerk
Ms. C. Rucci, Social Planner

1. ADOPTION OF THE AGENDA

1.1. April 1, 2019 Regular Meeting Agenda

MOVED by Councillor MURI

SECONDED by Councillor HANSON

THAT the agenda for the April 1, 2019 Regular Meeting of Council for the District of North Vancouver is adopted as circulated.

CARRIED

2. PUBLIC INPUT

2.1. Mr. John Harvey, 1900 Block Cedar Village Crescent:

- Spoke about current news stories;
- Expressed concern about recent Council decisions; and,
- Expressed concern about a Council candidate during the 2018 Local General Election and requested an investigation.

2.2. Ms. Kulvir Mann, 4700 Block Highland Boulevard:

- Expressed gratitude for the proclamation of Autism Awareness Month.

2.3. Mr. Bruce Tout, 4000 Block Mount Seymour Parkway:

- Expressed concern regarding the shared operating agreement for the proposed Harry Jerome Community Centre in the City of North Vancouver;
- Expressed support for the proposed facility and suggested that it is community focused with access to services that are not currently provided; and,
- Requested that the operating cost be supported by the District.

2.4. Ms. Isabelle Deguise, 2300 Block Riverside Drive:

- Commented on North Shore biking trails; and,
- Discussed trail improvement projects and volunteer work.

2.5. Mr. Peter Teevan, 1900 Block Indian River Crescent:

- Requested that Council continue to work collaboratively with the North Shore Mountain Biking Association (NSMBA) to achieve greater communication; and,
- Spoke about the Rental, Social and Affordable Housing Task Force proposal, suggesting that the housing strategy policy be converted into a bylaw.

2.6. Mr. Lyle Craver, 4700 Block Hoskins Road:

- Spoke in regard to item 9.2;
- Expressed concern about the clarity of the Alternative Approval Process (AAP); and,
- Suggested that core values including affordable housing be a focus of Council.

2.7. Mr. Blaise Ratcliffe, 2400 Block Berkly Avenue:

- Expressed support for NSMBA; and,
- Commented about the good condition of the trails.

2.8. Mr. Shane O'Brien, 2200 Block Greylynn Crescent:

- Commented favourably about the NSMBA and its role in his family.

2.9. Ms. Trina Notman, 1100 Block Nelson Street:

- Spoke as the Vice-President of Accent Inns Incorporated; and,
- Expressed support for NSMBA as a sponsor.

3. PROCLAMATIONS

3.1. Autism Awareness Month – April 2019

4. RECOGNITIONS

Nil

5. DELEGATIONS

5.1. Christine Reid & Cooper Quinn, North Shore Mountain Bike Association

Re: NSMBA – 2018 in Review

Ms. Christine Reid and Mr. Cooper Quinn, North Shore Mountain Bike Association, provided an overview of the 2018 NSMBA activities and their partnership with the community and District. They presented a video highlighting the work by NSMBA and

advised that membership is mostly comprised of North Shore residents. They commented about the support of local businesses, discussed the breakdown of volunteer hours, noted their youth programs, including the Trail Academy, and invited Council to attend future events hosted by NSMBA.

MOVED by Councillor MURI

SECONDED by Councillor BACK

THAT the delegation of the North Shore Mountain Bike Association is received.

CARRIED

Council recessed at 8:02 p.m. and reconvened at 8:03 p.m.

6. ADOPTION OF MINUTES

6.1. February 25, 2019 Regular Council Meeting

MOVED by Councillor MURI

SECONDED by Councillor CURREN

THAT the minutes of the February 25, 2019 Regular Council meeting are adopted.

CARRIED

6.2. March 4, 2019 Regular Council Meeting

MOVED by Councillor MURI

SECONDED by Councillor CURREN

THAT the minutes of the March 4, 2019 Regular Council meeting are adopted.

CARRIED

6.3. March 12, 2019 Public Hearing

MOVED by Councillor MURI

SECONDED by Councillor CURREN

THAT the minutes of the March 12, 2019 Public Hearing are received.

CARRIED

7. RELEASE OF CLOSED MEETING DECISIONS

7.1. March 6, 2019 Advisory Oversight Committee

File No. 01.0360.20/076.000

7.1.1. Advisory Oversight Committee Recommendations and Appointments

North Vancouver Public Art Advisory Committee

THAT Kelvin Humenny is re-appointed to the North Vancouver Public Art Advisory Committee for a two-year term ending December 31, 2020;

AND THAT Emily Neufeld and Dalia Gottlieb-Tanaka are appointed to the North Vancouver Public Art Advisory Committee for a two-year term ending December 31, 2020.

8. COUNCIL WORKSHOP REPORT

Nil

9. REPORTS FROM COUNCIL OR STAFF

9.1. Business Licence for Itsy Bitsy Daycare – 2391 Berkley Avenue

File No. 10.4750.30/001.000

MOVED by Councillor HANSON

SECONDED by Councillor CURREN

THAT an amendment to the business licence for Itsy Bitsy Daycare located at 2391 Berkley Avenue for the operation of Group Child Care for 20 school age children is approved subject to the following conditions:

- (a) compliance with District bylaws and Provincial code regulations; and,
- (b) receipt of a corresponding license from the Vancouver Coastal Health Authority.

CARRIED

9.2. Park Dedication Removal Bylaw 8381 (Portion of Lynn Canyon Park)

File No. 01.0115.30/002.000

Public Input:

Mr. Corrie Kost, 2800 Block Colwood Drive:

- Spoke about the history of dedication of parkland by referendum and AAP; and,
- Requested that a notice and diagram with good clarity, showing the area being considered for AAP, be published once more.

MOVED by Councillor HANSON

SECONDED by Councillor MURI

THAT "Park Dedication Removal Bylaw 8381, 2019" is given FIRST, SECOND and THIRD Readings.

THAT approval of the electors is to be obtained by means of an alternative approval process.

THAT the elector response form is approved in the form set out in Attachment 2 to the report of the Deputy Municipal Clerk dated March 22, 2019.

THAT the deadline for submission of elector response forms is 4 pm on Wednesday, May 15, 2019.

THAT a fair determination of the number of electors in the District of North Vancouver is 62,521.

CARRIED

Opposed: Councillor CURREN

9.3. Acting Mayor Date Change

File No. 01.0115.30/002.000

MOVED by Councillor BOND

SECONDED by Councillor BACK

THAT Councillor Back is designated as Acting Mayor for the period May 8 to 10, 2019, inclusive;

AND THAT Councillor Hanson is designated as Acting Mayor for the period May 30 to June 3, 2019, inclusive.

CARRIED

9.4. Prioritizing District-Owned Residential-Rental Housing for Non-Profit Organizations

File No.

MOVED by Councillor HANSON

SECONDED by Councillor CURREN

THAT staff is directed to develop a policy requiring the District to prioritize District-owned rental housing for non-profit organizations.

CARRIED

9.5. Rental, Social and Affordable Housing Task Force

File No.

MOVED by Councillor MURI

SECONDED by Councillor HANSON

THAT pursuant to the recommendation of the Advisory Oversight Committee, a Rental, Social and Affordable Housing Task Force Committee is created.

CARRIED

Opposed: Councillors BACK and BOND

9.6. INSTPP Priority Action – New Express Bus Service

File No. 16.8500.30/000.000

MOVED by Councillor MURI

SECONDED by Councillor HANSON

THAT reallocation of additional North Vancouver transit service hours approved through Phase II of the Mayor's Council Vision investment plan for expansion of Route 231 to a new express bus service connecting Phibbs Exchange to the regional SkyTrain network is approved;

AND THAT staff work with TransLink to revisit transit needs for the West 1st corridor once transit ridership growth timeframes are confirmed, and as part of the Mayor's Council Vision Phase III investment plan.

CARRIED

10. REPORTS

10.1. Mayor

Nil

10.2. Chief Administrative Officer

Nil

10.3. Councillors

- 10.3.1.** Councillor Muri reported on a community event for garbage pickup scheduled for April 6, 2019.

10.4. Metro Vancouver Committee Appointees

10.4.1. Industrial Lands Strategy Task Force – Councillor Back

Nil

10.4.2. Housing Committee – Councillor Bond

Councillor Bond reported on his recent attendance at the Metro Vancouver Housing Committee meeting where challenges associated with housing affordability for incomes under \$50,000 and constructing affordable housing were discussed.

10.4.3. Aboriginal Relations Committee – Councillor Hanson

Nil

10.4.4. Regional Parks Committee – Councillor Muri

Nil

10.4.5. Liquid Waste Committee – Mayor Little

Nil

10.4.6. Board of Directors – Mayor Little

Councillor Muri reported on her recent attendance at the Board of Directors meeting on behalf of Mayor Little.

10.4.7. Mayors Committee – Mayor Little

Nil

10.4.8. Mayors Council - TransLink – Mayor Little

Nil

10.4.9. Performance & Audit Committee – Mayor Little

Nil

10.4.10. Zero Waste Committee – Mayor Little

Nil

11. ANY OTHER BUSINESS

Nil

12. ADJOURNMENT

MOVED by Councillor MURI

SECONDED by Councillor BACK

THAT the April 1, 2019 Regular Meeting of Council for the District of North Vancouver is adjourned.

CARRIED
(9:34 pm)

Mayor

Municipal Clerk

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ATTACHMENT A

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April 1st Council Meeting

Good Evening Your Worship and District Council,

My name is Bruce Tout; I live at [REDACTED] It is my understanding that approx. 4 months ago, the City of North Vancouver requested a commitment from this council, to continue with the present operating cost share arrangement for the planned new Harry Jerome Community centre and to date no decision has been made.

SUBMITTED AT THE
27th 04 2019
REGULAR COUNCIL
MEETING

As a district taxpayer, and a frequent user of recreational facilities, I would like to provide you my insight into this important decision.

The Functional design of the proposed New Harry Jerome Community Centre is the result of a consultation process administered by City and Rec commission staff which involved residents from both City and District, and various user groups. I had the honor of participating in this consulting process. The facility proposed and endorsed by the previous City council is a community focus facility which allows the recreation commission to expand their health and fitness programing and flexibility, provide District and City residence of all ages, access to public recreational activities presently not provided, and due to the multi-purpose functional design, allow some local and provincial events. It is not an elite competition centre.

Unfortunately, the recently elected city council is looking to reverse the past council's decision and reduce the scale of the Harry Jerome Community Centre with the removal of the curling rink and replacing the 50-metre pool with a smaller 25-metre pool. Their decision is partially being based on a flawed Consultants report done in 2007 which does not reflect our community or its 2023 needs. The perceived financial risk is that other concern, even though 80% of the capital cost is being provided by non-tax base means.

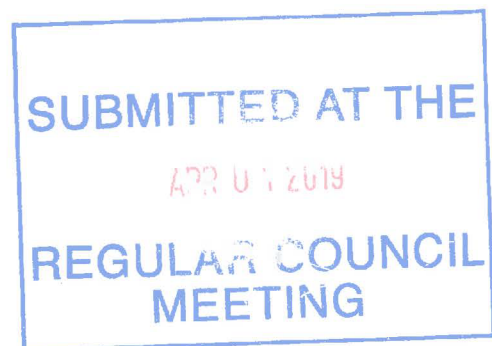
Yes, the Harry Jerome Centre is in the City, but it provides health benefits to District residents who use this facility on a regular basis.

My expectation of this council as a District resident are as follows:

1. The continuation of the operating cost sharing formula is a no brainer, provided the new facility addresses the increased capacity and needs for the future.
2. Council follow through with its election promise to open a new chapter of cooperation between the District and City. What a better way to prove this, then assisting the City by reducing their financial risk so that the presently proposed Harry Jerome Centre can proceed. I am aware of the agreement to not share in capital cost, but this facility will benefit District Residents as much as City residents and agreements can be changed.

City Council requires a commitment from the District before it will proceed, and in the spirit of cooperation, this council should act in kind, to assist and encourage the City to proceed with the current proposed Harry Jerome Community Centre redevelopment.

Thank you for your time and will be honoured to answer any question.



DISTRICT OF NORTH VANCOUVER PUBLIC MEETING

Minutes of the Public Meeting of the Council for the District of North Vancouver held at 7:06 p.m. on Tuesday, March 5, 2019 in the Committee Room of the District Hall, 355 West Queens Road, North Vancouver, British Columbia.

Present: Mayor M. Little
Councillor J. Back
Councillor M. Bond
Councillor M. Curren
Councillor J. Hanson

Absent: Councillor B. Forbes
Councillor L. Muri

Staff: Mr. D. Milburn, General Manager – Planning, Properties & Permits
Mr. B. Dwyer, Manager – Development Services
Ms. L. Brick, Deputy Municipal Clerk
Ms. A. Reiher, Confidential Council Clerk
Ms. C. Rucci, Social Planner

1. OPENING BY THE MAYOR

Mayor Little welcomed members of the public to the meeting and reviewed the procedures for the meeting.

2. PRESENTATION BY STAFF

Ms. Cristina Rucci, Social Planner, reviewed the application of Ms. Anna Amiri, Owner – Itsy Bitsy Daycare, at 2391 Berkley Road. She noted that Ms. Amiri has applied to amend her current Family Child Care License for seven children to a Group Child Care for school age children for twenty children. Ms. Amiri has been operating Itsy Bitsy Daycare, from her singly family home for approximately three years without complaints. She has decided to amend her license in response to requests from parents living in the community, searching for out of school care for their children entering kindergarten in September 2019 at Seymour Heights and Bluebridge Elementary Schools.

Ms. Rucci advised that staff reviewed this proposal against the Planning Guidelines for Home Occupied Child Care Facilities and considers the proposal to be in an under-served neighbourhood, close to community amenities, located on an easily accessible street. In the opinion of staff the application addresses arrival and departure, parking needs and maintains neighbourhood characteristics.

Ms. Rucci reported that the child care facility will be located on the ground level of the home, while the applicant and her family will live on the second floor. The daycare is located at the northern edge of Berkley Avenue, is situated across the street from Bluebridge Park and is a five-minute walk from Bluebridge Elementary School.

Ms. Rucci advised the hours of operation will be from 7:30 a.m. to 8:30 a.m. in the morning and from 3:00 p.m. to 6:00 p.m. in the afternoon. The children will be walked to Bluebridge School and will be transported by van to Seymour Heights School. The applicant will hire two qualified staff and is proposed to be open on professional development days, during the spring, summer and winter breaks and will be closed on holidays, statutory holidays and for one week during Christmas break.

Ms. Rucci advised that if her license is approved the applicant will renovate her home to create a child care space for twenty children. She noted that one family child care and two group child care facilities are near the daycare and that close to Mount Seymour Parkway, there are several larger facilities. She advised that there are approximately seventy out-of-school spaces that are located east of the Seymour River and West of Northlands Drive and that all these facilities are at capacity and have waitlists. Ms. Rucci advised that the applicant, Ms. Amiri, has sixteen children on her waitlist. She reported that the 2016 Census notes approximately 675 school age children living in this area.

Ms. Rucci reported there are currently six parking spots on the site and that off-site parking is also available. She advised that to manage noise, the applicant intends to divide the children up into two groups to play in the backyard and will bring each group out separately. During the summer months and school breaks the applicant will regularly bring the children on field trips to the local amenities and parents will be encouraged to pick their children up from these locations.

Ms. Rucci advised that the applicant hand delivered a letter of introduction to all of her neighbours located within fifty metres of her home where she outlined her proposal and included an invitation to attend an open house. The open house was held on February 12, 2019 and was attended by staff and a neighbour. Since the public meeting, staff have received one phone call and one letter from members of the public.

3. PRESENTATION BY APPLICANT

Ms. Anna Amiri, Owner – Itsy Bitsy Daycare, commented that her daycare currently cares for five children. She stated that she strives to keep noise levels down and respect her neighbours and will try to arrange alternate pick-up locations and times to mitigate traffic and noise. She advised that eighteen children, including one set of siblings will be cared for in addition to her two children by herself and two staff members. She discussed planned field trips and activities at playgrounds and advised that parents will arrive at staggered pick-up times for their children. She also expressed her willingness to discuss any concerns with neighbours.

4. REPRESENTATIONS FROM THE PUBLIC

4.1 Ms. Donna Fullerton, 3100 Block Strathaven Lane:

- Expressed support for the proposal;
- Commented about the after-school care in the neighbourhood and her work with the community to address childcare needs and solutions;
- Expressed that the proposal provides the best solution and commented favourably about the services provided by Itsy Bitsy Daycare.

4.2 Ms. Amie Kukkola, 2900 Block Eddystone Crescent:

- Expressed concern about the lack of childcare services in the Blueridge and Seymour Heights community; and,
- Commented about the desire for the children to stay within their community and need for childcare services such as those provided by Itsy Bitsy Daycare.

4.3 Mr. Bryan Gardiner, 2300 Block Berkley Avenue:

- Expressed concern about noise, increase traffic and parking;
- Requested that the Noise Regulation Bylaw be followed;
- Expressed support for the proposal on the condition that the applicant and District address any concerns that may be raised.

4.4 Ms. Chantal Seeley, 2700 Block Hamber Place:

- Commented about her difficulty in obtaining childcare services for her young family; and,
- Opined that Itsy Bitsy Daycare provides good service to the community.

4.5 Mr. Eric Andersen, 2500 Block Derbyshire Way:

- Expressed concern about traffic during pickup times after school; and,
- Expressed concern about noise levels for immediate neighbours and requested that District staff advise Community Associations directly about related childcare proposals.

4.6 Mr. Corrie Kost, 2800 Block Colwood Drive:

- Expressed concern about the impacts to the neighbourhood and the location of the home on a busy roadway;
- Expressed concern about the home valuation of properties adjacent to a daycare; and,
- Expressed concern about the transportation of children to school.

4.7 Mr. Peter Teevan, 1900 Block Indian River Crescent:

- Commented about the difficulty of maintaining staffing levels for before and after school daycare services; and,
- Suggested that schools accommodate such services for the community.

5. QUESTIONS FROM COUNCIL

In response to a question from Council, staff advised that a grant is available through the Ministry of Children and Family Development for childcare providers to provide facilities.

In response to a question from Council, staff advised that the need for school age care is rising and that toddler age care is also in demand.

In response to a question from Council, staff advised a change of license, for example from out of school care to infant/toddler care would require notification to the neighbours.

In response to a question from Council, staff advised if a complaint is made by a member of the public, the applicant would be advised of the concern and staff would work with the childcare to address the issue.

In response to a question from Council, staff advised that the person who drives the children from the daycare to school would require a class four drivers license.

6. CLOSING

MOVED by Councillor CURREN

SECONDED by Councillor HANSON

THAT the March 5, 2019 Public Meeting is adjourned.

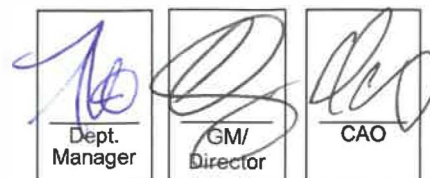
CARRIED
(7:48 p.m.)


Confidential Council Clerk

REPORTS

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AGENDA INFORMATION	
<input type="checkbox"/> Regular Meeting	Date: <u>April 15, 2019</u>
<input type="checkbox"/> Other:	Date: _____



The District of North Vancouver REPORT TO COUNCIL

March 20, 2019
File: 02.0720/Firehall 2

AUTHOR: Brian Hutchinson, Fire Chief
Gavin Joyce, General Manager, Engineering, Parks & Facilities

SUBJECT: Maplewood Fire & Rescue Centre

RECOMMENDATION:

THAT the Maplewood Fire & Rescue Centre Briefing Report dated March 20, 2019 from the Fire Chief and General Manager, Engineering, Parks & Facilities, be received for Information.

REASON FOR REPORT:

The purpose of this report is to update the Mayor and Council on the Maplewood Fire & Rescue Centre (MFRC) project that is currently in detailed design and scheduled for tender during summer 2019

SUMMARY:

Over a decade ago, the District of North Vancouver Fire & Rescue Services developed a strategy to update their operational capacity to meet future community needs. In alignment with this strategy, and anticipating the need to replace Fire Halls (FH) #1 and #2 and the Fire Training Centre, due to facility age, staff began a decade-long process to analyse the suitability of nine potential alternate sites across the District, eventually identifying the Maplewood site for the new Fire and Rescue Centre as the optimal location. (See Appendix A & B)

Several areas of operational interest were considered when evaluating the nine original sites.

The primary **Fire Operations** needs were:

1. to improve response times east of Highway 1 in the Blueridge/Mount Seymour Parkway/Dollarton areas
2. the ability to meet mandatory industry standard training benchmarks
3. the accommodation of new workforce gender composition
4. the ability to mitigate health risks to staff due to contaminant exposure and meet industry standards for turn out gear, decontamination, and separation between clean & dirty activities

5. to accommodate staff and visitor parking on-site, instead of relying on adjacent residential streets

The District created a multi-disciplinary staff team of professionals from across the organization to examine the site options. The team's specialist expertise allowed them to identify the following opportunities at the Maplewood site:

- **Environmental Improvement** (see Appendix C)
 1. Rehabilitation of a former landfill site contaminated with hydrocarbons, arsenic and zinc (formerly used for dumping demolition and construction debris)
 2. Removal of invasive plants and establishment of defensible space for wildfire protection
 3. Buffering and protection of existing adjacent wetlands and environmentally sensitive riparian area
 4. Combined Training Centre, Admin, and replacement for FH #2 in a smaller, more energy efficient (LEED Gold equivalent) building than if all these Fire & Rescue services were renewed in separate facilities (25% smaller building footprint than if separate facilities were built for required Fire services)
- **Disaster Preparedness**
 1. Creation of a resilient post-disaster community facility
 2. Capable of serving as Department Operations Centre in a large emergency event
 3. Sited on north portion of site above flood construction elevation (see Appendix B)
 4. Sited on north portion of site away from and above potential chlorine gas leak plume from waterfront industry
- **Facilities Planning and Asset Management**
 1. Replaces and modernises FH #2 and Fire Training Centre which are both approaching 40 years old, in poor condition, and deficient in function
 2. Replaces Admin component of FH #1 which is approaching 50 years old, and in poor condition
 3. Major components of FH #1, FH #2, and the Fire Training Centre are in need of replacement and would require some \$10M for individual component renewal to keep the buildings functioning physically but without providing any functional improvement to meet current needs.
- **Financial Planning**
 1. Consolidation of programs onto one site reduces capital cost by \$15M, required land by 35%, and energy consumption by 25% vs. continuing with separate buildings
 2. Compact, efficient facility reduces annual operating costs

- **Real Estate & Properties**

1. Consolidation of key Fire Operation Services in this compact facility frees up residual land from the FH #2 site and the Fire Training Centre site that can be used for other Council priorities
2. Transfer of the administration, tower, and rescue functions from FH#1 to this new site provides a smaller footprint requirement and thus flexibility for the future replacement of FH #1

- **Community Planning**

1. MFRC fulfils current Fire Rescue response needs east of Highway 1 in the Blueridge/Mt Seymour Parkway/Dollarton area
2. MFRC also fulfils future community plan needs for Lynn Creek Town Centre
3. The location of the old Fire Training Centre has a single two lane road access, and can leave firefighters inaccessible if the single access route is blocked
4. The new MFRC location for the Fire Training Facility meets the functional requirements for fire training and is buffered from nearby neighbours who may otherwise find the training activities to be a nuisance
5. MFRC access and circulation is compatible with the planned Berkley Extension which will provide essential north/south route redundancy east of Seymour if it is built in the future
6. Opportunity to add natural park space with enhanced trails on the rest of the site
7. MFRC site remainder maximised enabling flexibility for other future priorities as determined by Council

Through a process of elimination, and evaluation of benefits and opportunities, the Maplewood site was selected as the best choice to meet the District's current and future needs.

BACKGROUND:

Council approved proceeding with a consolidated Fire Training/FH #2/Fire Admin facility at the MFRC site in 2015. Since that time, over three years of work including geotechnical site investigation, environmental assessment, program refinement, and conceptual design has occurred.

Significant progress has been made and ongoing detailed design of MFRC is now over 75% complete.

EXISTING POLICY:

Corporate Policy 8-3060-5 "PUBLIC INFORMATION MEETINGS – DISTRICT FIRE HALLS AND FIRE TRAINING CENTRES" applies to this project. This policy was satisfied through the public consultation process that was undertaken through the Maplewood Village Centre Planning and Engagement process.

ANALYSIS:**Site Selection and Service Consolidation**

The location of the District's Fire Halls is based on an outdated fire service response model and an old community footprint, which leaves the area east of the Seymour River underserved. At the same time, Fire Hall #2 in Lynn Creek primarily serves areas of the City of North Vancouver that are also served by their own fire services.

By relocating Fire Hall #2 further east, it will provide proper coverage to the previously underserved areas in the Seymour area, and much-needed back-up support to Fire Hall #4 in Deep Cove in the event of a major emergency or evacuation.

Nine different sites have been evaluated extensively since 2009 and the proposed District-owned parcel in Maplewood is the only one that is suitable for this use (see Appendix A). It meets fire response and training site needs, complies with current zoning and community plans, and presents an opportunity to rehabilitate a contaminated former landfill site.

In designing the site, great care has been taken to optimize fire response, maximize enhancements to the environment, minimize the amount of land used, mitigate potential nuisance to neighbours, and tie into existing terrain grades. It is important to note that regardless of the inclusion or layout of other functions, or any plans for a future Berkeley Connector, the location of the apparatus bays must remain in the proposed location, with access off of the east property line, in order to achieve adequate response times and work with the existing road network and site grades.

Co-locating Training and HQ/Admin along with the new Fire Hall is critical to the goals of the department's strategic plan to improve operational efficiency and reach for best practices. Administration staff provide critical support to the training staff and many spaces can be shared by the three functions, thereby reducing the amount of built space and land required. The old facilities housing these functions are in poor condition and do not meet standards with regards to training, workplace health and safety, and inclusivity. The new co-located facility will help us recruit a more diverse workforce by accommodating all genders and a wider range of training. Also of importance is our ability to reduce exposure to carcinogens by providing proper decontamination areas for firefighters returning from incident scenes, and make better use of on-shift staff for training.

The existing Fire Hall #2 and Fire Training Centre are approaching 40 years old and are outdated and in poor condition. Most major building components (including roofs, electrical, mechanical, and life safety systems, as well as interior and exterior finishes) are in need of replacement or renewal. The old buildings are also built using old technology that uses twice as much energy and emits far more green-house gases (GHGs) than buildings built to today's standards.

Similarly, Fire Hall #1 is 46 years old, in poor condition, and we must replace it. By relocating the HQ/Admin functions and the tower and rescue functions to the new Maplewood Fire & Rescue Centre, Fire Hall #1 can be replaced with a much smaller building.

The plan is to combine Fire Hall #2, the Fire Training Centre, the Fire HQ/Admin function and tower & rescue functions at the new Maplewood Fire & Rescue Centre site because all these existing Fire facilities are reaching the end of their service life, and the District-owned Maplewood site is better situated for the Fire department's operational needs, and large enough to combine multiple functions for greater efficiency.

Site and Access Plan

The decision to locate the MFRC to the north of the remaining developable area of the site rather than to the south was made in consultation with staff from Fire & Rescue Service, Environment, Engineering Design, Development Planning, Development Engineering, Community Planning, Transportation, and Real Estate & Properties, and was informed by the Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines that was [approved by Council](#) on November 20, 2017.

The six key drivers for this decision were:

1. **Better response times:** As a major east/west connection, direct access from the site to Dollarton Highway is critical to emergency response times and can only be achieved by creating an access road along the east property line. Note that this means the main building and apparatus bays have to be in the same location for either the north or south site placement, due to clearance requirements from the existing intersection at Dollarton Highway (see Appendix B).
2. **Reduced environmental impact:** Situating the MFRC on the northern portion of the site reduces the provincial permitting requirements and impacts to environmentally sensitive riparian and wetland areas which traverse the southern portion of the site. Site footprint is also reduced due to topography and shape of developable area remaining outside of riparian area setbacks. Use of the north portion of the site also places training activities further from the Maplewood Conservation Area to the south while taking advantage of the north escarpment to buffer the training area from residential neighbours.
3. **Safer and more secure dedicated access:** Ensuring that the MFRC does not share an access point with other future development or uses on the site is critical for safety and security. Siting MFRC to the south would limit dedicated access to be from Old Dollarton which is not acceptable for response times.
4. **Future-proof:** The facility (and particularly the apparatus bays) have been situated to work with both the current road network, as well as the potential future Berkley Connector (per the approved Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines) without compromising response times. If the Berkley Connector is built in the future, response times to the north will be improved and be more reliable due to road network redundancy. It is not possible to locate the apparatus bays further south without precluding the Berkley Connector, and

any intersection with Dollarton Highway needs to be consolidated with access for the adjacent international school regardless of the scenario.

5. **Site Topography:** MFRC siting on the main plateau in the north area of the site places it above the flood construction elevation of 4m, and away from the steep escarpment further north. This has added benefits of being further away and above any potential industrial chlorine gas leak plume, buffering training activity from neighbours due to the escarpment, and provides suitable grades for access to the future Berkley connector road.
6. **Maximize the potential of the remaining site area:** Great care has been made to minimize the footprint of the MFRC and maximize the value and versatility of the remaining site area to accommodate future Council priorities.

Timing/Approval Process:

Construction of this new facility is critical to meeting the timeline to relocate Fire Hall #2, and the Fire Training and Administration functions in order to improve response times and fire protection services to the community, and vacate aging and inefficient facilities.

Preliminary design started in 2016 and detailed design has been in progress since Council approval in July 2018.

A Development Permit application for Protection from Natural Hazards, Protection of the Environment, and Energy and Water Conservation and GHG Emission Reduction was submitted in late 2018 and will be followed by a building permit application in the spring of 2019.

A Form and Character Development Permit is not required but staff will work to ensure the design meets the intent of the form and character design guidelines for the Maplewood Innovation District, and the project has been reviewed favourably by the Advisory Design Panel.

The construction project will be tendered in summer 2019, with site preparation and piling anticipated to start in fall 2019, and building construction to start in early 2020. The facility will be operational in fall 2021.

Staff will report back to Council with updated project cost information prior to contract award.

Concurrence:

This project has been a well-integrated, multi-disciplinary effort including Fire & Rescue, Facilities, Transportation, Environment, Engineering, Finance, Real Estate & Properties, and Planning.

The Advisory Design Panel considered this project favourably in February 2019.

Financial Impacts:

The current project budget for the design and construction of the Maplewood Fire & Rescue Centre on-site works and building is approximately \$34M.

By mid-April of 2019, approximately \$1.6M in funding and three years of staff and consultant resources will have been expended for site investigation and design work for the centre.

Aging and inefficient fire facilities have been identified in the District's building asset management plan, as costly essential assets needing modernization and renewal. A holistic strategy to meet community fire protection service needs by consolidating Fire Hall #2, a portion of Fire Hall #1, and the Fire Training Centre in a cost-effective manner consistent with town centre implementation plans has been adopted.

While the project was already included in the Financial Plan it will now be updated for latest information and will place pressures on reserves over the short term. Based on future Council direction on the Long Term Financial Plan (LTFP) and final cost estimates prior to contract award, this project may require debt service to complete.

Liability/Risk:

Efficient and effective fire protective services requires fire stations to be located so as to minimize response times, as well as regular training of staff to meet regulatory requirements and mitigate risk.

Social Policy Implications:

Effective fire protective services ranging from fire prevention and inspection to response and suppression by well-trained, efficient staff are key aspects of a socially supportive community.

Environmental Impact:

From about 1960 to 1980 the MFRC site was used as a dump site for road construction material. The area contains a contaminated 8m deep fill pile over the entire developable area, which includes unsorted concrete, asphalt, aggregate material, coiled wires, old telephone poles and other debris. Vegetation has since overgrown the previously cleared area, but due to the poor soil the existing trees are malnourished and struggling, and the area is completely infested with invasive species.

This project will remediate the soil and groundwater contamination, remove invasive species, create a defensible space for wildfire protection and protect the environmentally sensitive riparian and wetland areas to the north, west and south of the old landfill.

Other environmental benefits of the new building includes a net reduction in energy use and greenhouse gas (GHG) emissions compared to the existing buildings. The proposed building exceeds the District's green building policy for corporate buildings. It is being designed to be the most energy efficient and lowest GHG emitting facility of any District-owned building to date.

Runoff from the training facility is to meet the Aquatic Life Water Quality Criteria per the provincial guidelines. The runoff must also not cause erosion or other downstream issues due to energy and volume.

Smoke from training activities will be contained and scrubbed, and any emissions are to meet Metro Vancouver's Air Discharge Regulation and Bylaw.

Public Input:

Information about MFRC is available publicly [on the DNV web site](#) linked to Maplewood Town Centre.

Conclusion:

Because Fire Hall #2, the Fire Training Centre, the Fire HQ/Admin function and Tower & Rescue functions are reaching end of life they are being combined at the new Maplewood Fire & Rescue Centre site. The District-owned Maplewood site is better situated for the Fire department's operational needs and large enough to combine multiple functions for greater efficiency.

The current site layout, with the MFRC located to the north of the remaining developable area of the site, is the preferred layout to optimize response times, reduce environmental impact, buffer neighbours, increase safety, and maximize future opportunities to accommodate Council's priorities.

Respectfully submitted,



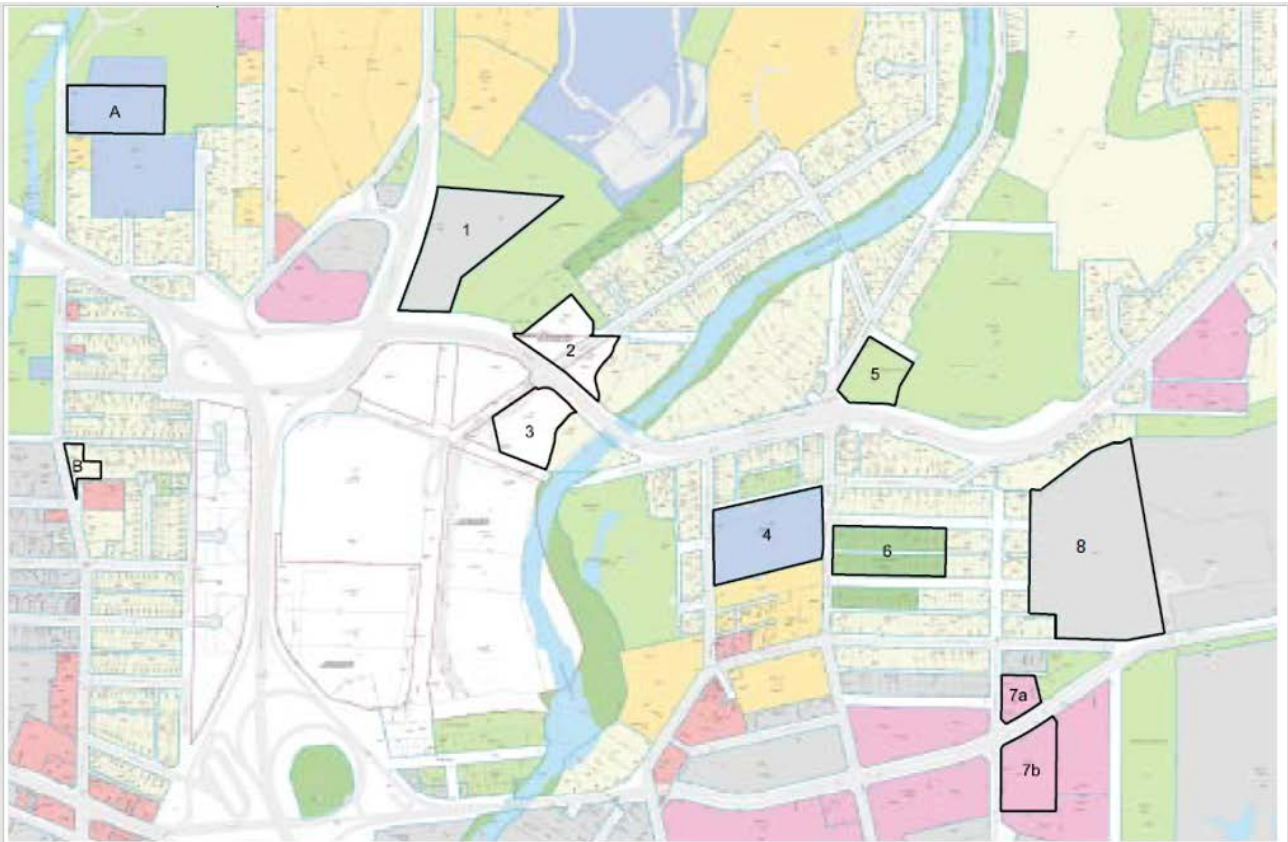
Brian Hutchinson, Fire Chief



Gavin Joyce, General Manager, Engineering,
Parks & Facilities

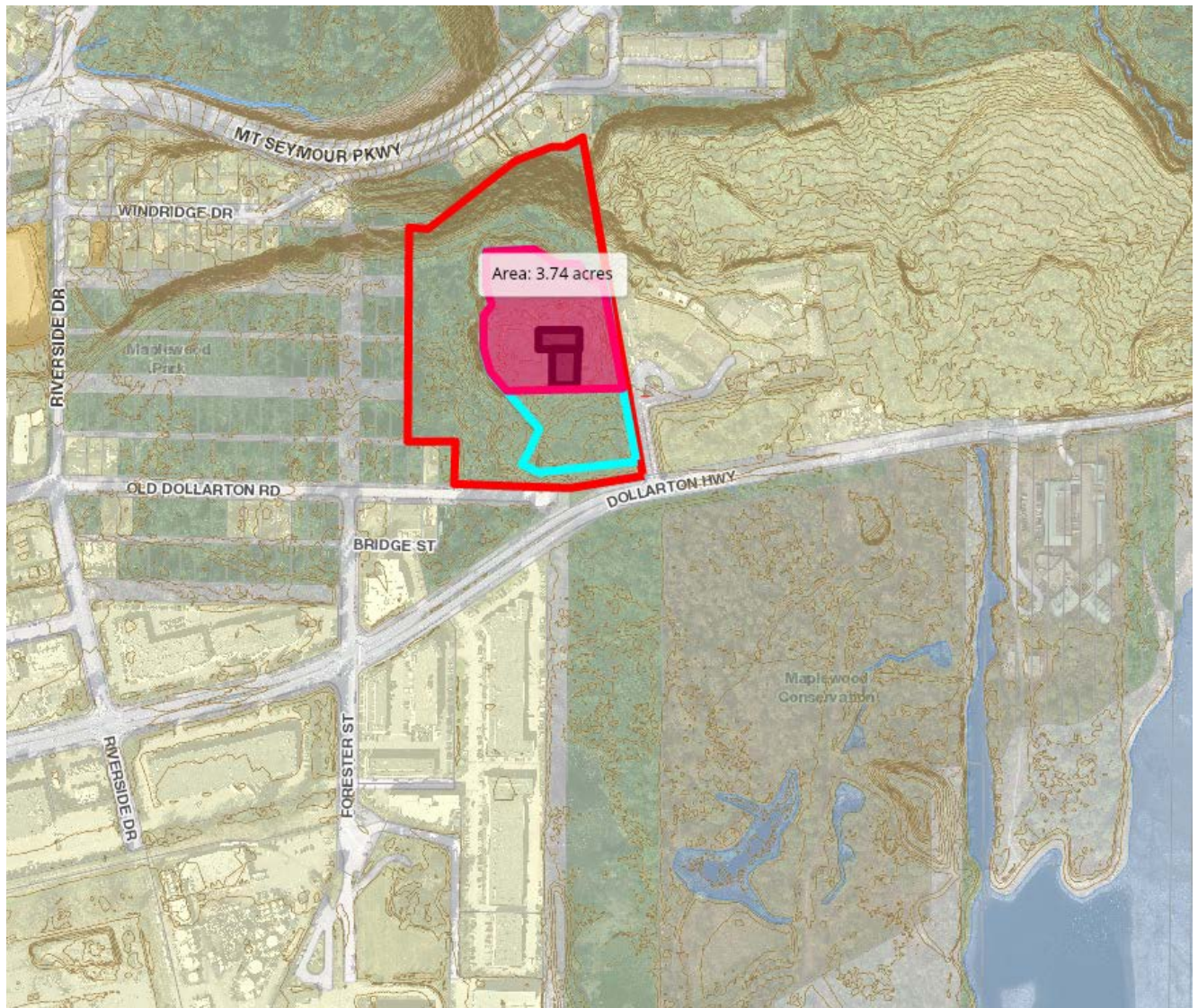
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<input type="checkbox"/> Development Engineering	_____	<input type="checkbox"/> Finance	_____	<input type="checkbox"/> NS Health	_____
<input type="checkbox"/> Utilities	_____	<input type="checkbox"/> Fire Services	_____	<input type="checkbox"/> RCMP	_____
<input type="checkbox"/> Engineering Operations	_____	<input type="checkbox"/> ITS	_____	<input type="checkbox"/> NVRC	_____
<input type="checkbox"/> Parks	_____	<input type="checkbox"/> Solicitor	_____	<input type="checkbox"/> Museum & Arch.	_____
<input type="checkbox"/> Environment	_____	<input type="checkbox"/> GIS	_____	<input type="checkbox"/> Other:	_____
<input type="checkbox"/> Facilities	_____	<input type="checkbox"/> Real Estate	_____		
<input type="checkbox"/> Human Resources	_____	<input type="checkbox"/> Bylaw Services	_____		

**APPENDIX A
OTHER SITES CONSIDERED**



Multiple Sites Analyzed
2009 HCMA Report

APPENDIX B
SITE



Site Context



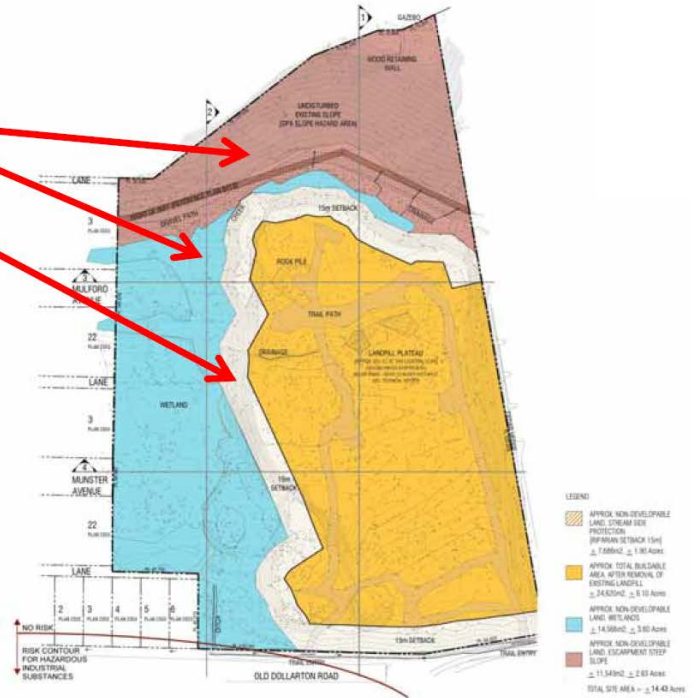
Aerial Photo of Former Landfill circa 1992 at Maplewood Fire Rescue Centre Site

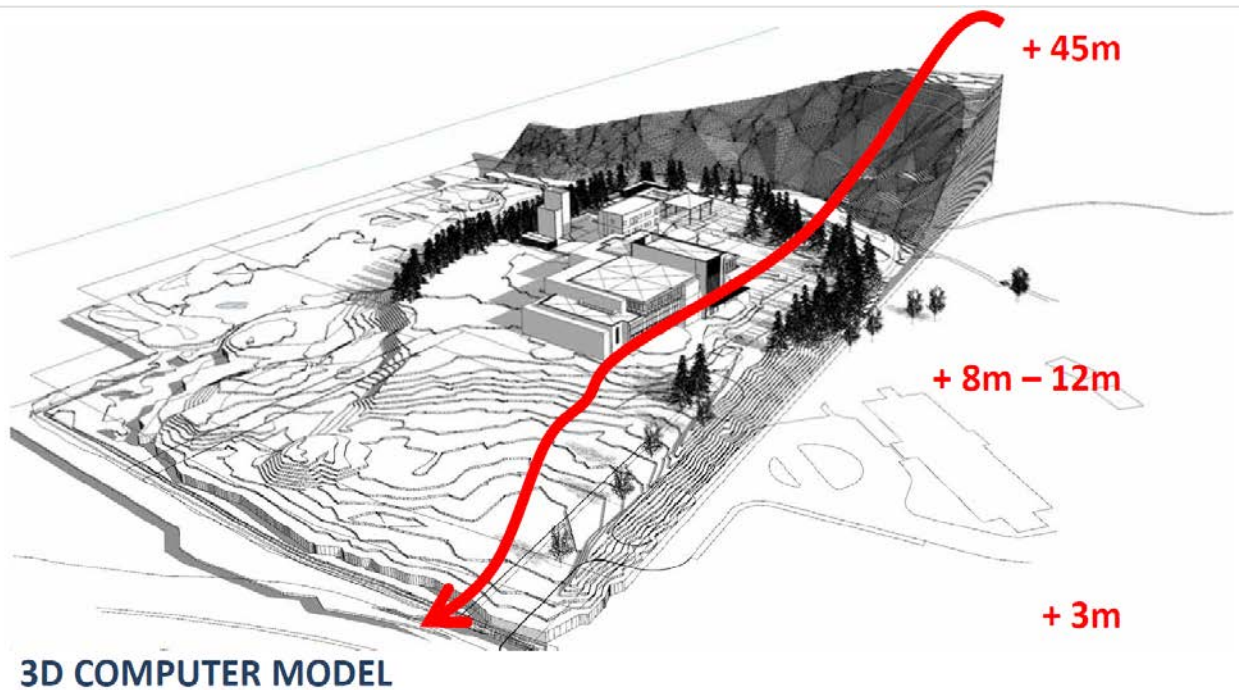


MFRC Site Footprint overlain on Landfill Location, (South Option 1)
Note apparatus bays are located in optimum location for access to Dollarton Hwy, site grading, existing and future road network
Note Wetlands to be Protected to North, South and West of Site



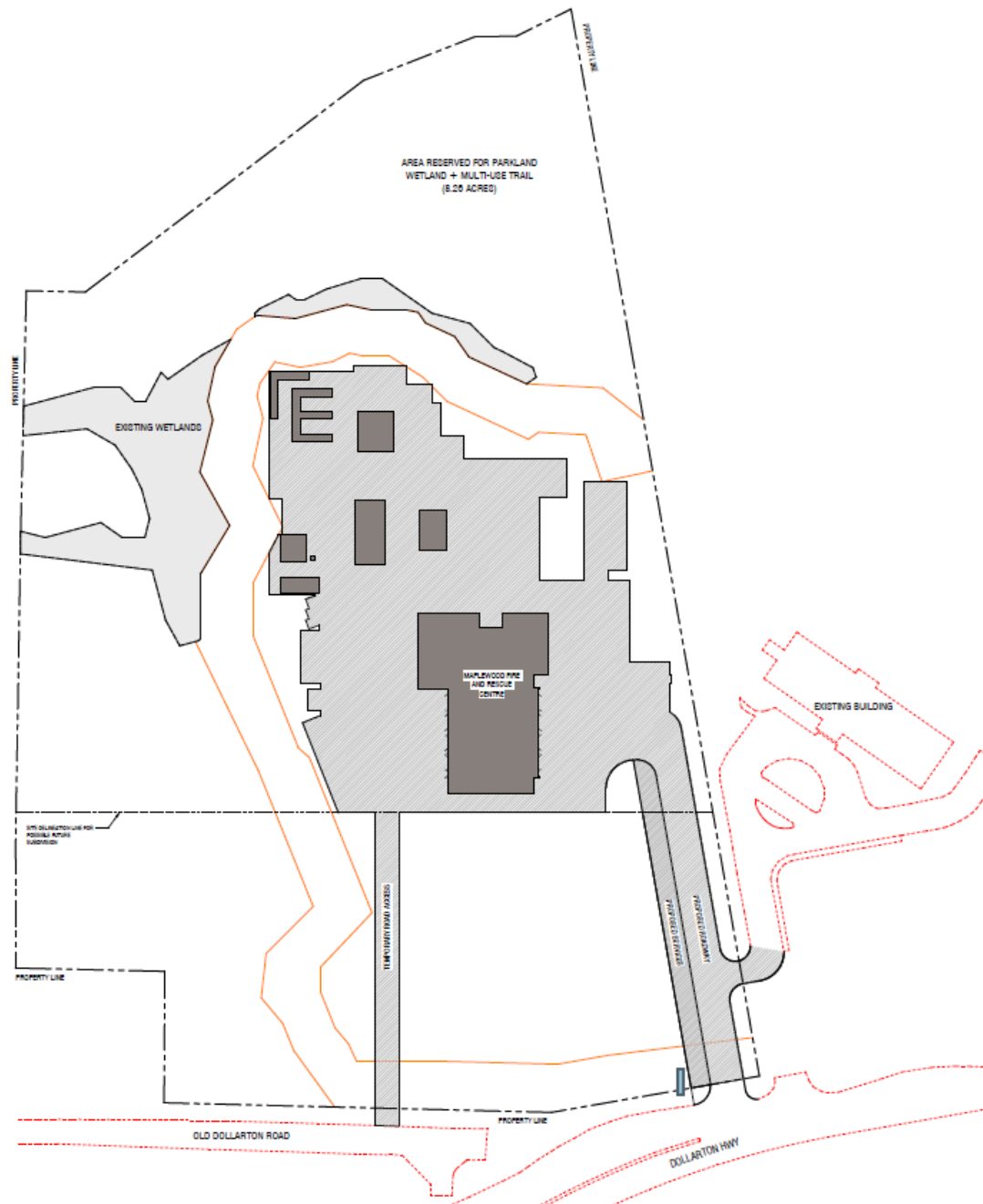
MFRC Site footprint overlain on Landfill Location (North Option 2)
Note apparatus bays are located in optimum location for access to Dollarton Hwy, site grading, existing and future road network
Note Wetlands to be Protected to North, South and West of Site





**Maplewood Fire & Rescue Centre
Advisory Design Panel Presentation**

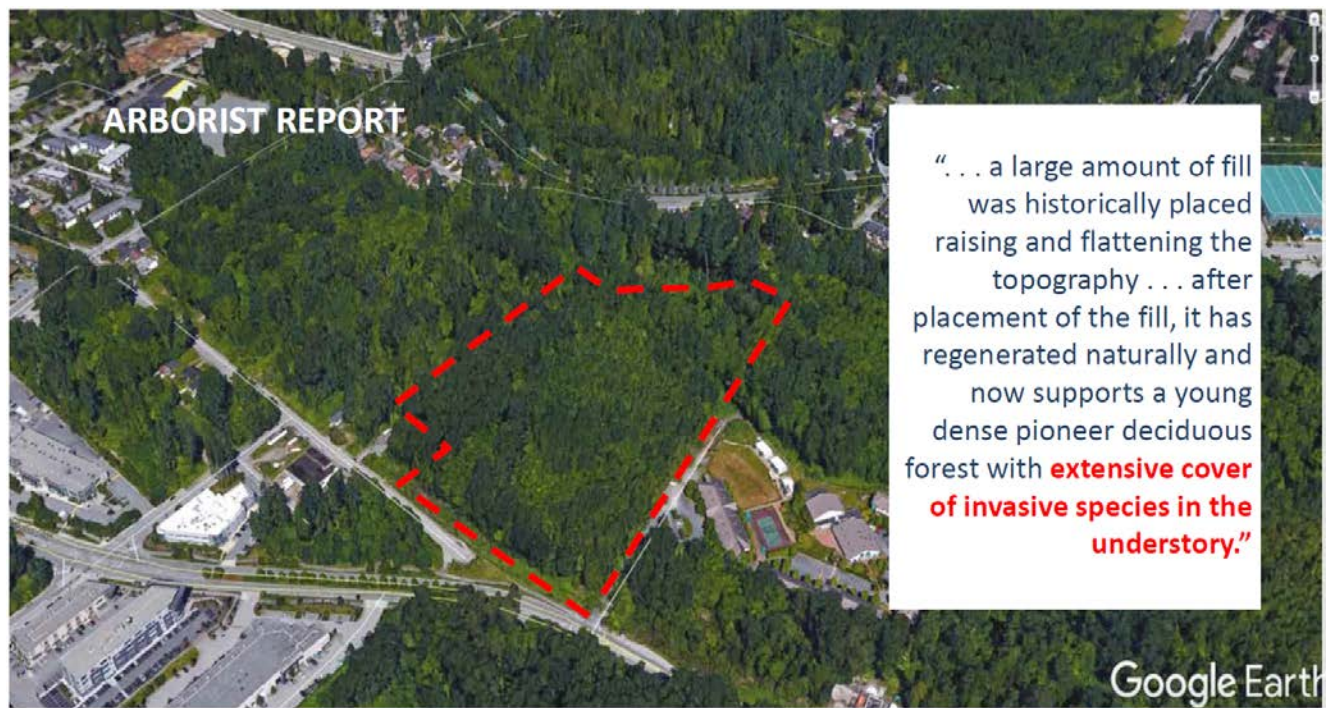
MFRC Site Topographic Model Looking Northwest
Note siting of building and apparatus bays is on central plateau above flood construction level of 4.5m and away from steep escarpment to north



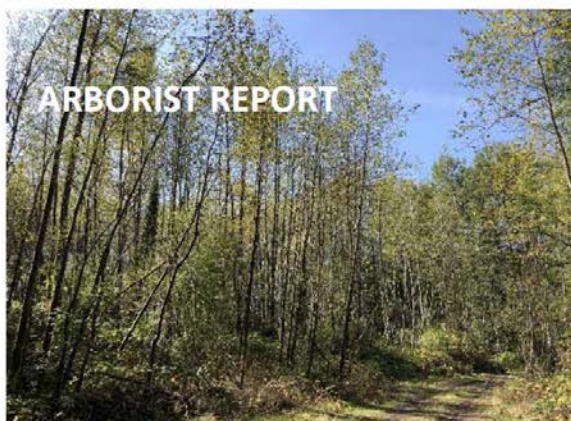
Document: 3849812

MFRC Site, General Arrangement

APPENDIX C
EXCERPTS FROM ENVIRONMENT RELATED REPORTS



Maplewood Fire & Rescue Centre Advisory Design Panel Presentation



View of the stand to be cleared



"It is **recommended that in most areas that all of the trees up to the top of bank of the fill slope be cleared.** This area is highly infested with invasive species and requires restoration. Clearing to the top of bank will create a defensible space for wildfire protection and allow this area to be restored to a healthy and fire-resistant plant community."

Diamond Head



Maplewood Fire & Rescue Centre Advisory Design Panel Presentation



Photo 5 – Detail of two Chevron moto oil drums present at the Site.



Photo 6 – Detail of an empty automotive product container.

CLIENT

District of North Vancouver (DNV)

CONSULTANT



YYYY-MM-DD 2016-12-12

TAKEN BY AGH

CHECKED BY AB

PROJECT

Stage 1 & 2 and Detailed Site Investigation Report, Maplewood
Precinct, North Vancouver, BC

TITLE

Photographic Record

PROJECT No 1657312




FIGURE

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AGENDA INFORMATION	
<input checked="" type="checkbox"/> Regular Meeting	Date: <u>April 15, 2019</u>
<input type="checkbox"/> Other:	Date: _____

9.2

 Dept. Manager	 GM/ Director	 CAO
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The District of North Vancouver REPORT TO COUNCIL

April 5, 2019
File: 13.6440.01/000.000

AUTHORS: Shazeen Tejani, Community Planner
Susan Rogers, Manager, Parks
Mairi Welman, Manager, Strategic Communications

SUBJECT: Delbrook Lands 2019 Planning and Engagement Process

RECOMMENDATION:

THAT staff is directed to proceed with the process outlined in the April 5th, 2019 Report from the Community Planner, Manager of Parks, and Manager of Strategic Communications entitled "Delbrook Lands 2019 Planning and Engagement Process."

AND THAT Council select the extent of the local neighbourhood consultation area from the options below:

- a. a 100m radius from the Delbrook Lands;
- b. a 200m radius from the Delbrook Lands; OR
- c. an alternate notification area as determined by Council.

REASON FOR REPORT:

To recommend a framework for the next phase of the Delbrook Lands planning process and to outline an engagement strategy for the period prior to the statutory rezoning process.

SUMMARY:

This report provides a proposed engagement strategy for the park design and planning process, the size and location of community services, and the form and character of the affordable housing building on the Delbrook Lands site.

More specifically, this report details the level of engagement recommended for preparing a Delbrook Lands Conceptual Park Master Plan and the process by which to engage the local neighbourhood. It outlines the engagement process, and identifies key audiences, key messages, and the various communication tools recommended.

BACKGROUND:

A District-wide consultation on the future of the Delbrook Lands, called the Delbrook Dialogue, was undertaken in 2015-16. Several hundred District residents participated in the process, and recommendations were reported to Council on September 19, 2016, with the majority of participants favouring a mix of “affordable housing” (funded by senior government), some form of seniors care and child care facility, and a park.



Figure 1: Delbrook Lands Site

On March 12, 2019 Council met with the Delbrook Community Association (DCA) in a workshop to discuss their concerns.

Council has now directed staff to engage the local community in an expedited and concurrent process of creating a park design plan, choosing the location and size of community services, and determining the form, character and location of an affordable housing building on the site.

ANALYSIS:

This expedited and locally-focussed planning and engagement process seeks to understand the neighbourhood's desires regarding:

1. Park planning and design
2. Community services type and location
3. Form and character of an affordable housing building

The following sections detail the steps recommended to address the above matters.

Park planning and design:

The objective of the Delbrook Lands Conceptual Park Master Plan is to design a park that reflects the Delbrook community's desire to create a vibrant, safe, inclusive and accessible multi-purpose park that will enrich the community through site-appropriate design. The Master Plan will provide a range of park amenities for all ages, abilities and interests, while protecting and enhancing the natural resources of the Mission Creek riparian area.

The following steps outline the process by which the Delbrook Lands Conceptual Park Master Plan will be developed and consulted on:

1. Prepare Site Analysis summary
 - a. Intent: To highlight site opportunities and constraints
 - b. Process: Review environmental resources, site topography, solar orientation, existing park amenities (e.g. playground and tennis courts) and parking & roadways
2. Analyze Needs and Preferences
 - a. Intent: To summarize public input for the new park to date and seek public input on preferred features for the park
 - b. Process: Review Delbrook Community Association input from March Council workshop, Delbrook Lands Deliberative Dialogue Report, DNV Parks and Open Space Strategic Plan. etc.
3. Develop a Park Vision and Objectives, Identify Key Park Features and Develop Park Options
 - a. Intent: To support key park planning and design objectives. For example, optimize protection of creek forest and riparian areas, incorporate sustainable and accessible principles in the design of park, provide a variety of park opportunities to meet diverse age groups and interests, strengthen trail connections for bikes and pedestrians. To integrate key features (as determined through consultation) into the final park master plan.
 - b. Process: Seek public input on park vision and objectives, park features and options.
4. Consider the location of existing and proposed site uses (e.g. housing, day care)
 - a. Intent: To assist with phasing of building demolition and park development
 - b. Process: Provide options that demonstrate trade-offs between housing, community services, and available park space. Seek public input on trade-offs.
5. Develop a recommended Park Master Plan option
 - a. Intent: To develop a Plan that reflects the needs of the neighbourhood and to develop a preliminary cost estimate to prepare detailed plans to support future construction of a park.
 - b. Process: Utilize what is learned from the public engagement process to help craft a comprehensive park master plan.

Community services type and location:

Through the Delbrook Deliberative Dialogue process and in Council's recent workshop with the Delbrook Community Association, there was overall general support for the following community services:

- Adult day care
- Child care
- Seniors' respite care

The exact location and size of each of these facilities will be determined through further site analysis and public engagement as part of the neighbourhood consultation process.

Form and Character of an Affordable Housing Building

Through the Delbrook Deliberative Dialogue process and in Council's recent workshop with the Delbrook Community Association, it was determined that there is a willingness to consider a building containing social housing of a height up to four stories on the existing surface parking lot.

There was also general consensus that seniors' respite care could be located on the first floor of a building containing affordable housing. The public engagement process outlined in this report will further refine the form, character, and size of this building.

After concluding the engagement process outlined in this report, the next step will be a rezoning process. A rezoning of the land will be required to accommodate any change in use including a senior's respite care or affordable housing. If the process proceeds to rezoning, staff will continue to work on further refining the parks plan.

Timing/Approval Process:

With direction from Council on April 15, 2019, this engagement process can be executed prior to summer break.

Concurrence:

This report has been developed in ongoing collaboration with Community Planning, Communications, and Parks.

Financial Impacts:

The cost of the neighbourhood public engagement process is estimated at \$15,000, including development of support materials, advertising and direct mail costs, and an open house event. Park design work and illustrations of potential form and character for buildings are being executed in-house.

Liability/Risk:

N/A

Social Policy Implications:

Social policy considerations will be addressed through the engagement and planning processes.

Environmental Impact:

The preferred options for the affordable housing building and park design will take existing environmental constraints into consideration, including riparian areas and slopes, to mitigate any environmental impact to the natural resources on site.

Public Input:

The timeline for the planning and engagement process is outlined below, and will be followed by the statutory rezoning process:

Timeline	Audience	Action Item
May - June	Staff and Community	Staff engages with local neighbourhood on park design, affordable housing form and character, community services
June	Staff	Staff reports to Council on neighbourhood engagement program outcomes
June	Council	Council decision point Has engagement satisfied the need for input? Is more required?
TBD	Council	Council decision point To proceed or not proceed with rezoning process
TBD	Staff and Community	Rezoning Statutory Process including Public input
TBD	Council and Community	Public Hearing

It is important to note that this engagement program precedes the public input opportunities that are statutorily afforded to the general public within the rezoning process, which will occur once the final design concept for the site has been determined.

Engagement Process:

PUBLIC ENGAGEMENT SPECTRUM

Adapted and used with permission from the International Association for Public Participation (IAP2 Federation).

Inform	Listen & Learn	Consult	Involve	Collaborate	Empower
"We will keep you informed. We will provide information that is timely, accurate, balanced, objective, and easily understood. We will respond to questions for clarification and direct you to sources of additional information."	"We will listen to you and learn about your plans, views, and issues; and work to understand your concerns, expectations, and ideas."	"We will keep you informed, and listen to and acknowledge your concerns and aspirations in developing final solutions, and we will report back to you on how your input influenced the decision."	"We will work with you to ensure your concerns and aspirations are directly reflected in the alternatives developed, and we will report back on how your input influenced the decision."	"We will look to you for advice and innovation in formulating solutions, and we will incorporate your recommendations into the decisions to the maximum extent possible."	"We will implement what you decide."

The engagement process for this neighbourhood-level process is at the "Consult" level on the IAP2 spectrum of engagement, and will consist of an online survey, and a community open house event for the Delbrook neighbourhood. To fulfil our promise made during the previous engagement process, the DNV will provide past participants with an update on this new engagement process.

Information materials will be developed that describe the possible options for and trade-offs between elements of park design, affordable housing, and community services for the site.

Key Audiences:

- Adjacent neighbours to the site
- Residents of Delbrook neighbourhood
- Delbrook Community Association
- Parks & Natural Environment Advisory Committee (for park design)
- Delbrook Dialogue participants
- Media

The 'neighbourhood' can be defined as properties being:

- Located within a 100-metre zone of the site, as required by Council bylaw through the statutory consultation process for a rezoning; OR
- Located within a 200-metre zone of the site, to include a wider catchment area, OR
- An alternate area defined by Council see Figure 4

Corresponding maps of the 100-metre and 200-metre zones can be found below:



Figure 2: Properties within a 100m zone of the site

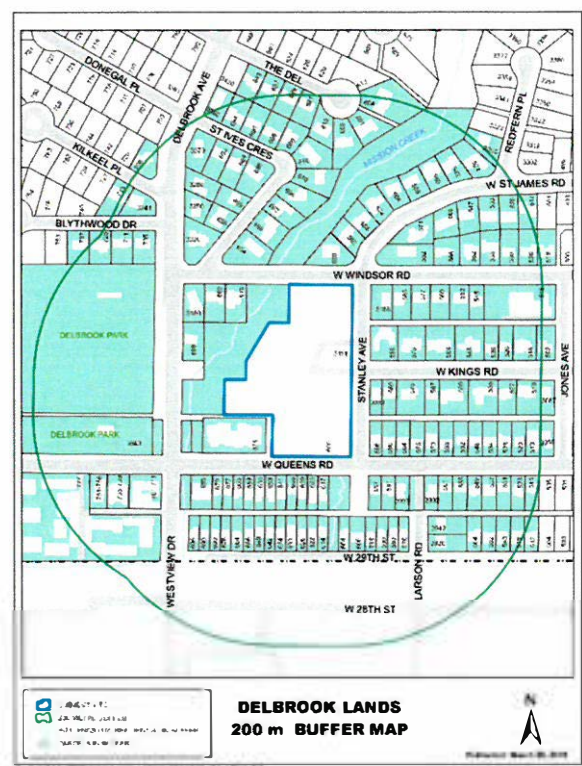


Figure 3: Properties within a 200m zone of the site

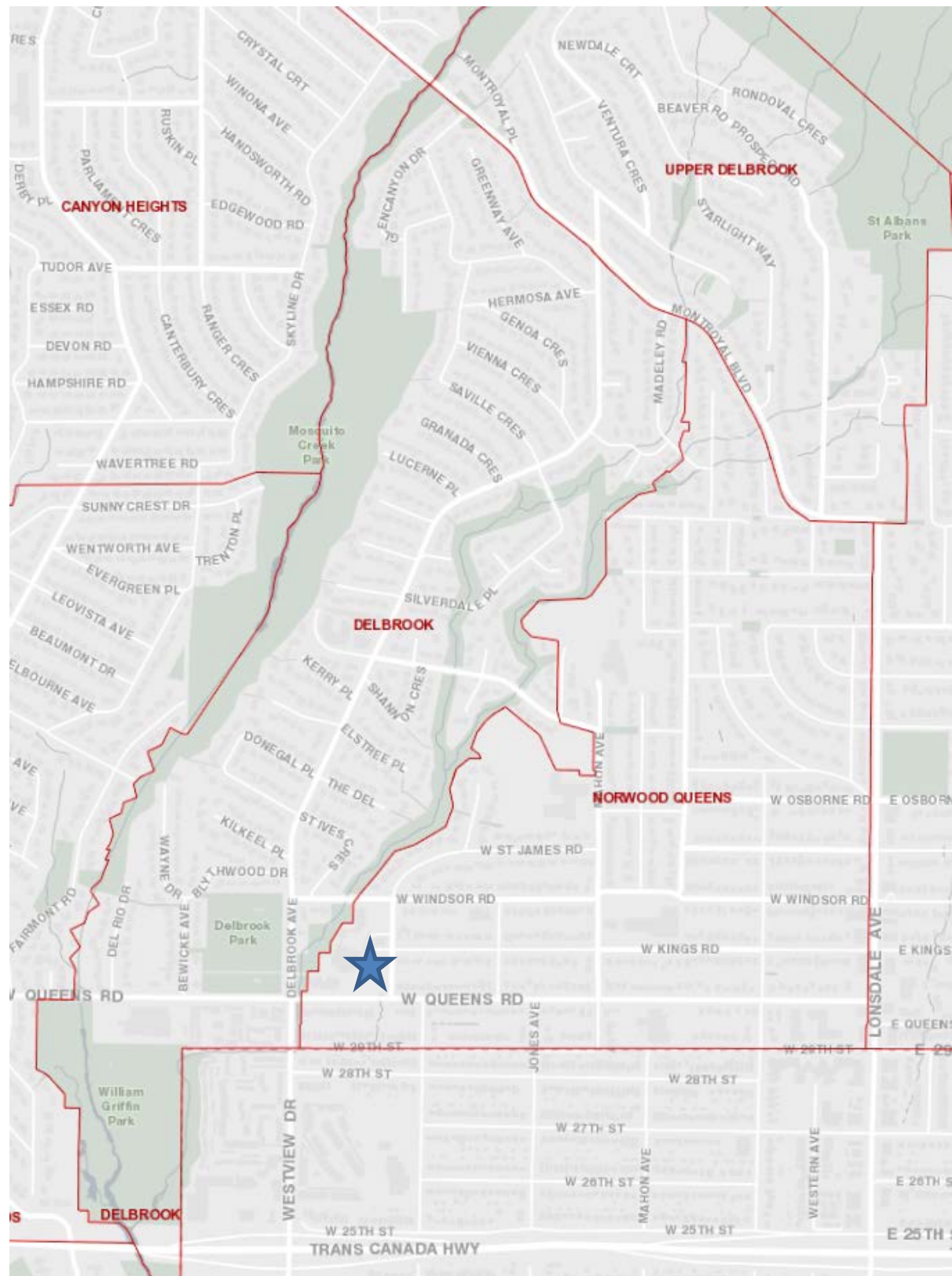


Figure 4 – Reference map of area – star indicates Delbrook Lands site

It is at Council's discretion which area constitutes 'neighbourhood' for the purposes of this consultation.

Engagement Key Messages:

Key messages are used in the public awareness materials. They provide everyone involved with a consistent and approved set of information points.

Cornerstone messages:

- The District of North Vancouver held a community-wide dialogue regarding the future of the Delbrook Lands, and the community supported parkland, affordable housing, and community services being co-located on the site.
- Now the District is ready to engage the Delbrook neighbourhood on a deeper level about the specifics of the site design.
- We heard your concerns and we want to learn more about your vision for the future of the site.
- Delbrook residents are invited to get involved and provide their thoughts on the park design, the location and size of a community services, and the form, character and location of affordable housing on the Delbrook Lands site.

For engagement awareness the following messages will be used:

- Watch your mailbox for your invitation to upcoming consultation events
- Visit DNV.org/DelbrookLands to learn more and join our Delbrook neighbourhood email list

Communication Tools:

Action Item	Responsibility	Cost Estimate	Lead Time Required	Details
Foundational key messages	Communications	In-house	2 weeks	Development and sign off of messages
Web content	Communications/ Community Planning/Parks	In-house	3 weeks – dependant on graphic materials & technical info from Planning & Parks	DNV already has significant web content on Delbrook Lands. Additional content will be added to support the new engagement project.
Graphic design	Communications with technical materials from Planning, Parks	In-house	4 weeks	The community engagement program will be supported by new graphic content such as display boards, maps, renderings of building mass

Action Item	Responsibility	Cost Estimate	Lead Time Required	Details
	and Consulting Team			and form, iconography, infographics and document design for use in print, on web site and in social media channels.

On site signage	Communications	Est. \$2500	2 weeks	Invite neighbours to participate in the next level engagement
Advertising/ Promotion	Communications	Est. \$5000	3 weeks	Facebook geo-targeted ads to Delbrook postal code Direct mail invitation from Council in the form of letter or postcard to homes in Delbrook neighbourhood to participate in new process. Email to past participants letting them know a local round of consultation is taking place, and providing them with a channel for input
Media Relations	Communications Council with technical/SME support from Planning, Parks	In-house	2 weeks once materials are finalized	Provide Council and key spokespeople with interview coordination. Manage incoming requests for information & interviews Provide background briefing to North Shore News to provide update on technical information

Engagement Tools:

Online survey	Communications design with info from Parks and Planning	In-house	4 weeks – dependant on technical materials from Parks and Planning	There will be two rounds of online survey in this engagement process. The first is to gather neighbourhood preferences the second will coincide with the open house event and will gather feedback on the draft design options.
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Community Open House	<p>Parks and Planning staff with assistance from Communications for materials & input form development.</p> <p>Council optional</p>	TBD depending on location	4 weeks	<p>Drop-in open house will be held in Delbrook neighbourhood, providing visual materials regarding draft options for site. Parks and Planning staff and Community Planning staff will be on hand to explain options/trade-offs and answer technical questions. Participants can fill in an input form or go to web link and complete online survey.</p> <p>Council may wish to participate to engage in direct conversation with attendees.</p>

Engagement Completion:

After the neighbourhood engagement process is completed, and prior to first reading of any rezoning bylaw, a report will be provided to Council containing the results from the online surveys and open house feedback forms, and any email comments that are received pertaining to Delbrook Lands. This information will be made public and all engagement process participants will be notified of the results.

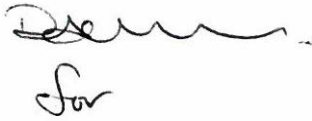
Conclusion:

There has been extensive consultation on the potential uses of the Delbrook Lands. Council has indicated its desire to complete a further condensed and expedited consultation with the local neighbourhood on park design, affordable housing form and character, and community services.

Options:

1. Engagement Process:
 - a. Direct staff to proceed with the engagement process outlined herein; or
 - b. Direct staff not to proceed with the process outlined herein and provide direction to staff regarding desired changes to the plan; AND
2. Defining local neighbourhood consultation area:
 - a. That local neighbourhood be defined by a 100-metre zone around the site; or
 - b. That local neighbourhood be defined by a 200-metre zone around the site; or
 - c. An alternate area defined by Council.

Respectfully submitted,



Shazeen Tejani
Community Planner



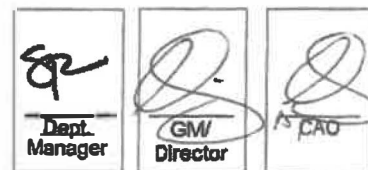
Susan Rogers
Manager Parks

Mairi Welman
Manager, Strategic Communications

REVIEWED WITH:					
<input checked="" type="checkbox"/> Community Planning	_____	<input type="checkbox"/> Clerk's Office	_____	External Agencies:	
<input type="checkbox"/> Development Planning	_____	<input checked="" type="checkbox"/> Communications	_____	<input type="checkbox"/> Library Board	_____
<input type="checkbox"/> Development Engineering	_____	<input type="checkbox"/> Finance	_____	<input type="checkbox"/> NS Health	_____
<input type="checkbox"/> Utilities	_____	<input type="checkbox"/> Fire Services	_____	<input type="checkbox"/> RCMP	_____
<input type="checkbox"/> Engineering Operations	_____	<input type="checkbox"/> ITS	_____	<input type="checkbox"/> NVRC	_____
<input checked="" type="checkbox"/> Parks	_____	<input type="checkbox"/> Solicitor	_____	<input type="checkbox"/> Museum & Arch.	_____
<input type="checkbox"/> Environment	_____	<input type="checkbox"/> GIS	_____	<input type="checkbox"/> Other:	_____
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<input type="checkbox"/> Human Resources	_____	<input type="checkbox"/> Bylaw Services	_____		

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AGENDA INFORMATION	
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<input type="checkbox"/> Other:	Date: _____



The District of North Vancouver REPORT TO COUNCIL

March 25, 2019

File:

AUTHOR: Susan Rogers, Parks Manager

SUBJECT: Handsworth School Track and Field

REASON FOR REPORT:

THAT this report be received for information.

SUMMARY:

The report provides information on the following:

- summary of existing joint-use field agreements between DNV and School District 44
- current status of Handsworth School track and field redevelopment plans
- summary of existing track and fields available in the City and District of North Vancouver,
- existing 5 year Parks Capital Plan to accommodate new artificial turf fields in the District

BACKGROUND:

The District currently has Joint-Use Agreements with Handsworth School and Windsor School to operate and manage the track and fields:

Handsworth School Joint-Use Agreement for Track and Field – 1996

On August 28, 1996, the District signed a joint-use agreement with Handsworth School for the track and field. Under the Handsworth Community Track and Field Joint-Use Agreement, the District is responsible for the maintenance of the existing grass field, and the School maintains the 6 lane synthetic track surface, fencing, curbs and jumping pits. The District has contributed up to \$25,000 annually for field and site maintenance over a period of 23 years. In the current Handsworth School replacement plan (2019), the School District is unable to fund the 6 lane replacement track.

Windsor School Track Joint-Use Agreement for Track and Field - 2011

At Windsor School, there is a 6 lane asphalt track surrounding the tournament sized lit ATF field. With the support of grant funding, the District funded the ATF field and the school funded the asphalt track. Currently, under the Windsor School/ DNV Joint-Use Agreement, the District maintains the ATF field and washroom, and the track is maintained by the School.

There are currently no plans in the DNV Parks 5 year financial plan to construct a lit ATF track and field at Handsworth. There are 2 additional tournament size multi-purpose ATF

fields identified in the District Financial and Parks and Open Space Strategic Plans - Argyle School and Inter River Park (south). Both those sites would commence field construction around Fall 2020 – 2021 at a cost of 9.7 million. Staff are in discussion with the NVRC Community Sports Advisory Committee to determine if the committee has identified the Handsworth track and ATF field as a high priority.

EXISTING POLICY:

In the Parks and Open Space Strategic Plan (2012), there is no specific reference to Handsworth School as a District funded artificial turf track and field project, however there is reference to exploring potential partnerships between the District, the City of North Vancouver and School District in addressing short fall of sports fields.

ANALYSIS:

There are currently 5 tracks on the North Shore as listed below:

DNV	Field	Track
Handsworth School (existing)	Grass	6 Lane Synthetic decommissioned 2019
Windsor Secondary School	Lit ATF	6 Lane Asphalt
CNV		
Sutherland Secondary School	Lit ATF	6 Lane Asphalt
Fen Burdett Park	Lit ATF	4 Lane Running Circuit Synthetic
West Vancouver		
West Vancouver Secondary School	Lit ATF	5 Lane Synthetic

Handsworth School Track and Field Preliminary Design – 2019

With the redevelopment of the school site, staff has viewed preliminary plans for the new Handsworth field which shows the potential to accommodate a tournament size multi purpose field (65 m x 110 m). The design identifies a place holder to include a 6 lane track in the future, should the community find project funding in the future. Constructing a 6 lane track may be feasible although further site analysis would be required to confirm. Due to the proposed new field location, combined with a constrained site, steep slopes and existing trees, an 8 lane track is not feasible.

The Province has provided \$62 million to replace the 57 year old school. While the education ministry will cover the cost of a new grass field to replace the existing field, community feedback has indicated the need for a new lit artificial turf field with track, both of which would require external funding. Currently, the track serves the elementary and high school community on the North Shore, as well as private schools and some community track and field clubs. The permanent loss of a track at Handsworth School will have a significant impact as there is no alternate track site to compensate.

Existing Tracks in City and District of North Vancouver – Fen Burdett & Sutherland

In 2017, the City of North Vancouver opened a 4 lane jogging circuit at Fen Burdett Park with a 100 metre straight away, however there was insufficient space to accommodate a 6 or 8 lane track. Sutherland School has a 6 lane track and a tournament size ATF field. In 2020, Sutherland's ATF field is scheduled for a turf replacement, and preliminary discussions

include replacing the asphalt track with a rubberized surface, subject to funding. At this time, there are no immediate plans to build an additional track in the City of North Vancouver.

DNV Site Options For a Track

In past years, DNV explored potential sites for an 8 lane track, however available sites required significant tree removal which was not supported by the Council of the day. For example, an 8 lane track and field in south Inter River was proposed as part of the Inter River Park Master Plan (1995) however Council did not support the significant tree removal required. Most recently in 2018, Council did not support tree removal at south Inter River to accommodate a second ATF field. Several years ago, Parkgate Park (the forested area east of Taylor Creek), was reviewed as a potential track & field site, however significant tree removal would be necessary to accommodate the facility.

With the redevelopment of Argyle School under construction, the site is too constrained to accommodate a track, in addition to the approved 64 x100 metre lit ATF field.

Timing/Approval Process:

A development permit for the replacement school is subject to Council consideration and approval in April. The SD44 plans to start construction of the school in Fall 2019 with the existing track and field decommissioned. Following construction of the new school on the current field site, the old school will be demolished and a replacement grass field constructed in 2022. The District is collaborating with the School District to accommodate Handsworth School sports on park fields during their construction phase.

Financial Impacts:

A detailed cost estimate for a lit ATF 6-lane track and field at Handsworth School would require more detailed site plans than currently available. At a conceptual level, the capital costs could be in the range of 2.5 – 3.0 million dollars.

5 Year Plan for District of North Vancouver Park ATF Fields

The 5 year Financial Plan for DNV Park capital projects does not include Handsworth School track and field. The current plan includes two tournament sized ATF fields:

- 1) new Argyle School ATF is slated for construction in 2020-2021, and
- 2) Inter River Park (south) which is currently being pre-loaded, with a field construction schedule targeted for 2021 – 2022.

The current costs for Argyle is \$3.5 million and Inter River Park South Field is \$6.2 million. Costs include all site upgrades including drainage, fields, lighting, fences, trails, warm up areas and parking.

At Argyle School, the School District is covering the cost equivalent for the replacement gravel field, with the District responsible for the upgrade costs for the lit ATF capital project.

District staff have met with the users and adjustments to current field user fees and funding for exclusive use of facilities are anticipated.

Public Input:

The School District is project managing the Handsworth School renovation, including community public consultation. The District Community Sports Advisory Committee is currently exploring sports community interest for an ATF and track.

Conclusion:

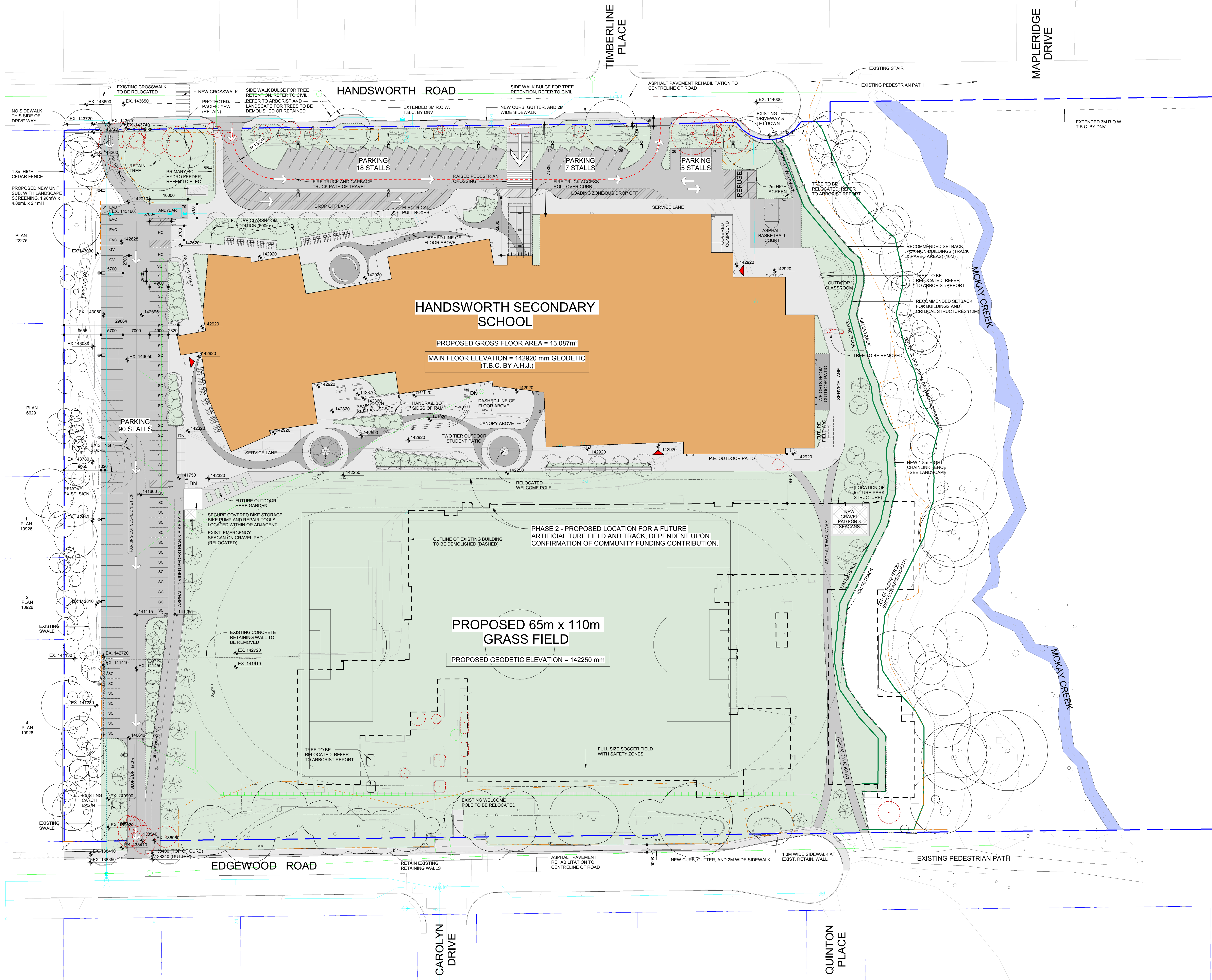
If the District wishes to pursue a lit ATF field and track at Handsworth School, the School District has indicated that they can support the discussion, however will require a financial partnership with the District and community sports users.

Respectfully submitted,



Susan Rogers
Parks Manager

REVIEWED WITH:					
<input type="checkbox"/> Community Planning	_____	<input type="checkbox"/> Clerk's Office	_____	External Agencies:	
<input type="checkbox"/> Development Planning	_____	<input type="checkbox"/> Communications	_____	<input type="checkbox"/> Library Board	_____
<input type="checkbox"/> Development Engineering	_____	<input checked="" type="checkbox"/> Finance	_____	<input type="checkbox"/> NS Health	_____
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<input type="checkbox"/> Parks	_____	<input type="checkbox"/> Solicitor	_____	<input type="checkbox"/> Museum & Arch.	_____
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<input type="checkbox"/> Facilities	_____	<input type="checkbox"/> Real Estate	_____		
<input type="checkbox"/> Human Resources	_____	<input type="checkbox"/> Bylaw Services	_____		



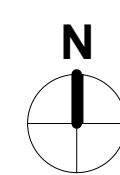
SITE DESCRIPTION			
LEGAL ADDRESS			
LOT 4, BLOCKS 8 TO 10, DISTRICT LOT 596, PLAN 15603			
CITY ADDRESS			
1044 EDGEMOOR ROAD, NORTH VANCOUVER, BC V7R 4G2			
ZONING			
R2C PUBLIC ASSEMBLY ZONE 2, PA			
SITE AREA			
95,025.30m²			
SITE ELEVATION			
143.30m ABOVE SEA LEVEL			
FLOOR AREA RATIO			
REQUIRED: 0.23			
FLOOR AREAS FOR E.A.R.			
MAIN	6,899m²		
SECOND	3,164m²		
TOTAL	10,063m²		
SITE COVERAGE			
BUILDING	0.14 (8,141 m²)		
BUILDINGS AND PARKING	0.22 (12,425 m²)		
BUILDING HEIGHT			
REQUIRED: 13.8m-17.4m			
* BUILDING HEIGHT IS MEASURED TO THE AVERAGE OF THE LOWER OF THE NATURAL OR FINISHED GRADE ELEVATIONS			
CAR PARKING**			
REGULAR STALLS	172	68	
SMALL CAR STALLS	42	42	
HC STALLS	3	3	
HANDICAP	1	1	
GREEN VEHICLE STALLS	-	4	4 EVC STALLS STUB OUTS FOR FUTURE EVC INSTALLATION (LOADING AREA PROVIDED)
LOADING STALLS			
TOTAL	174	120	REFER TO VARIANCE
** PARKING REQUIREMENTS BASED ON 3 STALLS PER CLASSROOM (38 CLASSROOMS) 3x8m+14			
PARKING STANDARDS			
2.7m x 5.7m REGULAR STALLS			
2.0m x 4.0m SMALL CAR STALLS (UP TO 35%)			
3.7m x 5.7m ACCESS STALLS @ 1 PER 100 REGULAR STALLS OR PART THEREOF			
7.0m DRIVE AISLES (TWO WAY TRAFFIC WITH PARKING)			
6.0m DRIVE AISLES (TWO WAY TRAFFIC)			
BICYCLE PARKING			
CLASS 1 (SECURED)***	N/A	14	
CLASS 2 (NON-SECURED)***	84	84	
TOTAL	84	84	
*** CLASS 1 SECURE BIKE PARKING STALLS NOT REQUIRED, 14 PROVIDED (1/1000 STUDENTS/STAFF)			
*** MIN. 0.5 BICYCLE SPACES FOR EVERY 10 STUDENTS ON A MAX. ATTENDANCE PERIOD			

- GENERAL SITE NOTES**
1. ARCHITECTURAL SITE PLAN IS TO BE READ IN CONJUNCTION WITH ALL LANDSCAPE, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS.
 2. READ, CHECK AND COMPARE ALL DRAWINGS, NOTIFY ARCHITECT OF ANYALL DISCREPANCIES.
 3. CHECK AND VERIFY EXISTING CONDITIONS AS SHOWN. NOTIFY ARCHITECT OF ANYALL DISCREPANCIES.
 4. VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE FABRICATION / CONSTRUCTION OF ANY COMPONENT.
 5. FOR SERVICING, GRADING, SITE DRAINAGE, ROADWORKS, RELATED TRAFFIC SIGNAGE AND SIDEWALKS REFER TO CIVIL DRAWINGS.
 6. FOR CONTRACT SEQUENCING, SITE ACCESS, HOARDING AND SO ON REFER TO DRAWING R-001.
 7. FOR LANDSCAPING INCLUDING HARD AND SOFT SURFACES, SITE FURNISHINGS, FENCES AND GATES, AND TREE REMOVAL/RETENTION REFER TO LANDSCAPE DRAWINGS.
 8. FOR RETAINING WALLS REFER TO LANDSCAPE AND CIVIL DRAWINGS.
 9. ALL PLANES AND SWALES ARE TO BE SMOOTH AND TRUE PROVIDING POSITIVE DRAINAGE AND PREVENT PONDING OF WATER.
 10. REFER TO CIVIL AND LANDSCAPE DRAWINGS FOR ALL GRADING. HARD SURFACE GRADING ADJACENT TO BUILDING FACE TO BE 50mm BELOW FINISH FLOOR AND TO SLOPE AWAY FROM BUILDING AT A MINIMUM SLOPE OF 2%. GRADING FOR SOFT SURFACES ADJACENT TO BUILDING FACE TO BE 150mm BELOW FINISH FLOOR IF CLADDING IS CONCRETE OR MASONRY.
 11. SCRAPE AND REMOVE ALL EXISTING MATERIALS AND DEBRIS DUMPED ON SITE.

LEGEND	
	PROPERTY LINE
	TREE PROTECTION DURING CONSTRUCTION - REFER TO ARBORIST REPORT
	FINISH GRADE AT BUILDING FACE
	EXISTING GRADE ELEVATION
	BUILDING OUTLINE
	EXTERIOR ENTRANCE DOOR
	PAINTED DIRECTIONAL ARROW
	EXISTING TREE TO BE RETAINED - SEE LANDSCAPE DWGS.
	EXISTING TREES TO BE REMOVED - SEE LANDSCAPE DWGS.
	NEW TREES - SEE LANDSCAPE DWGS.
	SIAMSE CONNECTION
	NEW FIRE HYDRANT


REVISION - RECORD		
No.	DATE	DESCRIPTION
1	2018-10-01	ISSUED FOR SD COSTING
2	2019-02-15	ISSUED FOR DP PRE-APPLICATION
3	2018-11-15	ISSUED FOR DEVELOPMENT PERMIT
4	2019-01-07	ISSUED FOR SD COSTING
5	2019-02-26	ISSUED FOR DEVELOPMENT PERMIT RE-APPLICATION

ISSUED FOR DP
RE-APPLICATION



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AGENDA INFORMATION	
<input checked="" type="checkbox"/> Regular Meeting	Date: <u>April 15, 2019</u>
<input type="checkbox"/> Other:	Date: _____


Dept.
Manager


GM/
Director


CAO

The District of North Vancouver
REPORT TO COUNCIL

April 3, 2019
File: 08.3060.20/079.18

AUTHOR: Robyn Hay, Development Planner

SUBJECT: **DEVELOPMENT PERMIT 79.18 - 1044 Edgewood Road (Handsworth Secondary School)**

RECOMMENDATION:

THAT Development Permit 79.18 (Attachment A) for the construction of a new Handsworth Secondary School be issued.

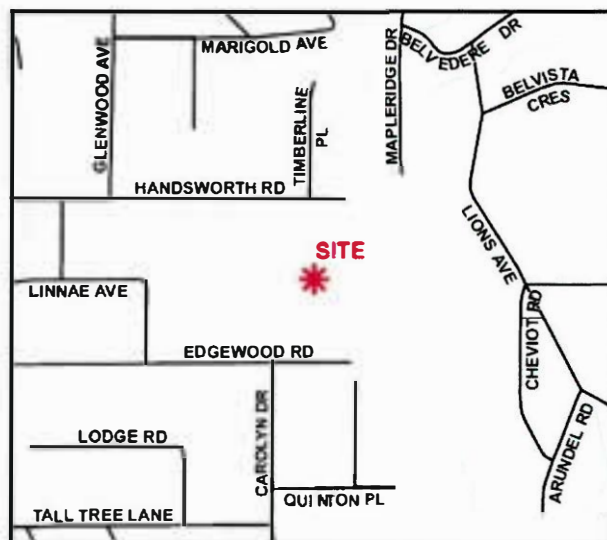
REASON FOR REPORT:

The proposed construction of a new Handsworth Secondary School triggers an environmental and hazard development permit (DP) with variances that requires Council's consideration.

SUMMARY:

The site is in DP areas for Protection of the Natural Environment, Streamside Protection, Protection from Natural Hazards (Wildfire and Slope) and Energy and Water Conservation and Green House Gas Emission Reduction. The proposal requires a variance to the Zoning Bylaw to amend the siting area map of the existing Handsworth School and to vary the parking requirements for the project.

Development Permit 79.18 facilitates the complete replacement of Handsworth Secondary School for grades 8 to 12. The new school will be seismically sound under current standards and will accommodate general instruction classrooms, various other learning spaces for students with



special needs, business education, information technology, art, library, administration offices, multi-purpose rooms, lunch server, tech ed shops, black box theatre, music, and three connected gyms which change rooms and storage rooms.

The proposal addresses environmental and hazard DP requirements, is targeting a LEED® Gold equivalency, addresses project constraints such as the creek, slope, trees, and the need to keep the existing school open during construction of the new school. The proposal will provide an improved parking layout and onsite pick-up and drop-off area. The parking variance is supported by a traffic study prepared by Binnie & Associates Ltd. which has been reviewed by staff.

SUBJECT PROPERTY:

The site is bounded by Handsworth Road to the north, Edgewood Road to the south and MacKay Creek (ravine) and forested area runs through the east side of the site. The property is bordered by residential land directly to the west and to the north and south on the opposite side of the respective streets.

The site is currently occupied by the existing Handsworth Secondary, a three storey school built in 1961. The existing school is 14,230 m² (153,170 sq ft) in size and occupies the south half of the site with field and running track on the north. The main pedestrian entrance of the existing school is on Edgewood Road with two parking areas (with a total of 119 formal parking spaces), one accessed from Edgewood Road and the other from Handsworth Road. The site is approximately 56,000 m² (13.8 acres).



Subject Site (1044 Edgewood Road)

EXISTING POLICY:

Zoning

The subject property is split zoned Public Assembly Zone 2 (PA2) and Natural Park Land (NPL). The NPL zoned area is associated with the MacKay Creek ravine towards the east side of the site. No development is proposed within the NPL zoned portion of the site. The proposed building is located on the PA2 zoned portion of the site which allows for the use and the density proposed.

The Zoning Bylaw includes siting (setback) maps for many public assembly buildings and the PA/02 map applicable to this site reflects the current school location. It must be varied to allow construction of the school in the proposed location which facilitates keeping the existing school open during construction of the new school.

Development Permit Areas

The property is within the following Development Permit Areas:

- Energy and Water Conservation and Green House Gas Emission Reduction;
- Protection of the Natural Environment;
- Streamside Protection; and
- Protection from Natural Hazards (Wildfire and Slope).

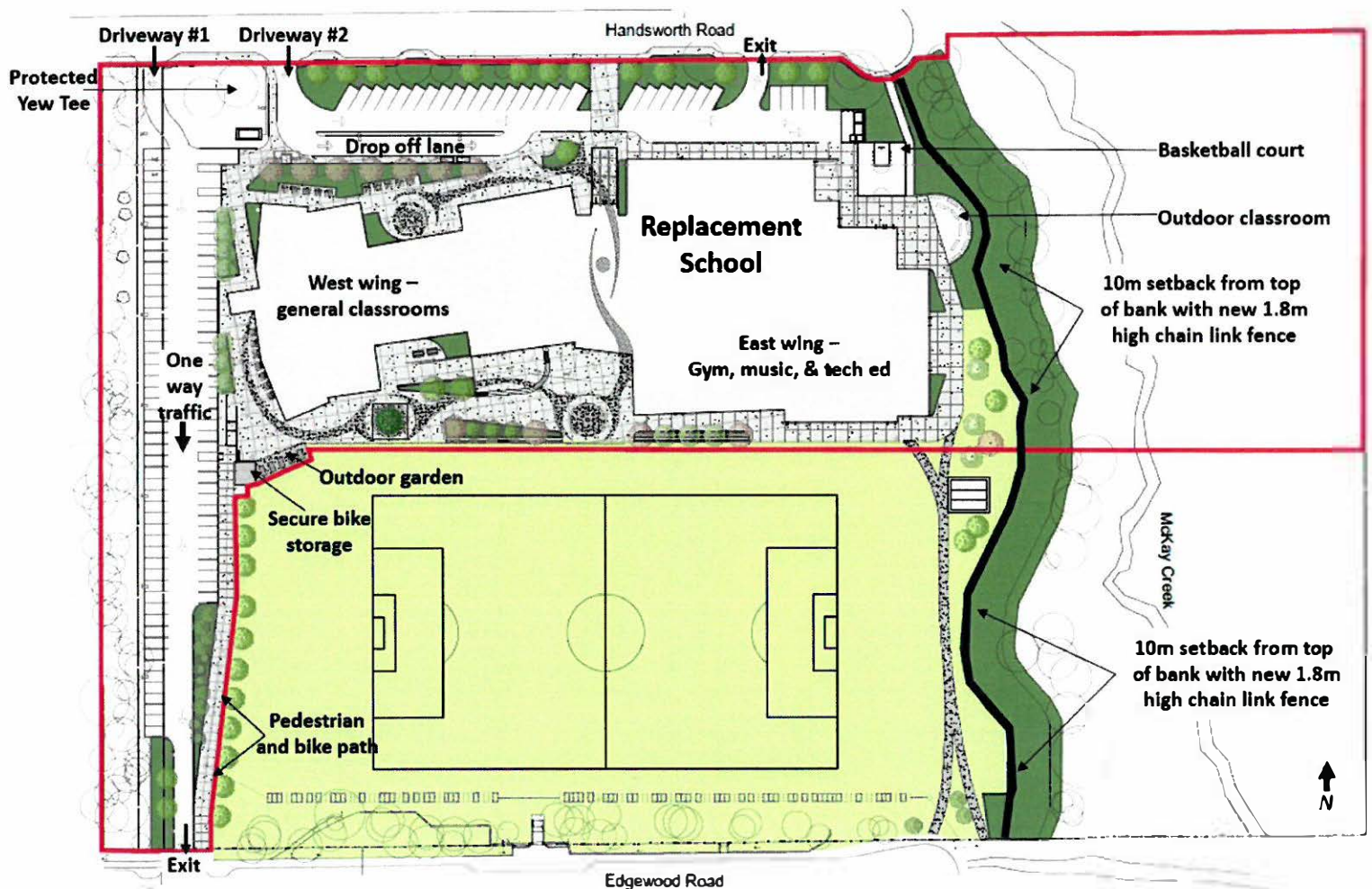
The development proposal has been reviewed against Schedule B of the OCP and is consistent with the applicable development permit guidelines. As an institutional use, the project is exempt from Form and Character Development Permit requirements, but has voluntarily undergone a design review by staff and Advisory Design Panel.

THE PROPOSAL:

The North Vancouver School District 44 (NVSD44) received funding from the Provincial Government to proceed with a full replacement of Handsworth Secondary School. The school will be developed in two phases to prevent interruptions to programing. The new building will be constructed in the northern portion of the site (on the existing field) as phase one. Once the building is complete and occupied the old school will be demolished and the construction of a new field in the south portion of the site can commence. There is the potential for an international tournament size sports field (65m x 100m) and a 6 lane running track. DP 79.18 applies only to the area outlined in red (phase one) on the map on the following page. This area includes the building and all parking, circulation and points of access. The south portion of the property, containing the proposed sports field will be subject of a separate development permit at a later date.

The proposed building is three-storeys with a height of 13.8m (45.3ft) and has a gross floor area of approximately 13,000 m² (139,930 sq. ft) which results in a floor space ratio of 0.23. The new building will be located on the north side of the property with main building entrance located centrally along the Handsworth Road frontage. The interior has been designed with maximum flexibility to support a variety of teaching and learning styles. The general instruction classrooms are located in the west wing of the building and the noisier uses (tech ed shop, music, gym etc.) are generally located in the east wing of the building, away from immediate neighbours.

Vehicle ingress to the site is proposed from Handsworth Road via two driveways. The entrance to the west will provide for one way traffic that flows through the site southbound to an exit on Edgewood Road. The second entrance from Handsworth provides for a one-way (west to east) drop-off and pick-up area near the building's main entrance. A total of 120 parking spaces are proposed on site in addition to 98 bike stalls and end of trip facilities.



Building Design

The expansive glass walls at the 'heart' of the building and main entrance creates a welcoming sense of arrival from Handsworth Road. The façade is broken down and well-articulated to provide visual interest. Ample glazing will be provided to maximise daylight and take advantage of the mountain views from within the building.



North (front) elevation – main entrance



South (rear) elevation

Large overhangs provide shelter at the main entrance and at the student patio and library amphitheatre at the rear. The external materials incorporates a mix of horizontal and vertical cladding textures. The colour scheme is neutral with wood emphasized at soffits. Overall, the building exhibits a quality design by virtue of its building material and finishes and articulation in the façade.

Sports Field and Potential Track

The Provincial Government has provided funding for a new tournament size (65m x 100m) grass field. Funding options will be explored, including with community groups, to upgrade the field to artificial turf with a running track around the perimeter. Given that the field will be constructed in phase two of the project, time is available to resolve the construction approach should funding for artificial turf and/or a running track be secured. The field and potential track will be subject to a separate DP at a later date.

Variances

The proposed footprint is located on a different part of the property than the existing school. There is siting area map (Plan Section Page PA/02) in the Zoning Bylaw which establishes setbacks for Handsworth Secondary School based on the location of the original building. DP 79.18 varies that Siting Map to reflect the new location and setbacks associated with the new Handsworth Secondary School. The new building is proposed to be located in a different location than the existing building in order to allow the existing building to remain in use while the new building is under construction and also to account for a variety of environmental constraints.

The current school has 119 parking stalls and 120 are proposed with improved circulation and onsite pick-up and drop-off. The Zoning Bylaw requires 3 stalls per classroom. The applicant's traffic consultant assumptions indicate that there are 58 classrooms proposed however, in accordance with the Zoning Bylaw there are only 54 classrooms (including 31 traditional classrooms and 23 additional learning spaces) which results in a requirement for 162 vehicle stalls. Therefore a variance of 42 spaces is proposed.

The floor area of the proposed building is approximately 1,230 m² (13,239 sq. ft) less than the existing school and the number of staff and students are expected to remain the same. The number of trips generated and parking demand generated from the proposed school will be the same or similar to the existing conditions. The applicant has provided a parking and traffic study which supports the proposed 120 stalls to meet the needs of the school.

The traffic demand management strategies outlined in the traffic study include supporting alternative transportation choices such as walking, cycling, taking public transit and carpooling. Encouraging these modes of travel is expected to decrease the overall site-generated parking demand. The site is serviced by public transit with route numbers 232, 236 and 247 operating along Capilano Road and route number 247 operating along Highland Boulevard. The respective transit stops are within walking distance to the site. Although not required, the design includes four electric vehicle charging stalls and two green vehicle stalls which will be used for a variety of sustainable initiatives/options such as hybrid vehicles, car-pool vehicles, and car-share. The site is located on a bike route in accordance with DNV's Bicycle Master Plan and the design includes an additional 14 secure bike parking stalls, end of trip shower facilities for staff and

bike repair and maintenance equipment, in addition to the 84 non secure bike parking stalls required by the Zoning Bylaw.

District staff supports the conclusions of the study as it relates to parking. DP 79.18 including the required parking variance, in accordance with the anticipated peak demand.

Zoning Regulation	Requirement	Proposed	Variance
Parking	162	120	42

Traffic and Circulation

The enrolment capacity of the new school will be 1,400 students which is generally consistent with the existing enrolment. No significant increase in traffic is anticipated. An onsite pick-up/drop-off loop is proposed near to main building entrance with access from Handsworth Road.



North elevation – drop off / pick up area

A new 2 metre wide sidewalk is proposed on the south side of Handsworth Road. This new sidewalk will require a statutory right of way which will be registered on title prior to the issuance of the building permit. A new raised crosswalk is proposed at the Handsworth Road and Timberline Place intersection and the existing crosswalk on Handsworth Road (near the west side of the frontage) will be relocated further to the east to better separate vehicle and pedestrian movements. The design includes narrowing of Handsworth Road with bulges at the crosswalks and other key locations to allow for the protection of existing trees, traffic calming, and improved pedestrian safety. The road bulges will result in the removal of approximately 11-13 street parking spaces however, is supported by Transportation Engineering as it improves pedestrian safety. An improved sidewalk is also proposed along the north side of Edgewood Road.

Bicycle Parking

The site is on a bike route and a separated onsite bike path from Handsworth Road to the new building is included in the off site design. The proposal includes 98 bicycle stalls which exceeds the Zoning Bylaw requirement of 84 stalls. Fourteen of these stalls are intended for long-term parking in enclosed secure areas. A bike repair area and end of trip facilities are also proposed.

Accessibility

The building has been designed to accommodate persons with disabilities and includes such features as centrally-located elevators, universally accessible bathrooms as well as wide hallways. A handydart parking space is provided near the west entrance and wheelchair accessible parking spaces are located adjacent to both the main and west entrances.

Crime Prevention Through Environmental Design (CPTED) and Lighting

External lighting is provided around the perimeter of the building including under the covered outdoor space. The lighting will be dimmed after hours to provide safe but unobtrusive lighting. The west parking is to be lit with lights facing toward the school mitigating light spillage onto neighbouring properties. The parking lot lighting will be programmed to shut off at 11pm. All light fixtures will be “full-cut-off” design in accordance with the LEED requirements for light pollution reduction.

Staff met with Sgt Kevin Bracewell, advisor to Advisory Design Panel (ADP) to review the proposal and overall, it was considered that the proposal generally complies with the CPTED principles.

CONCURRENCE

Energy and Water Conservation and Greenhouse Gas Emission Reduction

In accordance with the Energy and Water Conservation and Greenhouse Gas Emission Reduction Development Permit Area Guidelines, a sustainability report prepared by Recollective Consulting Inc. was provided. The project is designed to reduce energy consumption and incorporate building performance measures that will result in reduced operation and maintenance costs for the NVSD44. The applicant is utilizing LEED® and is proposing to incorporate a range of features to meet a target equivalent to the Gold standard.

Notable highlights from the proposal include the installation of low flow and water efficient fixtures, LED lighting (interior and exterior), energy recovery ventilators, and a high performance building envelope which includes triple pane windows, continuous air barriers and exterior wall assembly with continuous outboard insulation. A light coloured roofing material has been used to reduce the heat island effect and outdoor water conservation strategies

include water-conscious landscaping incorporating drought-tolerant and native species. The design includes four electric vehicle charging stalls and two green vehicle stalls which will be used for a variety of sustainable initiatives/options such as hybrid vehicles, car-pool vehicles, and car-share. Additional measure to promote resource and greenhouse gas emission reduction include diverting at least 75% of construction materials the landfill and direct to reuse and recycling.

Given the institutional nature of the project the BC Energy Step Code is not applicable. The sustainability measure proposed satisfies the Energy and Water Conservation and Greenhouse Gas Emission Reduction DP requirements.

Protection of the Natural Environment and Streamside Protection

There are four watercourses east of the proposed development including MacKay Creek, two stormwater outflow ditches that flow into MacKay Creek and an unnamed watercourse that runs along the bottom of the slope on the western ravine bank before flowing into MacKay Creek.

The Streamside DPA requires a minimum 10 metre setback from the top of bank for all watercourses where the watercourse is set in a ravine over 60 metres wide. The width of the ravine associated with this site varies, but is generally between 100 and 150 metres wide.



Photo of Mackay Creek from the center east edge of the property, facing south

The proposed building footprint has been carefully located to minimise impacts to natural areas. All development is outside the 10 metre setback from the Mackay Creek ravine in accordance with the Streamside DPA requirements and the Streamside Protection Environmental Report prepared by Diamond Head Consulting (Attachment C).

All trees along the ravine will be protected and measures taken to protect the slopes stability. Any existing impervious surfaces within the 10 metre setback will be removed and the area restored. Upon completion of the restoration works, a permanent 1.8 metre tall chain link fence will be installed along the 10 metre setback.

Invasive species are pervasive throughout the Mackay Creek ravine. The Protection of the Natural Environment DPA Report prepared by Diamond Head Consulting (Attachment D) recommends that once the invasive species are removed ecologically suitable native species

will be replanted in order to prevent these invasive species from re-establishing on the site. The report includes a restoration plan accordingly.

An arborist report has been prepared by BC Plant Health Care Inc. (Attachment E) and approximately 240 onsite and offsite trees have been assessed. While every effort is being made to minimize impacts to trees, there is tree removal required due to a combination of wildfire hazard, poor health, and siting conflicts associated with the new building, associated infrastructure and road upgrades. The arborist report indicates that 38 trees are slated for removal and 81 replacement trees are proposed. A final landscape plan will be required prior to the issuance of a building permit.

There is a Pacific Yew tree located to the north west corner of the site (photo on the following page). The tree is approximately 130 years old and this species of tree reaches maturity at 250-350 years of age. This tree has heritage value and the NVSD44 have agreed to formally protect it as a heritage tree, with a Section 219 Covenant.

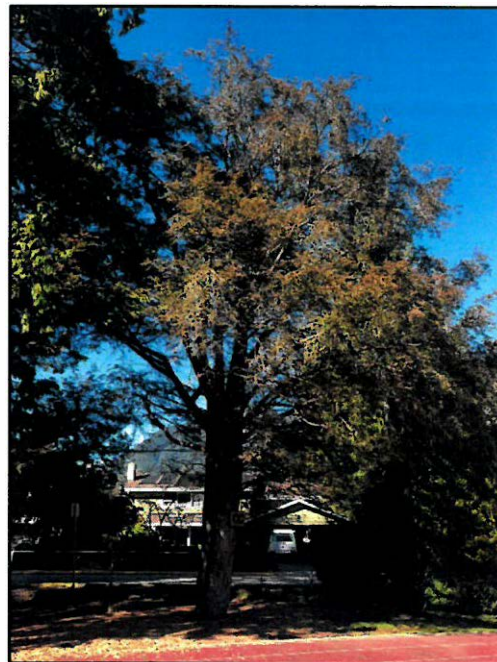


Photo of the Pacific Yew Tree

Protection from Wildfire Hazard

A Wildfire Hazard Report prepared by Diamond Head Consulting (Attachment F) has been provided which outlines how the combination of the building materials and fire resistant replacement trees meets the Development Permit requirements for construction in a wildfire hazard area. A post construction sign off will be required as a condition of DP 79.18 to ensure the structure and landscaping meets the recommendations in the Wildfire Hazard Report.

Protection from Slope Hazard

A Slope Hazard Assessment Report prepared by EXP Services Inc. (Attachment G) has been provided which confirms that the site is safe for intended use as per Section 56 of the Community Charter. The proposed development complies with the District's current risk tolerance requirements as per the Official Community Plan (OCP). The proposal and associated Slope Hazard Assessment Report has been reviewed and accepted by the District's Environment Department.

DP 79.18 requires development in accordance with the above referenced environmental and hazard reports.

OFF-SITE IMPROVEMENTS

As part of this development, the NVSD44 will be responsible for off-site improvements to Handsworth Road and Edgewood Road including new sidewalks, crosswalks and new paving to the centre line of the respective streets.

CONCURRENCE

Staff

The project has been reviewed by staff from Permits, Parks, Development Engineering, Environment, Community Planning, Urban Design, and the Fire and Rescue Department.

Advisory Design Panel

As the form and character DP guidelines do not apply to institutional buildings, a review by the ADP is not required. Though not required to do so, the application was considered by the ADP on December 13, 2018 and the Panel recommended approval of the project subject to minor revisions to the satisfaction of staff.

The applicant has provided the following revisions in response to the ADP's comments:

- A horizontal pattern was added on the metal cladding to add visual interest.
- Sunshades have been added to the south and west side of the building to improve energy efficiency. Larger, deeper sunshades are used on the classrooms and shorter more narrowly spaced pattern sunshades are used on the collaboration spaces to provide variation.
- Additional windows have been added on the south elevation (east wing of the building).
- Landscaping details have been further developed.
- South plaza has been refined, with the outdoor basketball half-court moved to the north-east side of the site closer to the gym, and the grading from the parking lot to the plaza level has been resolved.

The above list of issues have been satisfied with design revisions.



Public Input

The applicant held a facilitated Public Information Meeting on January 24, 2019. Notices were distributed to 186 addresses within approximately a 100 metre radius of the site and via email to all the student parents, and two websites (DNV and NVSD44) have been established for this application. Two signs were placed on the property, and advertisements were placed in the North Shore News on December 28th and January 4th. The meeting was attended by approximately 100 people. 44 comments sheets were received at the meeting and an additional 210 were received following the meeting.

The NVSD44 also held user group input workshops, steering committee presentations open to the public, and distributed questionnaires to staff, students and parents.

The overall tone of the Public Information Meeting meeting was supportive of the replacement school and the proposed design. Comments included:

- Environment concerns relating impacts to the riparian area
 - The applicant has provide reports from qualified professionals addressing the Streamside Protection and Protection of the Natural Environment Development Permit Area Guidelines which have been reviewed and accepted by the District's Environment Department. The riparian area will be restored and protected as part of this project. Development Permit 79.18 requires construction in accordance with the recommendations of the professional reports.
- Traffic and parking impacts
 - Traffic and parking impacts have been carefully considered. The traffic demand management strategies outlined in the traffic study include supporting alternative transportation choices such as walking, cycling, taking public transit and carpooling. The design includes improved onsite pedestrian and cycling connections.
- Interest in having an artificial turf field and running track
 - The field and potential track will be subject to a separate DP at a later date, as mentioned previously.
- A number of operational concerns and question including the design and number of washroom and change room facilities and specific concerns from individual users with regards to individual programs
 - The NVSD44 had considered the issues raised and had very specific reasons for the design choices being presented, which largely reflect the Ministry of Education

requirements and the desire to build a facility that is welcoming to as many users as possible.

- Relationship to the single family lots to the west
 - The school has been strategically place as far away from the neighbours as possible with the parking lot in between and maintained the tree buffer at the property line. Additionally, noisier programs such as tech ed and the gym (which gets heavier after hours use) are in the east wing of the school to mitigate impacts.

Also, in response to neighbour input the applicant has agreed to construct a new 1.8 metre high cedar fence along approximately half of the west property boundary, remove the exiting path along the sites west boarder and restore the land.

The facilitator report is attached as Attachment B.

CONSTRUCTION MANAGEMENT

In order to address the goal to reduce development impacts on pedestrian and vehicular movements, the applicant will be required to provide a final construction traffic management plan as a condition of Development Permit 79.18. The Construction Management plan must minimize construction impacts on pedestrian movement and vehicular traffic. The plan is required to be approved by the District prior to issuance of a building permit.

In particular, the construction traffic management plan must address:

1. Construction schedule
2. Coordination with other projects in the area or those affecting the transportation network
3. Construction site access and egress
4. Estimated traffic generated by the site during construction
5. Proposed truck routing and staging plan
6. Proposed crane assembly and/or concrete pouring sites
7. How traffic of all types (vehicle, transit, cyclists, pedestrians) will be managed around the site
8. A plan for monitoring and minimizing impacts to the community
9. Location of parking worker/trades vehicles
10. A plan for communicating with neighbours and other stakeholders

There are currently no other development applications in the immediate area and the District in not expecting any new major civil infrastructure work in the area during the construction of this project.

Conclusion

The project meets the applicable Development Permit Area Guidelines and the variances for building siting and parking are supported by staff. The new school is respectful of the natural environment and will create a quality learning environment for the students.

Development Permit 79.18 is now ready for Council's consideration.

Options

1. Issue Development Permit 79.18 (Attachment A) to allow for the proposed construction (staff recommendation); or
2. Provide direction to staff with respect to Development Permit 79.18.

Respectfully submitted,



Robyn Hay
Development Planner

Attachments:

- A. DP 79.18 with attached drawings
- B. Facilitator Report
- C. Streamside Protection DPA report prepared by Diamond Head Consulting dated April 24, 2018 (updated February 12, 2019)
- D. Protection of the Natural Environment DPA Report prepared by Diamond Head Consulting dated April 25, 2018 (updated January 24, 2019)
- E. Wildfire Hazard DPA Report with appendix removed prepared by Diamond Head Consulting dated May 5, 2018 (updated January 22, 2019)
- F. Slope Hazard Assessment Report with appendix removed prepared by EXP Services Inc. dated November 27, 2018
- G. Arborist Report excerpt prepared by BC Plant Health Care Inc. dated October 25, 2018 (updated November 19, 2018 & February 21, 2019)

REVIEWED WITH:					
<input type="checkbox"/> Sustainable Community Dev.	_____	<input type="checkbox"/> Clerk's Office	_____	External Agencies:	
<input type="checkbox"/> Development Services	_____	<input type="checkbox"/> Communications	_____	<input type="checkbox"/> Library Board	_____
<input type="checkbox"/> Utilities	_____	<input type="checkbox"/> Finance	_____	<input type="checkbox"/> NS Health	_____
<input type="checkbox"/> Engineering Operations	_____	<input type="checkbox"/> Fire Services	_____	<input type="checkbox"/> RCMP	_____
<input type="checkbox"/> Parks	_____	<input type="checkbox"/> ITS	_____	<input type="checkbox"/> NVRC	_____
<input type="checkbox"/> Environment	_____	<input type="checkbox"/> Solicitor	_____	<input type="checkbox"/> Museum & Arch.	_____
<input type="checkbox"/> Facilities	_____	<input type="checkbox"/> GIS	_____	<input type="checkbox"/> Other:	_____
<input type="checkbox"/> Human Resources	_____	<input type="checkbox"/> Real Estate	_____		

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THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER

DEVELOPMENT PERMIT 79.18

This Development Permit 79.18 is hereby issued by The Corporation of the District of North Vancouver to the registered owner(s) for the construction of a replacement school on the property located at 1044 Edgewood Road, legally described as Lot A Blocks 8 To 10 District Lot 596 Plan 15603, (PID: 007-645-961) subject to the following terms and conditions:

- A. The following Zoning Bylaw regulations are varied under Part 14, Division 7, Subsection 490 (1) (a) of the Local Government Act:
1. The Plan Section Page PA/02 setbacks are varied to permit the building footprint as illustrated in the attached plan DP 79.18 – 1, and to permit the construction of the building as illustrated in the attached package (DP 79.18 – 1-10).
 2. The minimum number of on-site parking stalls is varied to 120 stalls.
- B. The following requirement is imposed under Subsection 490 (1) (c) of the Local Government Act:
1. Substantial construction as determined by the Manager of Permits and Licenses shall commence within two years of the date of this permit or the permit shall lapse.
 2. A Construction Management Plan is required prior to issuance of the Building Permit and Excavation Permit, and may require amendments during the course of construction to ensure that construction impacts are minimized.
 3. No work shall take place except to the limited extent shown on the attached plans (DP 79.18 – 1-10) and in accordance with the following specifications:
 - i. Commitment to demolish existing school upon occupancy permit being granted for new school.
 - ii. Confirmation of registration of a section 219 covenant for the protection of the Pacific Yew Tree located in the north west corner of the subject site.
 - iii. Confirmation of registration of a statutory right of way (SROW) for:

-
- a. A water service through the proposed parking lot along the west side of the property (from Handsworth Road to Edgewood Road).
 - b. A widened sidewalk along Handsworth Road.
 - 4. Prior to the issuance of a Building Permit, the following shall be submitted to:
 - i. Parks Department:
 - a. Three copies of a final detailed landscape plan prepared by a Landscape Architect registered in British Columbia for the approval of the General Manager of Engineering or their designate.
 - b. A written landscape estimate in accordance with District format, submitted by the Landscape Architect for approval by the Parks and Engineering Services Department for the installation of all landscaping as shown on the final approved landscape plan.
 - c. A completed "Permission to Enter" agreement to provide evidence that a Landscape Architect has been retained to supervise the installation of the landscape works and the written authorization for the District or its agents to enter the premises and expend any or all of the deposit monies to complete the landscape works in accordance with the approved landscape plan.
 - ii. Engineering Department:
 - a. Finalized civil and electrical engineering plans designed by a Professional Engineer, for review and acceptance by the Engineering Department.
 - b. An executed Engineering Services Agreement between the property owner and the District related to the required upgrading of off-site facilities on Handsworth Road and Edgewood Road. Upgrades will include, but are not limited to: street lighting, sidewalk, curb gutter, and street improvements.
 - C. The following requirements are imposed under Subsection 491 (1) of the Local Government Act:
 - 1. No work shall take place except to the limited extent shown on the attached plans (DP 79.18 – 1-10) and in accordance with the following specifications:
 - i. The site shall be developed in accordance with the recommendations of the Protection of the Natural Environment and Streamside Protection Reports

prepared by Diamond Head dated April 25, 2018 (updated January 24, 2019) and April 24, 2018 (updated February 12, 2019) respectively.

- ii. This permit does not authorize any buildings, structures, paving or other impervious surfaces or alteration of land to be constructed within the Natural Environment or Streamside Protected Area (10m from top of ravine bank) as outlined on the attached plans, except in accordance with the attached site plan and/or as exempted in the Streamside or Natural Environment Protection Sections in Schedule B of the District of North Vancouver Official Community Plan.
- iii. A qualified professional shall confirm that the Building Permit drawings meet the recommendations of the Protection of the Natural Environment and Streamside Protection Reports referenced above, or meets an equivalent or higher degree of protection.
- iv. No trees or other vegetation shall be disturbed or removed from the Natural Environment or Streamside Protected Area, except as identified on the attached plans.
- v. No material of any kind, including grass clippings, compost material or other yard waste shall be placed within the Natural Environment or Streamside Protected Area.
- vi. A permanent 1.8 metre high chain link fence (in accordance with District bylaws) must be constructed along the edge of the Natural Environment or Streamside Protected Area.
- vii. A detailed arborist report based on a topographical survey of the trees within and within influencing distance of the subject site is required at the demolition and Building Permit stage. The arborist report must schedule all bylaw trees to be removed or pruned and detail any protection requirements for those being retained.
- viii. A post construction report by the Registered Qualified Professional(s), stating that the development has been carried out in accordance with all the above mentioned Reports, shall be submitted prior to finalization of the Building Permit and release of security deposit monies held by the District including, but not limited to:
 - a. Invasive species management has occurred as cited in the Protection of the Natural Environment Report for development within the protected area.

-
- b. Re-planting is to be in accordance with the recommendations of the Protection of the Natural Environment Report.
 - c. New habitat construction and/or enhancement has been completed in accordance with the recommendations of the Registered Professionals.
 - d. Construction mitigation measures have been carried out in accordance with the recommendations of the Protection of the Natural Environment Report.
- ix. Construction on the site must adhere to all requirements of the *Environmental Protection and Preservation Bylaw* (EPPB), including, but not limited to:
- a. During the project extreme care must be taken to ensure that absolutely no cement wash or other substance deleterious to aquatic life enter the creek, creek bank, waterfront, or the storm water system.
 - b. Soil removal and excavation is permitted on the site for foundation or other approved purpose.
 - c. Excavated soil is to be removed from the District of North Vancouver or to a site pre-approved by the building inspector.
 - d. Sediment and erosion control for the site to be as per the standard plan and maintained in compliance with the EPPB at all times.
 - e. Imported soil and fill for the site must comply with the appropriate contaminant criteria as per the EPPB.
 - f. DNV equipment called in to clean sediment from the roads will be charged to the project.
 - g. A copy of the permit to be on site at all times.
- D. The following requirements are imposed under Subsections 491 (2) of the Local Government Act:
- 1. No work shall take place except to the limited extent shown on the attached plans (DP 79.18 – 1-10) and in accordance with the following specifications:
 - i. The site shall be developed in accordance with the recommendations of the Slope Hazard Report prepared by EXP Services Inc dated November 27, 2018.

-
- ii. A qualified professional engineer shall confirm that the Building Permit drawings meet the recommendations of the Slope Hazard Report referenced above, or meets and equivalent or higher degree of protection.
 - iii. The site shall be developed in accordance with the recommendations of the Wildfire Report prepared by Diamond Head dated May 5, 2018 (updated January 22, 2019).
 - iv. Ongoing building envelope and landscape maintenance shall occur in accordance with the requirements set out within the Wildfire Hazard Assessment Report.
 - v. A post construction report by the Registered Qualified Professional(s), stating that the development has been carried out in accordance with all the above mentioned Reports, shall be submitted prior to finalization of the Building Permit and release of security deposit monies held by the District including, but not limited to:
 - a. Slope hazard mitigation measures as outlined in the Registered Professional report have been constructed and inspected to the satisfaction of the Registered Professional.
 - b. Details on any monitoring of slope conditions, structures or devices associated with the development.
 - c. Slope and/or creek restoration including re-planting or enhancement has been completed in accordance with the recommendations of the Registered Professionals.
 - d. Building construction has occurred using the building materials as cited in the Wildfire Hazard Assessment Report or their fire resistant equivalents have been implemented to meet the requirements for development within the Wildfire Hazard Development Permit Area.
 - e. Landscaping is to be in accordance with the recommendations of the Wildfire Hazard Assessment Report.
 - f. Mitigation measures have been carried out in accordance with the recommendations of the Wildfire Hazard Assessment Report.

E. The following requirements are imposed under Subsections 491 (9) and (10) of the Local Government Act:

1. Prior to issuance of the Building Permit the following is required:

- i. Confirmation of the green building features included in the project as per the Sustainability Report dated March 28, 2019 to fulfil the Energy and Water Conservation and Greenhouse Gas Emission Reduction Development Permit Area Guidelines.

F. The following requirements are imposed under Subsection 502 of the Local Government Act:

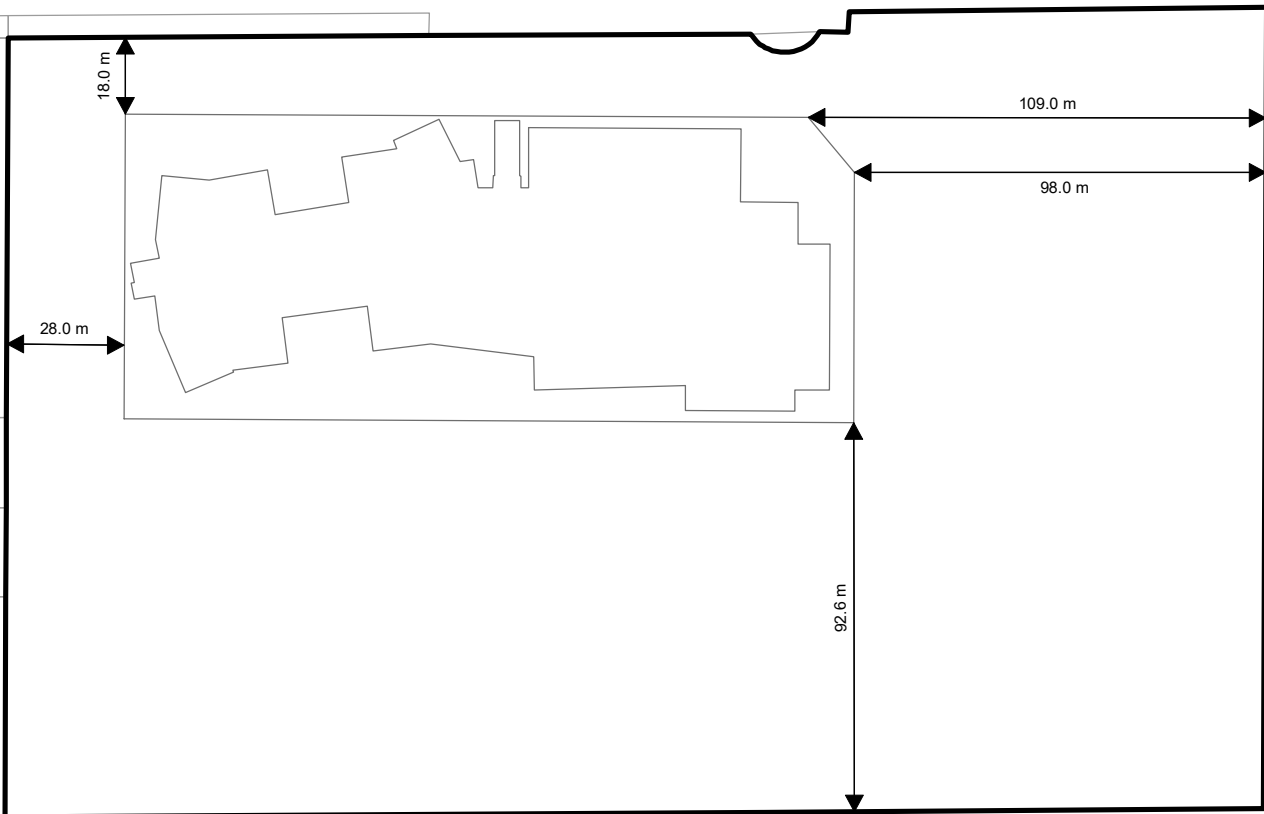
1. Prior to issuance of the Building Permit the following deposits are required:

- i. A security deposit equal to the greater of 125% of the estimated cost of all on-site landscaping, in accordance with the approved cost estimate or \$100,000. The deposit must be provided prior to issuance of a Building Permit for the development on the Land and will be held as security for landscaping and environmental works.
- ii. Engineering security deposit(s), in an amount specified in the Engineering Services Agreement, to cover the construction and installation of all off-site engineering and landscaping requirements.

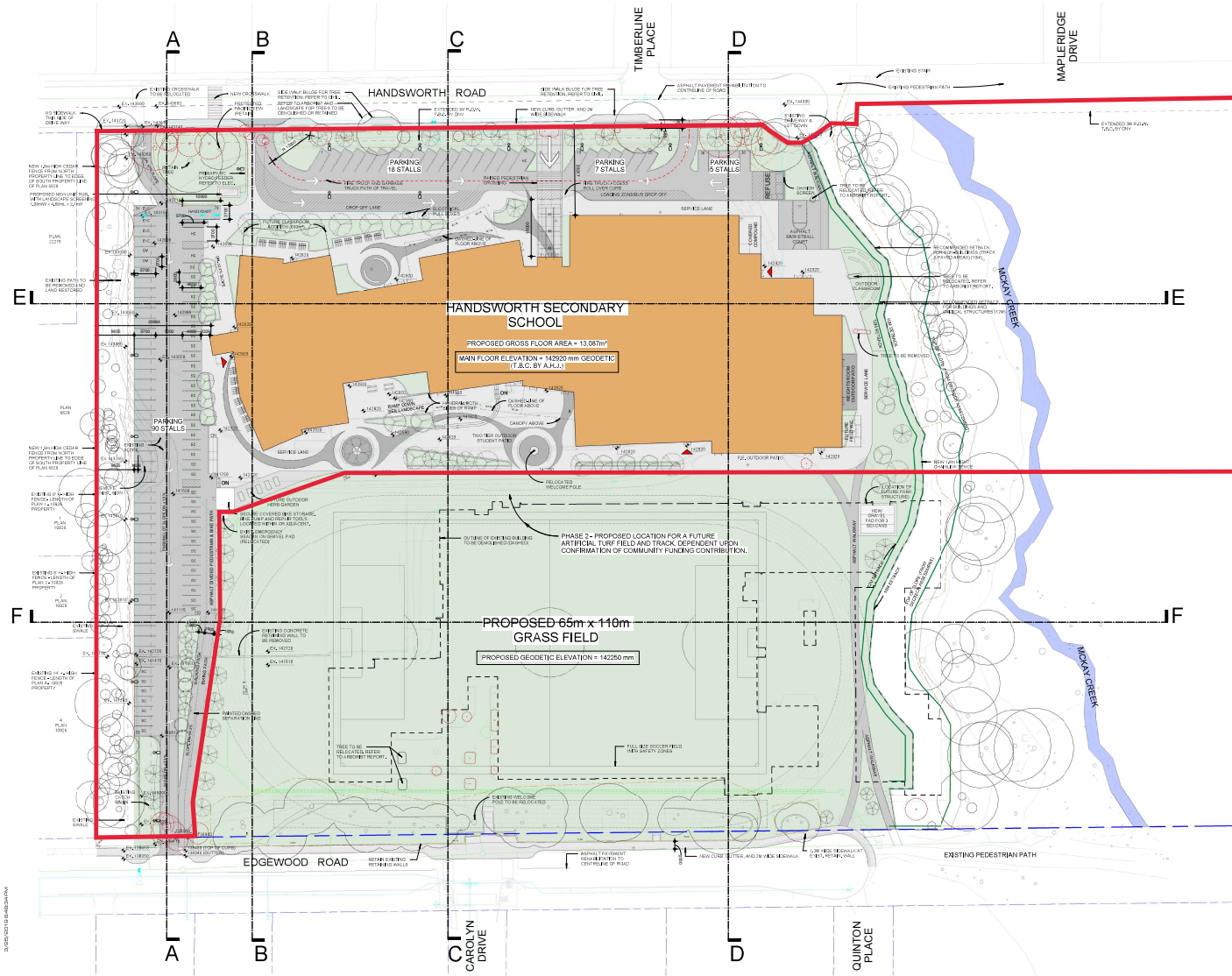
Mayor

Municipal Clerk

Dated this _____ day of _____, _____



1 in = 150 ft



1 CONTEXT SITE PLAN
1:100
1/8" = 1'-0"

NOTES	
1. BUILDING FOOTPRINT IS ASSIGNED TO THE AVENUE OF THE LOWER OF THE MATERIALS ON THE ADJACENT SIDEWALK.	
2. BUILDING FOOTPRINT IS ASSIGNED TO THE AVENUE OF THE LOWER OF THE MATERIALS ON THE ADJACENT SIDEWALK.	
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11. BUILDING FOOTPRINT IS ASSIGNED TO THE AVENUE OF THE LOWER OF THE MATERIALS ON THE ADJACENT SIDEWALK.	

- GENERAL NOTES**
1. ARCHITECTURAL SITE PLAN IS TO BE READ IN CONJUNCTION WITH ALL LANDSCAPE, CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS.
 2. READ, CHECK AND COMPARE ALL DRAWINGS. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
 3. CHECK AND VERIFY EXISTING CONDITIONS AS SHOWN. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
 4. VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE FABRICATION / CONSTRUCTION OF ANY COMPONENT.
 5. FOR SERVING, GRAVING, SITE DRAINAGE, ROADWORKS, RELATED TRAFFIC SIGNALS AND SIGNALS REFER TO THE DRAWINGS.
 6. FOR CONTRACT SCHEDULING, SITE ACCESS, HOARDING AND SO ON REFER TO DRAWING 889.
 7. FOR LANDSCAPING INCLUDING HARD AND SOFT SURFACES, SITE FURNISHINGS, FENCES AND GATES, AND TREE REMOVAL/RETENTION REFER TO LANDSCAPE DRAWINGS.
 8. FOR RETAINING WALLS REFER TO LANDSCAPE AND CIVIL DRAWINGS.
 9. ALL PLANES AND SWALES ARE TO BE SMOOTH AND TRUE PROVIDING POSITIVE DRAINAGE AND PREVENT FLOODING OF WATER.
 10. REFER TO CIVIL AND LANDSCAPE DRAWINGS FOR ALL GRADING, HARD SURFACE DRAINAGE ADJACENT TO BUILDING FACE TO BE 50mm BELOW FINISH FLOOR AND TO SLOPE AWAY FROM BUILDING AT A MINIMUM SLOPE OF 2% GRADING FOR SOFT SURFACES ADJACENT TO BUILDING FACE TO BE 150mm BELOW FINISH FLOOR OR CURBING IS CONCRETE OR MASONRY.
 11. SCRAPE AND REMOVE ALL EXISTING MATERIALS AND DEBRIS DUMPED ON SITE.

LEGEND	
	PROPERTY LINE
	TREE PROTECTION DURING CONSTRUCTION (SEE REPORT)
	FINISH GRADE AT BUILDING FACE
	EXISTING GRADE ELEVATION
	BUILDING OUTLINE
	EXISTING ENTRANCE DOOR
	PRINTED ORIENTATION ARROW
	EXISTING TREES TO BE REMOVED - SEE LANDSCAPE DRAWING
	EXISTING TREES TO BE REMOVED - SEE LANDSCAPE DRAWING
	NEW TREES - SEE LANDSCAPE DRAWING
	NEW TREES - SEE LANDSCAPE DRAWING
	NEW TREES - SEE LANDSCAPE DRAWING

ISSUED FOR DP
RE-APPLICATION



MAIN ENTRANCE



APPROACH FROM HANDSWORTH ROAD



VIEW OF CLASSROOMS FROM SOUTH-WEST CORNER



VIEW OF STUDENT PATIO FROM FIELD

NO.	REVISION	DATE	DESCRIPTION
1	REVISION	2024-09-10	REVISION
2	REVISION	2024-09-10	REVISION

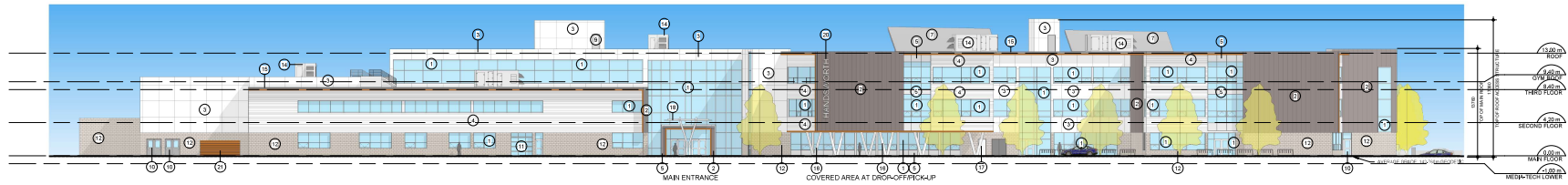
ISSUED FOR DP
RE-APPLICATION

North Vancouver
 School District
 the natural place to learn

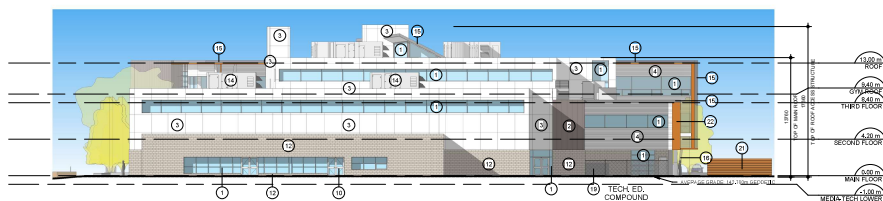
PROJECT NAME
 HANDSWORTH
 SECONDARY
 SCHOOL
 REPLACEMENT
 PROJECT

CLIENT
 SCHOOL DISTRICT
 #44 NORTH
 VANCOUVER

PROJECT NUMBER
 18322
 DATE
 2024-09-10
 SCALE
 A500



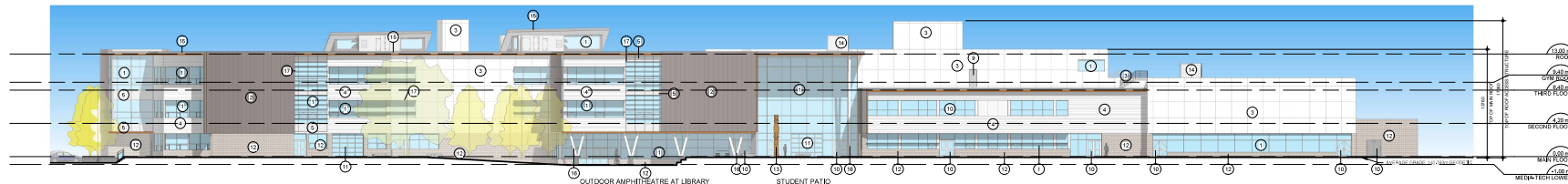
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A2007
1:200



2 EAST ELEVATION
A2007
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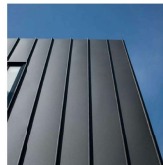


3 WEST ELEVATION
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4 SOUTH ELEVATION
A2007
1:200

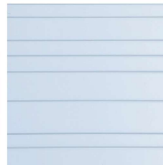
MATERIAL LEGEND	
1	SEALED DOUBLE GLAZING IN THERMALLY BROKEN CURTAIN WALL
2	REFINISHED STANDING SEAM METAL CLADDING
3	HIGH-DENSITY GLASS FIBRE-REINFORCED CONCRETE PANELS
4	REFINISHED HORIZONTAL METAL CLADDING
5	OPAQUE CURTAIN WALL SPANDREL PANEL
6	SSS MEMBRANE ROOF SYSTEM
7	WINDOW VENT
8	DOOR AS SCHEDULE
9	PAIR DOOR AS SCHEDULE
10	PREFINISHED THERMALLY BROKEN OVERHEAD DOOR
11	CONCRETE MASONRY VENEER (w/ ANTI-GRAFFITI COATING)
12	EXISTING RELOCATED WELCOME POLE
13	MECHANICAL ROOF TOP UNIT
14	PREFINISHED METAL FASCIA
15	PAINTED STEEL COLUMN
16	SUN SHADES
17	ENTRANCE CANOPY (TBD)
18	CHAIN LINK FENCE
19	SCHOOL SIGNAGE
20	REFUSE SCREENING
21	WOOD LOOK METAL SOFFIT



2 PRE-FINISHED STANDING SEAM METAL CLADDING



3 HIGH-DENSITY GLASS FIBRE-REINFORCED CONCRETE PANEL



4 PREFINISHED HORIZONTAL METAL CLADDING



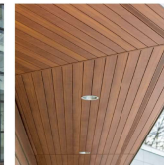
5 OPAQUE GLASS SPANDREL PANELS



12 MASONRY VENEER



18 GLASS CANOPY AND PAINTED STEEL STRUCTURE



22 WOODLOOK METAL SOFFIT

ISSUED FOR DP
RE-APPLICATION

North Vancouver
School District
the natural place to learn

PROJECT #1
HANDSWORTH
SECONDARY
SCHOOL
REPLACEMENT
PROJECT

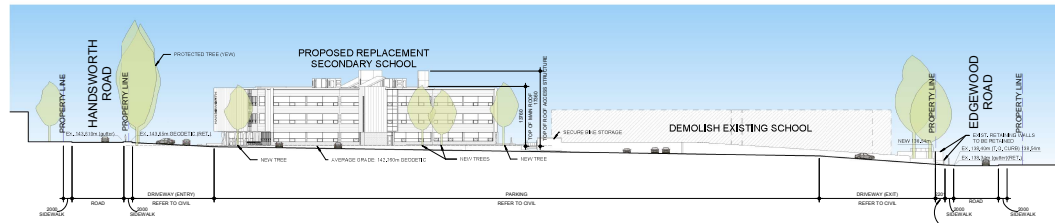
CLIENT
SCHOOL DISTRICT
#44 NORTH
VANCOUVER

COMPOSITE
EXTERIOR
ELEVATIONS

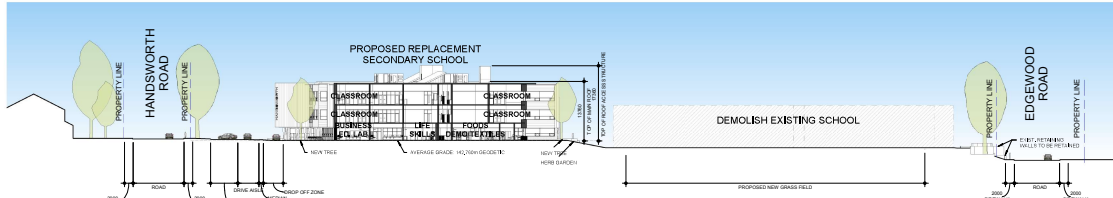
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18322

DRAWN BY
DATE: 08/20/19 SCALE: 1:200

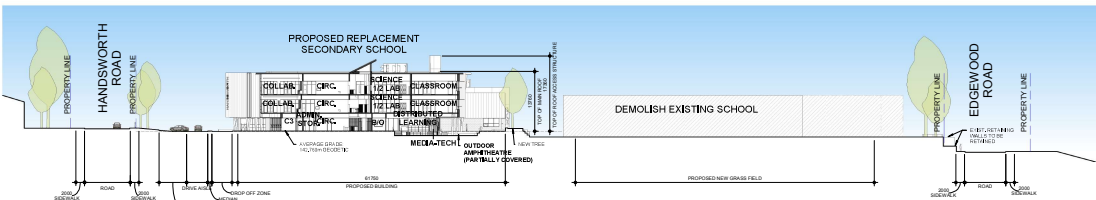
DRAWING NUMBER
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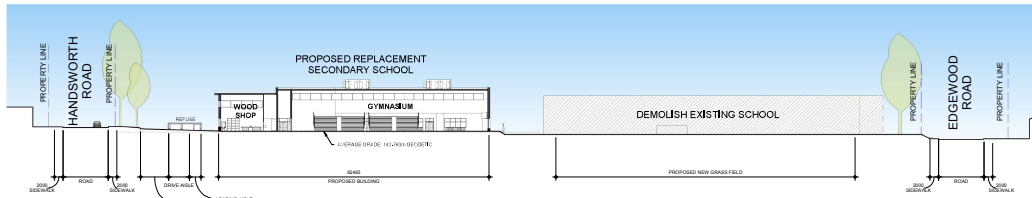
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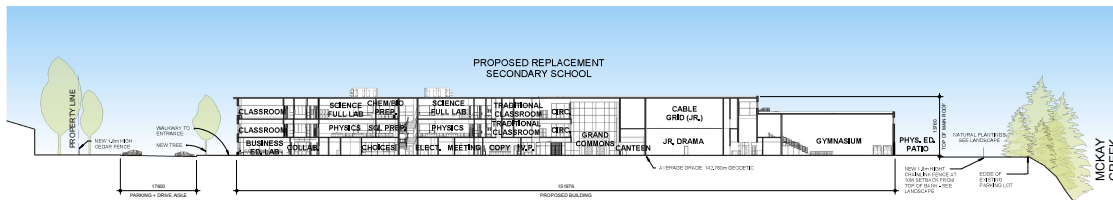
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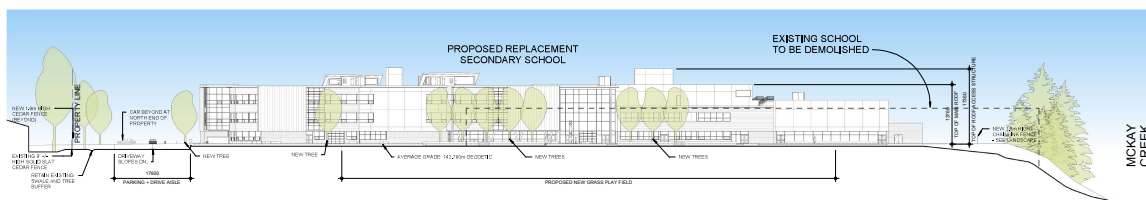
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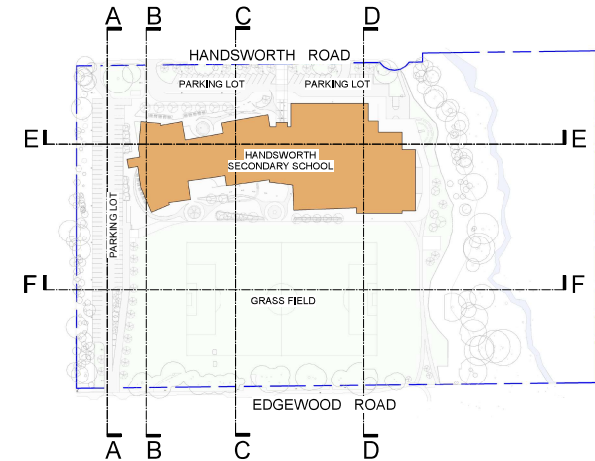
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E-E SITE SECTION E-E - EAST-WEST
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F-F SITE SECTION F-F - EAST-WEST
 1:400



SITE SECTION KEY PLAN
 1:1000

NO.	REVISION	DESCRIPTION
1	ISSUED FOR DP RE-APPLICATION	
2	PROPOSED REPLACEMENT SECONDARY SCHOOL	
3	DEMOLISH EXISTING SCHOOL	
4	PROPOSED NEW GRASS FIELD	

ISSUED FOR DP
 RE-APPLICATION

North Vancouver
 School District
 the natural place to learn

PROJECT NAME
**HANDSWORTH
 SECONDARY
 SCHOOL
 REPLACEMENT
 PROJECT**

CLIENT
**SCHOOL DISTRICT
 #44 NORTH
 VANCOUVER**

DATE
18322

DATE
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18322



No.	By	Description	Date
5	HP	Reviewed for DP	Feb 26, 2019
4	HP	100% DD	Jan 4, 2019
3	HP	Issued for Review	Dec 20, 2018
2	HP	Issued for Development Permit	Nov 15, 2018
1	HP	Issued for Review	Sept 28, 2018

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No.	By	Description	Date
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REVISIONS TABLE FOR SHEET

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 Handsworth Secondary School

Location:
 1044 Edgewood Rd
 North Vancouver, BC

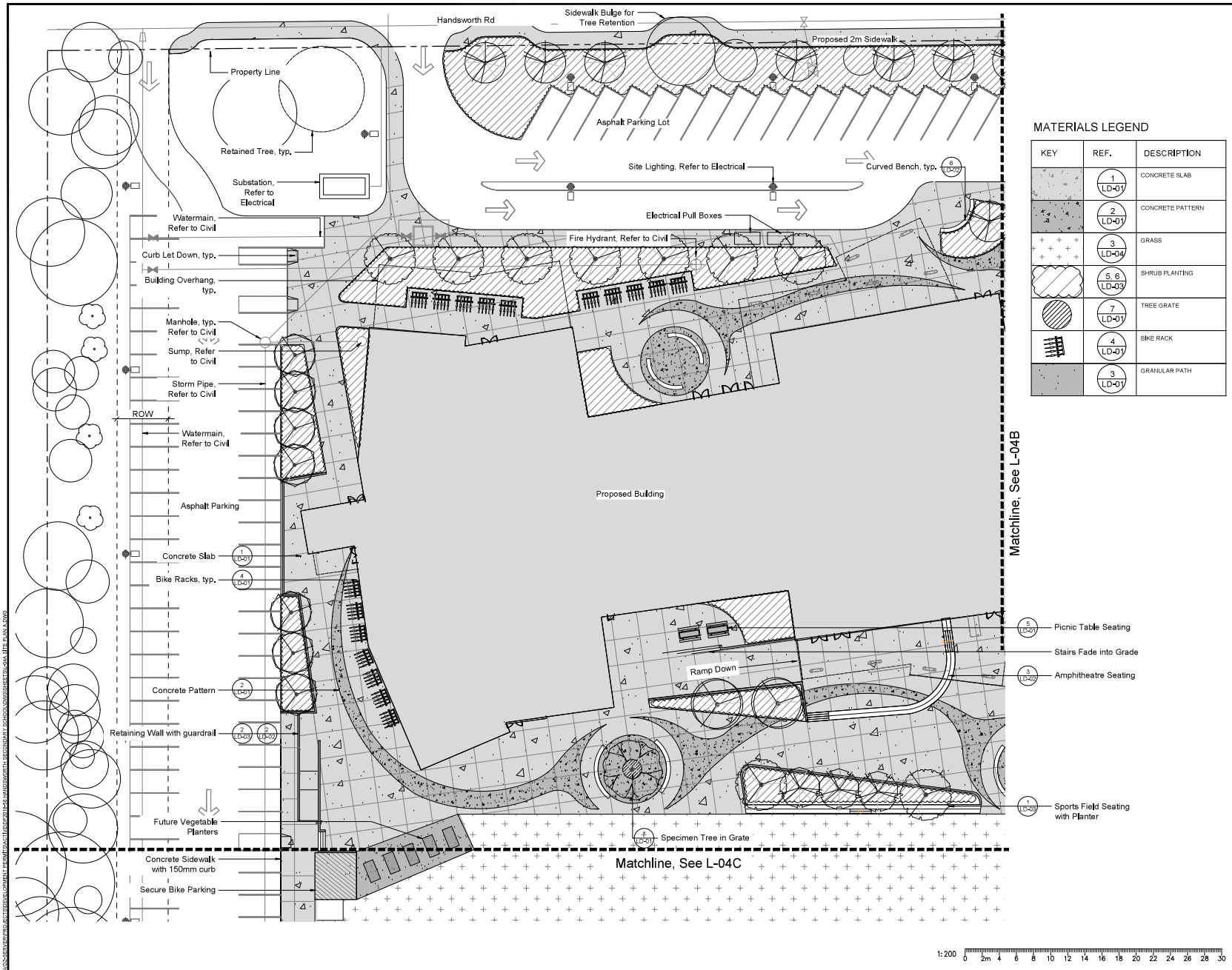
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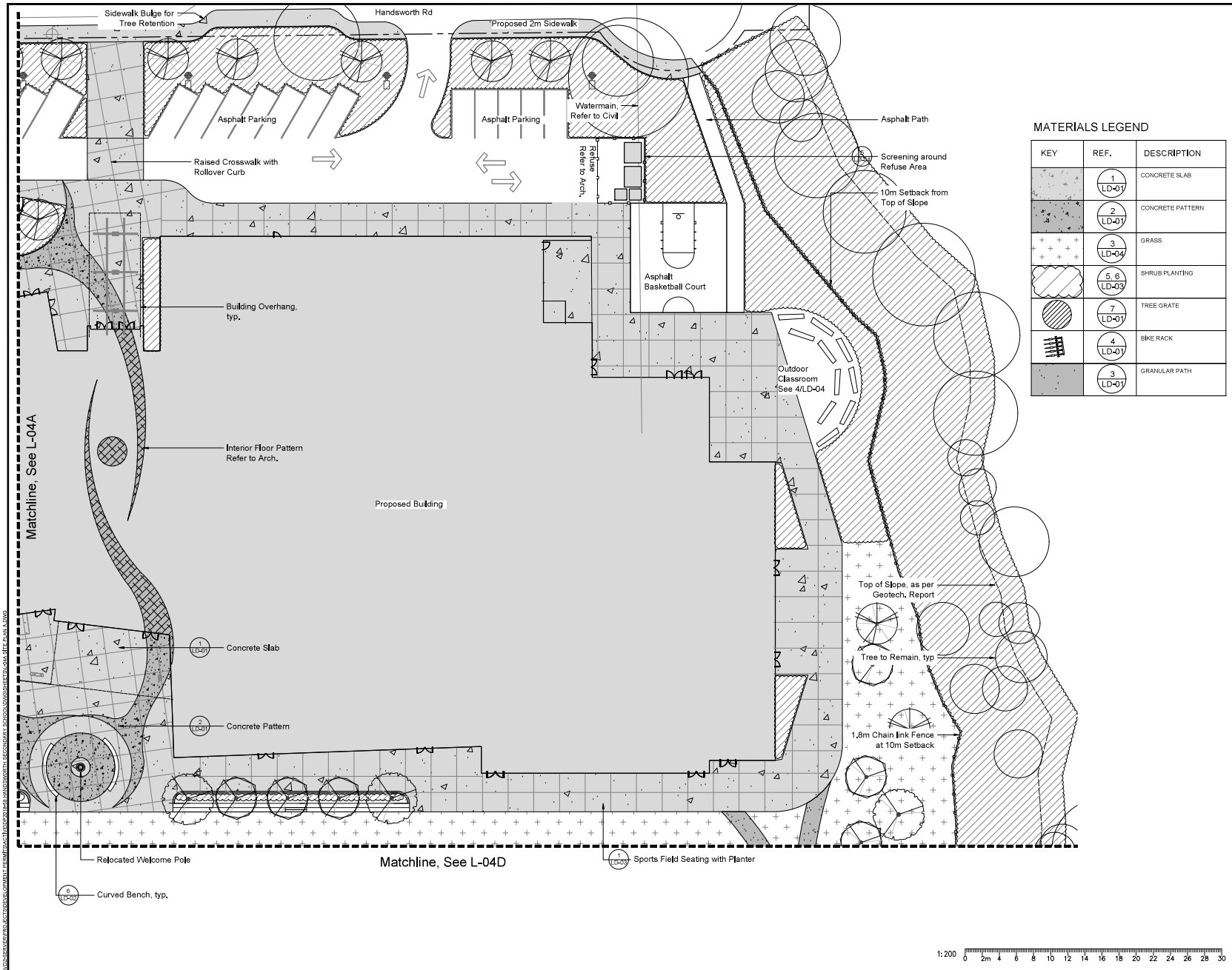
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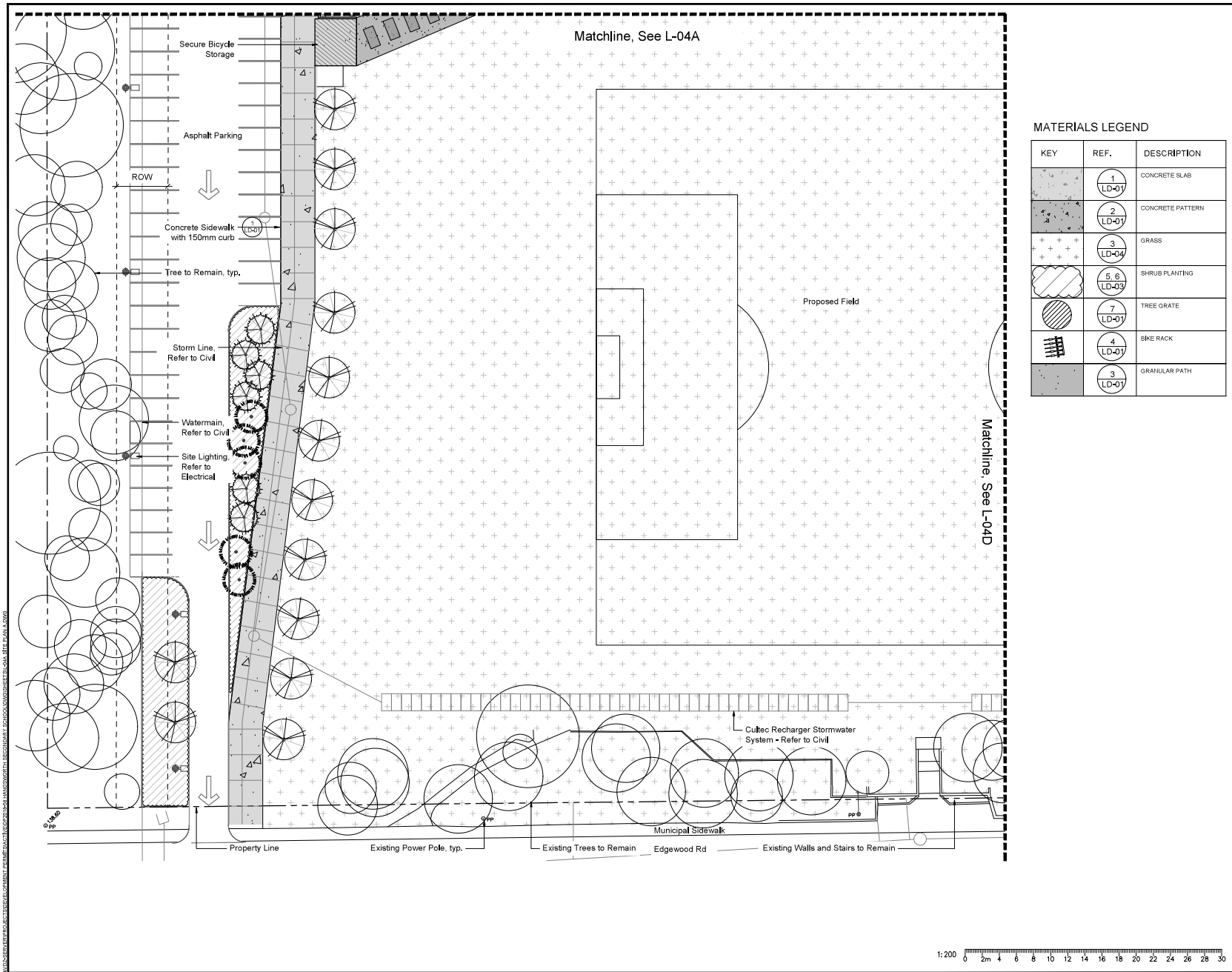


VDZ Project #:
DP2018-58

Drawing #:
L-03



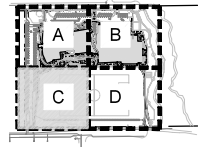




MATERIALS LEGEND

KEY	REF.	DESCRIPTION
	1 LD-01	CONCRETE SLAB
	2 LD-01	CONCRETE PATTERN
	3 LD-04	GRASS
	5, 6 LD-02	SHRUB PLANTING
	7 LD-01	TREE GRATE
	4 LD-01	BIKE RACK
	3 LD-01	GRANULAR PATH

Key Map (NTS)



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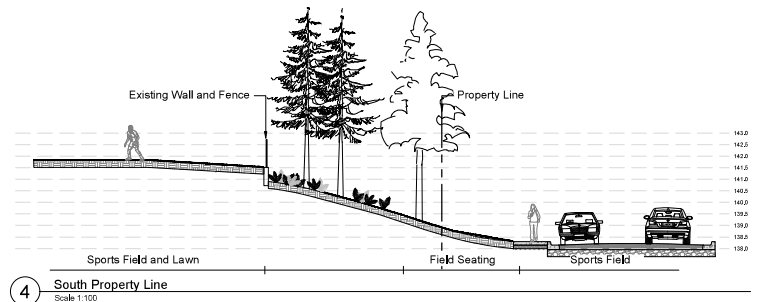
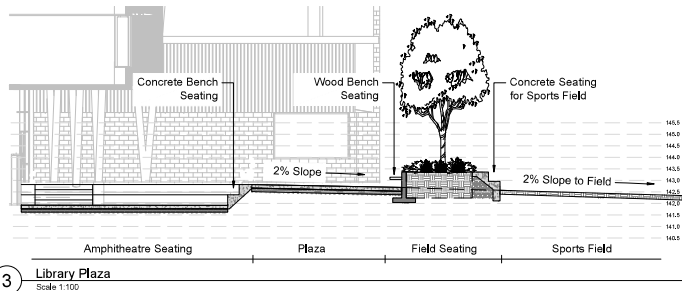
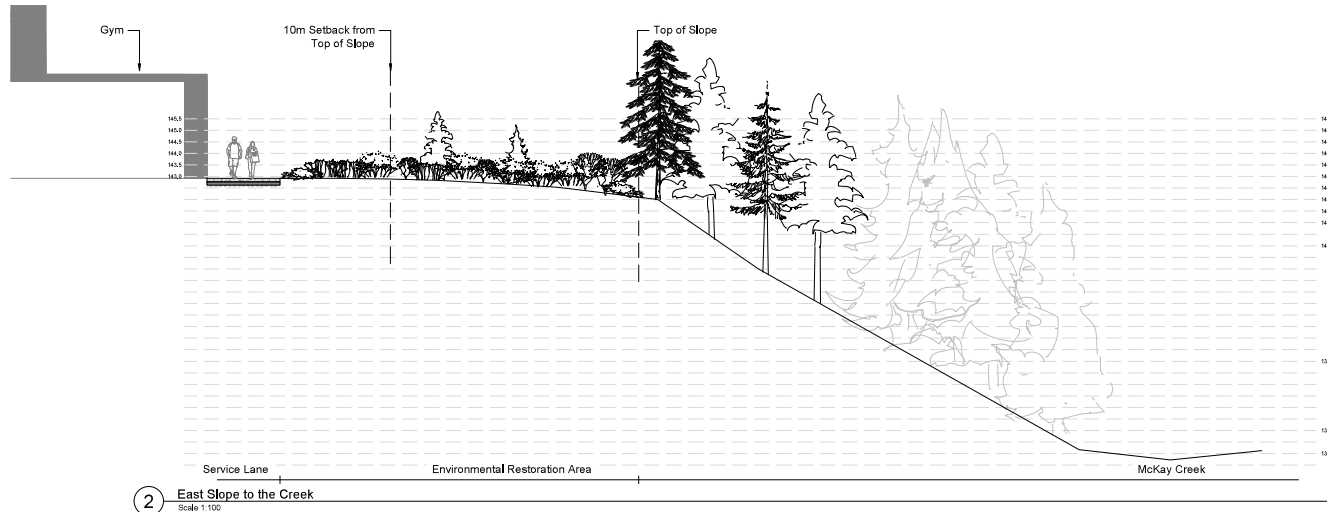
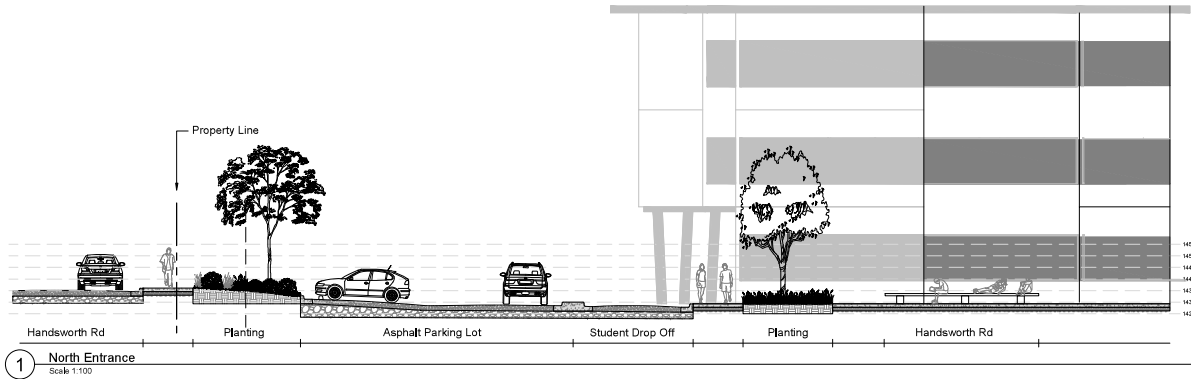
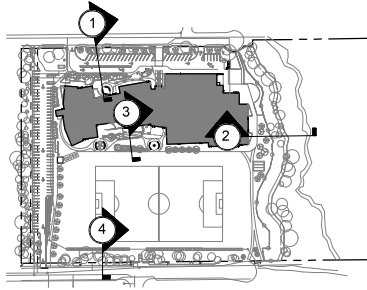
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VDZ Project #:
DP2018-58

Drawing #:
L-04C

Key Map (NTS)



1:100 0 1m 2 3 4 5 6 7 8 9 10 11 12 13 14 15

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ROCKANDEL&ASSOCIATES

*Building Success Through Process Facilitation
Organizational & Community Engagement*

PUBLIC INFORMATION MEETING REPORT

To: Robyn Hay, Development Planner, District of North Vancouver. E: hayr@dnv.org
Mark Thomson, North Vancouver School District. E: mthomson@sd44.ca

From: Catherine Rockandel, IAF Certified Professional Facilitator
Rockandel & Associates E: cat@growpartnerships.com

Re: PIM Summary for Handsworth Secondary School Replacement Project

Date: January 24, 2019

Event Date: Wednesday, January 8, 2018

Time: 6:30 PM – 9:00 PM

Location: 1044 Edgewood Road, Handsworth School Gym, North Vancouver

Attendees: One hundred and seven (107) people signed in to the meeting

Comment Forms: Forty-four (44) comment forms were received at the meeting. A summary of comments is included in the Appendix. In addition, the School District received 254 email comments which were provided to the DNV planner.

Notification:Flyer Notification

Approximately 186 flyers were distributed to all addresses within 100m of the school. The flyer was also distributed by email to all Handsworth students/parents, and posted on the School District website. See Appendix

Social Media Notification

- Included: Facebook, Twitter and Instagram. See Appendix

Email Notification

- Dec 11: to parents
- Dec 14: to parents and email to staff
- Jan 7: to parents
- Jan 7: to parents and staff (a different email than the one above for the same date)

Website Notification

- Front page banner of SD44 website
- Capital Project Updates, presentation materials, and comments sheets located at:
<https://www.sd44.ca/Board/CapitalPlanProjects/CapitalProjectsUpdates/Handsworth/Pages/default.aspx>

Site Signs

Two signs were erected on Handsworth Road and on Edgewood two weeks before meeting.

Newspaper Advertisement

Two versions of the notification ad ran in the North Shore news on December 28th and January 4, 2019. See Appendix

PIM Summary for Handsworth Secondary School Replacement Project
January 24, 2019

The following North Vancouver School District staff, Project Team, District of North Vancouver staff and Mayor were in attendance.

District of North Vancouver

Robyn Hay, Development Planner, District of North Vancouver

Mike Little, Mayor, District of North Vancouver

North Vancouver School District

Mark Pearmain, Superintendent of Schools

Georgia Allison, Secretary Treasurer

Chris Atkinson, Assistant Superintendent

Jim McKenzie, Director Facilities

Mark Thomson, Capital Projects Manager

Deneka Michaud, Communications Manager

Rupi Samra-Gynane, Principal, Handsworth Secondary

Mark Barrett, Vice Principal, Handsworth Secondary

Justin Wong, Vice Principal, Handsworth Secondary

Project Consultants

Architecture: KMBR, Witmar Abele, Kate Lemon and Georgia Fisher

Transportation: Binnie Civil Engineering Consultants, Amy Cho

Landscape Architecture: van der Zalm & Associates, Heather Pelz

Facilitator

Catherine Rockandel, Rockandel & Associates

PRESENTATION SUMMARY

The North Vancouver School District presented a proposal to replace the existing Handsworth Secondary School, located at 1044 Edgewood Road. The new school is being designed to accommodate 1400 students. It will be designed with a focus on creating collaborative workspaces for students and staff with flexible and adaptable spaces for teaching and learning. The new Handsworth Secondary will be constructed on the existing grass play field at the north side of the property. Following completion of construction of the new school, the existing Handsworth school will be demolished, and a new grass sports field will be constructed in its place. Parking will line the west side of the property and will be on either side of a driving aisle that will provide one way traffic from Handsworth Road to Edgewood Road. Some additional parking will be provided near the new building entrance and associated drop-off and pick-up area within the site boundaries along the Handsworth Road frontage. A total of 120 parking spaces and 98 bike stalls are proposed to be provided on site. Various alternate site configuration options, which could accommodate the potential for future installation of an artificial turf field and a track, were presented for comment.

FACILITATED PUBLIC COMMENT: Q & A (Index: Q: Questions C: Comment A: Answers)

- Q1** I am a North Shore Streamkeeper, I am wondering in your design have you consider management of storm water for the site and how it will embrace the creek from the use

of swales and soften the impact of the building? Does the design embrace the impact on this land?

A1 We have an environmental consultant who has been engaging on this project. They are looking at impacts on the creek. In terms of embracing the creek we have to do the opposite. There is a requirement to stay 10 metres back from the top of the bank associated with the creek. We have to install a fence along the creek set back 10 metres. There will be storm drains installed on the site to manage water. In terms of habitat encroachment, the plantings around the site will be native species. We are also being asked to look at where the invasive species are and in the slope area replace them with native species.

Q2 I am neighbor for about twenty years. I want to address the issue of parking. There is a bylaw in place that says is adequate. The school will see in the future the same amount of traffic. There are events at the schools that bring in traffic and buses to the neighbourhood. I can't see why we would want to see anything other than the bylaw requirement being met for parking. The school should meet the parking requirement. When you say that you are making an application for a bylaw variance, what form will that variance take, and how political will that be, and do the neighbours have much meaningful influence.

A2 We are contemplating reducing the parking requirement because what is in the budget is a grass field. A second option is a turf field but if a track is contemplated it needs the space that would be acquired from a reduction in parking.

(Robyn Hay) Tonight is part of the District's political process. If you have concerns please write them down on the comment forms. The next opportunity for you to voice your concerns will be at a Council meeting. We are hoping for that to be in the early spring. You can also talk to Councillors prior to that time.

Q3 I live in the area and my children will be coming to Handsworth. Is there an option to move the bike parking to a covered option? I would support that. Is there going to be any electric plug in parking area? Will there be gender neutral bathrooms?

A3 Bikes Parking: Half the bike parking is planned to be under cover --the secured bike parking is under cover and about half the unsecured is under cover. We could look at moving more of the unsecured bike parking to the covered area. This would be near the main entrance, just outside Admin.

Electric Vehicle Charging (EV): We are having a conversation about EV currently. 2-3 stalls are designated for future EV charging as part of design. We will allow for the electrical connection and the district is reviewing options for providing metered charging stations in future.

Gender Neutral Washrooms: In general, the design provides at least one universal washroom at each cluster of gendered washrooms and changerooms. The universal washrooms is a single occupant, wheel chair accessible, washroom, available to all genders. There are currently 5 universal washrooms distributed throughout the school -

-there is one near the gym change room, drama, and dance; There is one at the washrooms north of the theatre near the Grand Commons, LAC, and tech ed; and there is one at the centre of each classroom wing (one on each of the 3 floors). There is also a gender neutral, single occupant washrooms associated with Life Skills on level 1 and one in the admin and counselling area. In summary, there is one centrally located in each wing associated with each of the gendered washrooms blocks, and 2 additional universal single occupant GN washrooms not associated with the larger gendered washrooms blocks for a total of 7 altogether.

- Q4** I am a parent and neighbor that is affected by traffic. I would like to have a track and would like to understand the rationale of why it is not in the initial plan? What analysis has occurred to involve the Ministry of Health. We currently have a situation of obesity, without a track an entire population of North Shore residents is going to be driving longer contributing to traffic issues all over the north shore. You have a dance studio and other amenities. There are numerous studies that support running as a base sport for other things. The loss of track is a huge loss for the whole community for the future of the community.
- A4** The Government, Ministry of Education as funders only fund certain things and tracks are not one of them. We have an excellent relationship with the District and we are looking at working with them to find external funding for the track.
- C5** Some positive feedback, I like the cool design, collaboration emphasis. I can see how you have integrated the feedback you received from parent surveys in terms of the drama, robotics, and the emphasis on active transportation. I do want to pick up on theme, your parking proposal is an improvement on the current situation. We must support the application that allows for maximum design flexibility for future. It is a win-win situation for the existing neighbourhood. It improves traffic flows, more space for the existing school, and it allows for track. We encourage design team to look at where you are going to get the cash. We as a community need your help to get organized to enable to the ask for the funding for the track to be made clearly and compellingly to other potential funders. It is not good enough to say we don't have the money. We need you to allow us to help you to get the money.
- Q6** I wanted to emphasize my support for the track and field. I attended Handsworth many years ago. How much funding is required for the track and field? And what needs to happen to get that funding?
- A6** We are not in the track and field business, but best guess is magnitude three to four million. This is outside of bake sale capacity fundraising. There are lots of different ways to approach this funding. The District is a big player in possibly funding this. There are a lot of different conversations required.
- Q7** I am concerned about the geology. My house is adjacent to this site and it is creeping more than you think. I like the previous design where the fields were along the ravine this one is too modern. I would like to know why you diverged from that design. Other issues I am concerned about are that there are a lot of kids loitering after hours; along

Handsworth there is a lot of speeding; there are kids up on the roof of the school; I like the idea of robotics but we also need computers; LEED Gold are you doing that?

- A7 In terms of the siting of the building, I don't recall a concept where the fields were along the ravine. This is not possible because the existing school has to be in operation while the new school is being built. A phased approach costs a lot more. The school is being designed to LEED Gold. We are looking at cross walks on Handsworth in particular raised cross walks and narrowing the road at the crossing with bulges.

The School District has the same concerns lighting, loitering, hiding at every school site. This is an opportunity to use design to address these issues. In terms of equipment, there will be all new computers, one of the design principles is about building community inside the building so Wi-Fi, video conferencing, and the space will be designed to support connectivity with gathering spaces.

- Q8 I see the traffic design but I am a bit confused about traffic going north south exiting through Edgewood. Someone mentioned there is going to be a bike route. I have a hard time envisioning that people already travelling through Sunset will re-route and go on Capilano and then up and turn on Handsworth. It seems confusing to me as a biker. It seems strange to me that the parking is a far away from the theatre and the gymnasium where a lot of extra traffic will be coming. It seems awkward to have to walk across the school yard to get there. I would like to encourage the track for our children. There is a lot of space right now with the gravel field, the track and tennis courts and with the new building there will be less outdoor space. What is the square footage of the new school?

- A8 The current school is 14,230 and the new school is 13,500 square metres. The decrease is in the design areas not in programming space.

- Q9 I am curious about the mix of bathrooms, will they be taking into account female cultural backgrounds that have a need for female only spaces?

- A9 There will be a mix of gender specific single sex and gender-neutral bathrooms.

- Q10 I am concerned about the structural safety of the building in case of an earthquake. Are you taking that into account? Would students go out on the field?

- A10 It is good to see students here asking questions. The new school is being built to a level that everyone inside the building can get out safely, that is the purpose of a seismic upgrade project. It is going to be safer to go outside than stay in the building. Now we practice what to do in event of an earthquake and we would also do that in the new school. The field will be a safe place because there is no overhead wires, glass from windows, etc.

- Q11 Where is the post disaster building in the community if it is not the school?

- A11 (Mayor Little) We are working on a project to put sensors on buildings in the event of an earthquake the District will be able to tell if there has been enough shaking on that building to make it unsafe. We would provide notification if the building is safe. The District of North Vancouver does not have a lot of post disaster buildings, I believe the new community centre building on Queens Road was built to a post disaster standard.

We are also trying to identify other spaces that can be completed to a post disaster standard, the next one is the Edgemont Library which is up for a capital upgrade.

Q12 When will the presentation materials be online for people that cannot attend this meeting but would like to comment in the two-week comment period?

A12 These presentation boards, comment sheets and materials were posted today online

Q13 I didn't see a cafeteria in the new plans or places to sit and eat. Is there one? The location of the front door with pick up and drop off right in front seems like a recipe for disaster. I would like to hear your thinking on this.

A13 Multi use is an important design principle for the new school. There is not a dedicated cafeteria, but there is a huge central commons area, that is a place to sit, connect with community. There are also decentralized hubs around the school that will be places where people can connect, eat lunch, etc. It is a big school but the way to make it feel like a small school is to create hubs where cohorts can gather.

Yes, we are looking at how to separate vehicle traffic from pedestrians, we are talking about the best way to do that.

Q14 Is there only one washroom per floor? I don't think this is enough as vaping is big and they do it the washrooms. As a student, I currently avoid going into washrooms where vaping occurs. In terms of traffic flow and the approximately 90 spots with the traffic flowing one way people are driving in they can't find a parking spot then they have to go out and drive around the block is that not going to make traffic worse with backups. I am also curious how you are going to stop the erosion from the creek? I am also concerned that with more students being enrolled each year you are making the new school smaller than before.

A14 There is one set of washrooms for male and one set of washrooms for female per classroom floor. This is a good comment about vaping, it is a challenge in all our schools. Patrolling washrooms and keeping them safe is one issue. The number of washrooms is another.

In terms of traffic flow, we are looking at that. In terms of creek erosion that is a good question but outside the focus of this meeting. In terms of space, all the programming space is built on current program requirements. This is built for maximum flexibility. You have a whole performing arts area, drama, there is lots of space to move things around.

C15 I am Janet Carswell and I am the Handsworth PAC Chair. There will be a cafeteria and kitchen. We are fundraising for equipment in the school and for the track. The main concern in the broader and school community is the track. There is a lot of support for this. It will be the only big track on the north shore if you build it. We have committee to raise funds and we are always open to more people joining that committee. We also need a lot of help from the District and the School to raise these funds. The contact information is on website

C16 I am a neighbor and in the 90s I was the PAC Chair, I wanted to comment that when the original track was built School District 44 contributed the most to building the existing

track. The municipality also contributed and we as parents raised money. It is not impossible. I do not want to lose the track in this area of the District that we worked so hard for.

Another point, there is a Yew tree in the northwest corner that is very important that I hope you are aware of?

A16 Yes, we are aware of the Yew tree. It will be protected as per draft plans. In terms of the track we are not saying it is impossible, it needs collaborative effort to make it happen.

C17 I am Brian and this is my tech crew. Handsworth has two student tech programs for drama, school plays and for big events such as Remembrance Day assembly and events like this. Our concern when we look at the drawings we don't see a tech booth like we have here in the gym. We are worried about moving into the mechanical room on the second floor. It has some pros such as sound proof but the cons are about microphones and the sound quality will not be as good as before. Currently our stuff is spread all over the school. We would like to see a tech room in the new gym that is a bit bigger if possible.

A17 Everything is possible, it really is dependent on space as to how we can implement improvements. In the drama space, it is much improved with a grid floor over top so safe walking and hanging lights. But not all of it has to be permanent. I can't guarantee that. The key is multi-use and flexible.

C18 It is going to be a really big pain for us to not have a tech booth in the gym and will affect the quality of the assemblies and other meetings. I have been involved in the tech program for four years and this is like a second family to me. Having that space where we can work together, collaborate and work on important tech stuff in private non-judgmental space I thoroughly enjoy. I think you should have a dedicated tech booth.

Q19 My kids are coming to the school. I appreciated the student's presentation on the rationale for the tech program needs. I am thinking outside the box, is there any chance that the track could be located off Nancy Green Way off Cleveland Park where there is more space for the track and parking area. There are a couple of schools up there, people drive up there and have track for more than running incorporating all the other field athletics. Is that possible? My second question, is I am biologist and on the north-east corner I don't see the trees, but perhaps they are not in good condition, can you provide an update on that?

A19 The sequoias in the north east corner showed signs of decay. These would have to be removed to widen the sidewalk. They would be replaced with native plantings.

In terms of alternate locations for track this may be something for District to look at.

Q20 I live on Edgewood Place, my property line is adjacent to the tree buffer for the parking lot, is that area protected or is it possible to landscape the area and clean out the brush as that area is being used as a smoking zone. All kinds of things get thrown into my yard including lit cigarette butts which is quite dangerous particularly in the summer when it

is dry. Also, is there an opportunity to include newer building methods into what you are doing such as recycling water, etc.

A20 We are doing some clean up in that area, so, yes, we could make it a higher visibility zone. The building is being designed to LEED Gold standards so that includes a number of measures such as water and energy conservation, materials selection that results in about 64 credit measures.

C21 I am a neighbor to the immediate west. The set back in the parking area could be adequate as shown of 30 feet or so but needs further attention in terms of the lighting for parking area. The current lights are on 30 foot standards and this adjacent to my property will not be acceptable. They do not have to be 30 feet high and I trust that they will have shields etc. Secondly, since you are proposing a three storey building with windows on that west side, I would suggest that the landscape buffering needs to be full mature trees at 20-30 feet to replace what you are taking out. This will create a buffer from school activities. It is important to me that you put in proper fencing and mature landscaping. In terms of the discussion about the field. I am in favor of a grass field without lighting and with a track. This is what we have now and that is what should be replaced. It has minimal impact but if you put in artificial turf and lighting that will bring in a lot more traffic and use. The loss of basketball hoops and tennis courts is something to recognize as Handsworth has a great athletic tradition and there are none of these elsewhere in the neighbourhood. I am not sure what the answer is but even in the winter there are kids playing hoops at the school. I am curious about security and how the school will address concerns raised by others.

Q22 First wanted to say that I love the beautiful design and am excited for my daughter to come next year for grade 8. I am in favor of track. There is a problem with obesity and a focus on fitness, it is right way to go to encourage students. I heard you say Province does not fund tracks. What if we can come up with a million or two dollars out of changes to the building design and go back to Province and say we can save this money can we use it for a track. Do we really need the most-fancy expensive building there is – LEED Gold is?

A22 The building will be durable but not fancy. There won't be any extra funds we can extract from the design. The LEED Gold design is not going to be certified, we are focusing on longevity and energy saving design. There is not being going to money left over.

Q23 I am hoping this project goes through and we get a track but who get to vote on it the school council? Is this District wide or just in the neighbourhood? If the bylaw does get amended what kind of engineering will happen on that field?

I have heard people here say that they would like a track and a grass field so that all activities such as rugby, football, javelin that happen on grass can occur. If the funding is not in place for the track what will happen. For example: If there is just a grass field is it going to be flat or with a slope. If there is no track does the School District have a plan for where the track and grass field related activities will happen?

PIM Summary for Handsworth Secondary School Replacement Project
January 24, 2019

A23 The decision makers on the School District application for the project and variance is the District of North Vancouver Mayor and Council.

(Robyn Hay) This application will be going to Mayor and Council for consideration in the spring.

The key to what type of engineering would occur on the field is timing. If the funding is not in place, then no track would be built but the space would be there for the future. Currently the plan is to have a slightly sloping grass field with no track until the track funding is in place. Once the funding is in place then a track would be built. Whomever takes on track building would be responsible for engineering and lighting. The School District does not have a plan yet for where the activities that occur on the track and grass field would occur if the track is not built right away. We will have one but not yet.

Q24 Where is everyone going to park while construction is underway?

A24 There is not a parking plan yet. We are working on it. It will be offsite.

C25 In West Vancouver they have been fundraising for a new track for 5 years. They may well have some tricks and tips. I think their track budget is 5 million. Not sure what bells and whistles it has. It is a big project

C26 We have lived in area for a long time and our kids are all finished school. I would support less parking. I think it is important to encourage people that driving to work, to school and driving your kids to drop them off is not the number one option. Lets have a field and track and less parking

A26 We encourage our staff to ride their bikes and also students. We have facilities to encourage people to do that.

Q27 I have lived in the neighbourhood for 20 years and my kids have graduated. I am wondering if you can shift the proposed parking lot from the west side to the east side. My concern is safety, on Edgewood there is a three way stop but cars turning have limited sight. Also on Handsworth people speed.

A27 Potentially it could be shifted. We looked at some options to do that. One of the concerns we had was that positioning the new school against neighbours would create a three storey on look. We don't have a lot of instructions from District in terms of height and setbacks but they do specifically say in bylaw that we should be thinking of our neighbours and massing adjacent. We also looked at whether we flipped the design and put the gymnasium and the theatre against the neighbours this also would creating massing and afterhours noise and activities. The decision was made to keep the massing and overlook away from neighbours as much as possible.

In terms of transportation we have conducted a number of site visits to the school. After school, before and after bell, afternoons, evenings, mornings, weekend events to understand traffic patterns. The proposed drop off on Handsworth includes opportunities to calm down Handsworth with traffic calming measures. We expect there would be less traffic coming out on Edgewood. We are also looking to separate vehicle and pedestrian traffic. The only overlap is in the drop off area.

- Q28** I grew up in the neighbourhood and understand traffic patterns. Why is there a new pedestrian cross walk at the new entrance to the new school? For the residents of Timberline coming out of their street turning right onto Handsworth they will be right into a cross walk. In terms of the running track I went to Handsworth and did not enjoy running in circles. I think you should encourage trail running. They are beautiful and there are lots of great places to get exercise without track.
- C29** The west parking lot, would it be more efficient if the parking was on an angle? It takes longer to park particularly for new drivers backing out. I think you should look at that.
- A29** Angle parking requires more space than 90-degree parking. With angle parking, fewer parking stalls would be provided within the same overall parking lot space

APPENDIX: SUMMARY OF KEY ISSUES PROVIDED ON COMMENT SHEETS AT THE PIM

- Consideration should be given to traffic calming measures (i.e. speed bumps and/or raised crosswalk)
- The building has not been design to meet post-disaster standards
- Building too contemporary, industrial looking, very grey, incorporate more wood
- Parking should comply with the bylaw
- Concerns with congestion around the drop off and pick up area
- Concerns with increase of traffic
- Suggestion to move the parking to the east side of the site
- Consider resident only parking permitted areas for the local streets
- Concerns with the one-way traffic flow from Handsworth Road to Edgewood Road as people may not find a space and have to loop back through the neighbourhood to get a space or park on Edgewood
- Lighting of the parking lot and potential ATF field needs to be considered carefully
- Prefer grass field over artificial turf and vice versa
- Desire for a running track
- Consider a tennis court and more space for basketball
- Consider more washrooms facilities in the school as well as some external to be accessible by the community for events
- Consider gender natural washrooms and change rooms
- Clear the bush on western side of the site to improve visibility and prevent loitering
- Desire to have more covered bike parking and promote cycling to school
- Parking during construction / concern for construction safety
- Electric plugs for vehicles and bikes should be considered

APPENDIX: NEWSPAPER AD – VERSION ONE

Notice of Public Information Meeting

Handsworth Secondary School Replacement Project

The North Vancouver School District is hosting a public information meeting to present the development proposal to replace the current Handsworth Secondary School with a brand new school located on the same parcel of land (1044 Edgewood Road, North Vancouver)

North Vancouver School District proposes to replace the existing Handsworth Secondary School, located at 1044 Edgewood Road. The new school is being designed to accommodate 1400 students. It will be designed with a focus on creating collaborative workspaces for students and staff with flexible and adaptable spaces for teaching and learning. Spaces will be inclusive for all abilities and will incorporate First Peoples Principles of Learning. The new Handsworth will also be designed to meet the expectations from our community that we connect the building with our natural surroundings, be sustainable in operation and maximize community use opportunities in areas such as gymnasiums, arts spaces, multi-purpose spaces, and outdoor recreation. We look forward to this opportunity to create a prized community asset for the Handsworth community and the larger North Vancouver community.

The new Handsworth Secondary School will be constructed on the existing grass play field at the north side of the property. Following completion of construction of the new school, the existing Handsworth school will be demolished, and a new grass sports field will be constructed in its place.

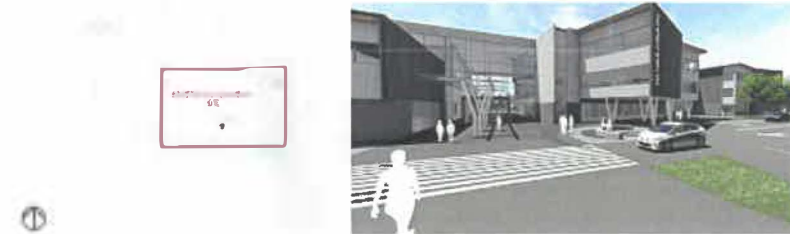
Parking will line the west side of the property and will be on either side of a driving aisle that will provide one way traffic from Handsworth Road to Edgewood Road. Some additional parking will be provided near the new building entrance and associated drop-off and pick-up area within the site boundaries along the Handsworth Road frontage. A total of 120 parking spaces and 98 bike stalls will be provided on site.

Construction is anticipated to commence in Summer 2019, with target occupancy of the new school in September 2021.

Meeting Time and Location:

Wednesday, January 9, 2019 • 6:30 p.m. – 8:30 p.m.

Handsworth Secondary School small gymnasium, 1044 Edgewood Road, North Vancouver



This information notice is being distributed to residents within 100 meters of the site as per DNV requirements and sent home to students' parents. Community feedback is being sought on several community-related aspects of the project. For further information, please contact: Deneka Michaud, Communications Manager, North Vancouver School District, 604-903-1254, dmichaud@sd44.ca and Robyn Hay, Community Planner, District of North Vancouver, 604-990-2369, hayr@dnv.org


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APPENDIX: NEWSPAPER AD – VERSION TWO

PUBLIC INFORMATION MEETING

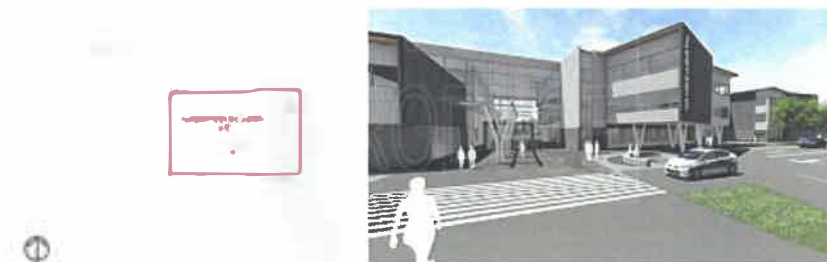
The North Vancouver School District is hosting a public information meeting to present the development proposal to replace the current Handsworth Secondary School with a new school located on the same parcel of land at 1044 Edgewood Road, North Vancouver. You are invited to the meeting to discuss the project.

Date: Wednesday, January 9, 2019

Time: 6:30 p.m. – 8:30 p.m.

Location of Meeting: Handsworth Secondary School small gymnasium,
1044 Edgewood Road, North Vancouver

The school will be developed in two stages to prevent interruptions to programming. The new building will be constructed in the northern portion of the site (on the existing field) as part of stage one. Once the building is complete and occupied the old school will be demolished and the construction of a new field in the south portion of the site can commence. The proposed building is three-storeys with a height of 13.8m (45.3ft) and has a gross floor area of approximately 13,000 m² (139,930 sq. ft). A total of 120 parking spaces are proposed on site in addition to 98 bike stalls and end-of-trip facilities. Construction is anticipated to commence in summer 2019, with target occupancy of the new school in September 2021.



Information packages are being distributed to residents within a 100 meter radius of the site. If you would like to receive a copy or if you would like more information, contact Deneka Michaud at dmichaud@sd44.ca or Robyn Hay of the Development Planning Department at 604-990-2369 or hayr@dnv.org, or bring your questions and comments to the meeting.

***This is not a Public Hearing. District of North Vancouver Council will receive a report from staff on issues raised at the meeting and will formally consider the proposal at a later date.**


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PIM Summary for Handsworth Secondary School Replacement Project

January 24, 2019

APPENDIX: PUBLIC INFORMATION FLYER P.1

Meeting Agenda

- 6:30 p.m. – Doors Open
- 6:30 – 7:00 p.m. – Open House
- 7:00 p.m. – Presentation
- 7:15 - 8:30 p.m. – Facilitated Q & A

Community feedback is being sought on several community-related aspects of the project

For further information, please contact:

- Deneka Michoud, Communications Manager,
North Vancouver School District, 604-903-1254, dmichoud@sd44.ca
- Robyn Hay, Development Planner,
District of North Vancouver, 604-990-2368, hayr@dnv.org



Notice of Public Information Meeting

Handsworth Secondary School Replacement Project

The North Vancouver School District is hosting a public information meeting to present the development proposal to replace the current Handsworth Secondary School with a brand new school located on the same parcel of land (1044 Edgewood Road, North Vancouver).

This information notice is being distributed to residents within 100 meters of the site as per DNV requirements and sent home to students' parents.

Meeting Time and Location:

Wednesday, January 9, 2019
6:30 p.m. – 8:30 p.m.

Handsworth Secondary School small gymnasium
1044 Edgewood Road, North Vancouver


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APPENDIX: PUBLIC INFORMATION FLYER P.2

The Proposal

North Vancouver School District proposes to replace the existing Handsworth Secondary School, located at 1044 Edgewood Road. The new school is being designed to accommodate 1400 students. It will be designed with a focus on creating collaborative workspaces for students and staff with flexible and adaptable spaces for teaching and learning. Spaces will be inclusive for all abilities and will incorporate First Peoples Principles of Learning. The new Handsworth will also be designed to meet the expectations from our community that we connect the building with our natural surroundings, be sustainable in operation and maximize community use opportunities in areas such as gymnasiums, arts spaces, multi-purpose spaces, and outdoor recreation. We look forward to this opportunity to create a prized community asset for the Handsworth community and the larger North Vancouver community.

The new Handsworth Secondary will be constructed on the existing grass playfield at the north side of the property. Following completion of construction of the new school, the existing Handsworth school will be demolished, and a new grass sports field will be constructed in its place. Parking will line the west side of the property and will be on either side of a driving aisle that will provide one way traffic from Handsworth Road to Edgewood Road. Some additional parking will be provided near the new building entrance and associated drop-off and pick-up area within the site boundaries along the Handsworth Road frontage. A total of 120 parking spaces and 98 bike stalls will be provided on site.

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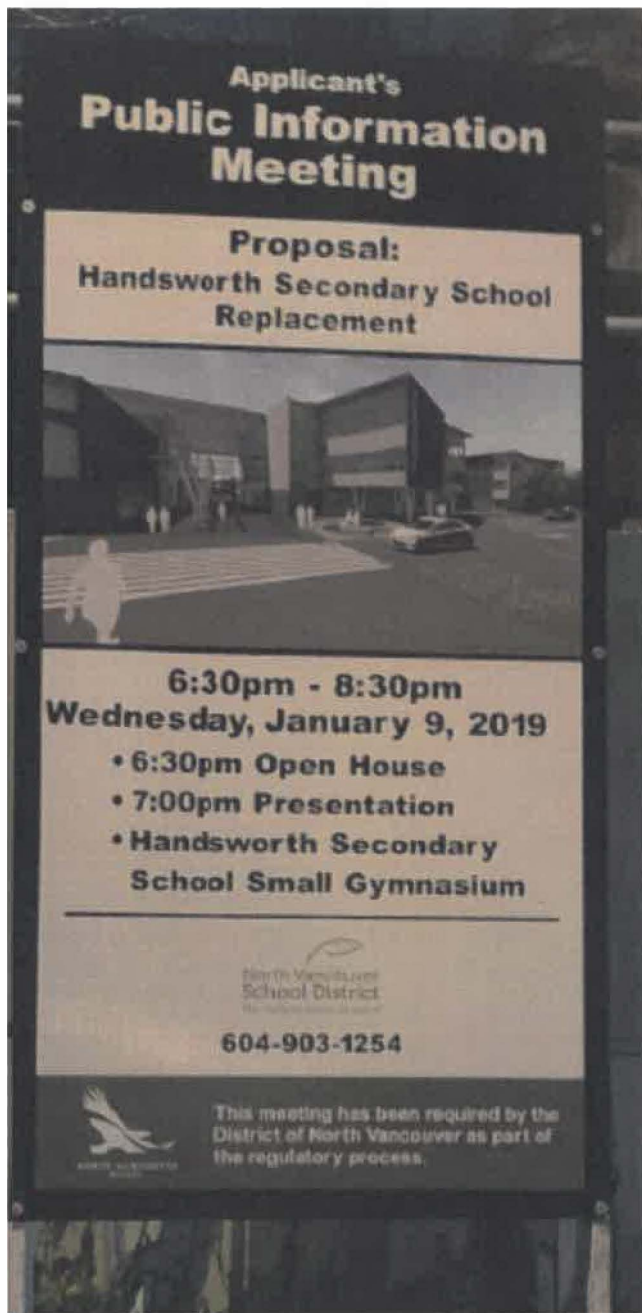


Proposed site plan




Conceptual representation of front entrance

APPENDIX: SITE SIGN



APPENDIX: SOCIAL MEDIA ADVERTISEMENT




You are invited

Public Information Meeting

**Handsworth Secondary School
Replacement Project**

The North Vancouver School District is hosting a public information meeting to present the development proposal to replace the current Handsworth Secondary School with a brand new school located on the same parcel of land (1044 Edgewood Road, North Vancouver)

Date: Wednesday, January 9, 2019
Time: 6:30-8:30 p.m.
Place: Handsworth Secondary School, 1044 Edgewood Road, North Vancouver


**North Vancouver
School District**
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Diamond Head Consulting Ltd. Streamside Protection DPA Assessment

For:

**Handsworth Secondary School
District of North Vancouver, BC**



**April 24th, 2018
Updated February 12th, 2019**

Submitted to:

**Mark Thomson
North Vancouver School District #44
2121 Lonsdale Avenue
North Vancouver, BC, V7M 2K6**



The following Diamond Head Consulting staff performed the site visit and prepared the report. All general and professional liability insurance and individual accreditations have been provided below for reference.



Mike Coulthard, R.P.Bio., R.P.F.
Senior Forester, Biologist
Certified Tree Risk Assessor (46)



Cassandra Cummings, R.P.Bio
Biologist, Planner
MSc. Biology, MSc. Planning

If there are any questions or concerns as to the contents of this report, please contact us at any time.

Contact Information

Phone: 604-733-4886
Fax: 604-733-4879
Email: cassandra@diamondheadconsulting.com, mike@diamondheadconsulting.com
Website: www.diamondheadconsulting.com

Insurance Information

WCB: # 657906 AQ (003)
General Liability: Northbridge General Insurance Corporation - Policy #CBC1935506,
\$5,000,000
Errors & Omissions: Lloyds Underwriters – Policy #1010615D, \$1,000,000

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1 Introduction

Handsworth Secondary School is in need of seismic upgrades. Funding for a full replacement has been approved by the Ministry of Education, with a new school proposed to replace the existing school building on this lot. The new school building is planned to be built on the existing fields, so that the existing building can remain operational during construction. The property falls within the District of North Vancouver's Streamside Protection Development Permit Area, which is applicable to all residential, industrial and commercial uses. Diamond Head Consulting Ltd. (DHC) was retained to prepare a Streamside Setback Assessment for this site.

Civic address:	1044 Edgewood Rd, District of North Vancouver, BC, V7R 4G2
Legal description:	LOT A Blocks 8 to 10, District Lot 596 Plan 15603; PID 007-645-961
Client name:	Mark Thomson, North Vancouver School District #44
Date of site visit:	March 28 th , 2018, April 12 th , 2018

2 Legal Requirements

Regulatory requirements exist for works in and about streams and the ocean. These are contained within municipal bylaws and the Development Permit Area (DPA) process, the Riparian Areas Protection Act, Water Sustainability Act and Riparian Areas Regulation and the federal Fisheries Act.

2.1 District of North Vancouver (DNV)

The property falls within the District of North Vancouver Streamside Protection DPA. The DPA stipulates that all developments should be located outside of the minimum streamside protection area set by the DNV of 15.0 m from the top of bank or 10.0 m from the top of ravine bank. All properties within these areas are included in the Streamside Protection DPA, and may require an assessment from a qualified environmental professional (QEP) to determine the setback distances.

2.2 Ministry of Environment (MOE)

The primary provincial statutes regulating water resources is the *Water Sustainability Act*, the *Riparian Areas Protection Act* and associated *Riparian Areas Regulation (RAR)*. Any work proposed that may affect the integrity of a watercourse channel requires that a notification or approval application be submitted. No requirements for this project are expected under this legislation. The RAR identifies minimum riparian setback distances from the highwater mark that must be met by municipal policy.

2.3 Fisheries and Oceans Canada (DFO)

Section 35 of the federal *Fisheries Act* protects fish habitat. Fisheries and Oceans Canada (DFO) is responsible for regulatory enforcement of works in and around streams and the ocean. Subsection 35(2) of the *Fisheries Act* contains provisions for the DFO to authorize works where the harmful alteration, disruption or destruction (HADD) of fish habitat is expected. Proposed works that would result in a HADD require an authorization under Subsection 35(2) of the *Fisheries Act*. No requirements for this project are expected under this legislation.

3 Project Description

3.1 Project location

This site is located on Edgewood Road, east of Capilano Road and north of Highway 1 in North Vancouver, BC (Figure 1). There are 4 watercourses east of the proposed development site: Mackay Creek, two stormwater outflow ditches that flows into Mackay Creek, and an unnamed watercourse that runs along the toe of slope of the western ravine bank before flowing into Mackay Creek. This site is zoned for Public Assembly Zone 2, and Natural Parkland Zone. The area surrounding the site consists primarily of single family residences and corresponding amenities, with Capilano River to the west and mountainous natural areas to the north.



Figure 1. Project location – 1044 Edgewood Road, District of North Vancouver, BC. The subject site is west of Mackay Creek.

3.2 Construction Work Plan

Currently, the existing school building is set on the southern half of the property, with a football field on the northern half. A new school building is being proposed on the existing field, with plans to tear down the existing school and replace with a field after construction on the new building is completed. Diamond Head Consulting was retained to determine the riparian setbacks for the 3 watercourses to the east, to ensure that the new building plans are outside of the Streamside Protection Enhancement Area (SPEA) for the two waterbodies.

4 Site Description

4.1 Mackay Creek

Mackay Creek flows south along the eastern edge of the property, before draining into Burrard Inlet. Mackay Creek is a fish-bearing watercourse, with several fish species recorded over the last 20 years including Chum Salmon, Coastal Cutthroat Trout, Coastrange Sculpin, Coho Salmon, Lamprey, Prickly Sculpin, Rainbow Trout, Signal Crayfish, Slimy Sculpin, Starry Flounder, Steelhead, and Threespine Stickleback¹.

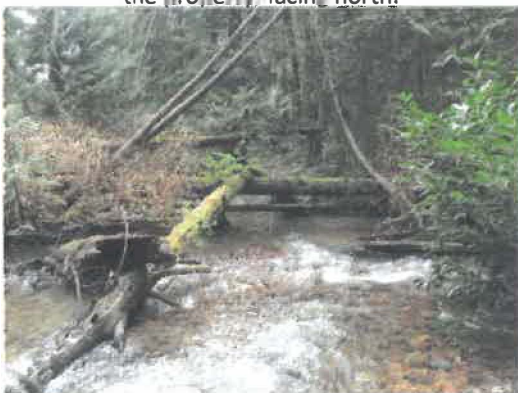
The reach of Mackay Creek that is adjacent to the school is moderately wide, averaging 7.0 m wide at the highwater mark. Water depth averages 50 cm. The banks are moderately tall and steep, averaging 0.9 m metres on the right bank and 1.0 m on the left bank. Slopes were variable, averaging 70% on the left bank and 75% on the right. The average slope of this reach is 2.5%. Moderate amounts of large woody debris (LWD) is found in the creek. The streambed was on average roughly composed of 15% rocks and boulders, 50% cobble, 25% gravel, and 10% sand and silt.



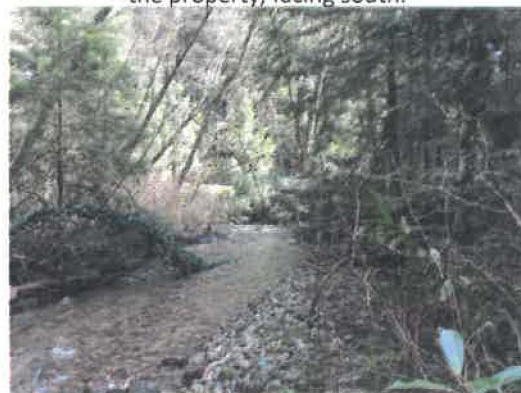
View of Mackay Creek from the southern edge of the property, facing north.



View of Mackay Creek from the center east edge of the property, facing south.



View of Mackay Creek from the northern edge of the property, facing south. Note the large amounts of LWD.



View of Mackay Creek from the southern edge of the property, facing south. The pedestrian crossing is visible in the background.

¹ Habitat Wizard. 2017. Retrieved Oct. 11th, 2017 from <http://maps.gov.bc.ca/ess/sv/habwiz/>

4.2 Unnamed Watercourse 1 – Along West Ravine Bank

There is an unnamed watercourse that begins at a stormwater outfall at the northeastern end of the property, runs south along the base of the ravine and flows into Mackay Creek near the southern end of the property. It is considered a fish bearing watercourse due to its connection to Mackay Creek. The watercourse averages 2.0 m wide at the highwater mark and 30 cm deep. The top of bank of the right bank is often the same as the top of the ravine bank. When the top of bank is distinct from the ravine, they average about 0.7m. The banks are generally steep, averaging 75% and ranging from 15-100%. The average slope of the watercourse is ~2%. Some large woody debris (LWD) was found in the ditch. The streambed is composed of 5% rocks and boulders, 15% cobble, 40% gravel, and 40% sand, silt and organic materials. A mixed age second growth stand exists in the riparian habitat around the watercourse.



View of the stormwater outfall at the northern end of the property.



Riparian areas around the creek are often flooded.



View of the main side channel on the northern end of the site, facing north.



High concentrations of English Ivy in some parts of the riparian area.

4.3 Unnamed Watercourse 2 – Side Channel

There is a second stormwater outfall which flows from under the school into Mackay Creek, starting roughly one third up the property. It is considered a fish bearing watercourse when there is sufficient water flow due to its connection to Mackay Creek. A detailed assessment of this ditch was attempted but not completed, due to its short length. It has a highwater mark width of 0.55 m, and an average depth of 5 cm. The banks are short and steep, with the left bank averaging .25 m and 100%. The right bank averages 0.2 m and 90%. The average creek slope is ~5%. The streambed was composed mainly of sands and organic materials, with up to 10% gravel and 10% cobble.



Example photos of the side channel.



Stormwater outfall under the school

4.4 Unnamed Watercourse 3 – Along Pedestrian Path

There is a culvert that releases stormwater from the surrounding area into a small side channel of Mackay Creek, roughly halfway up the site. This side channel then flows alongside the pathway from Edgewood Road into Mackay Creek. The lower portion of this is considered a fish bearing watercourse due to its connection to Mackay Creek. A detailed assessment of this ditch was attempted but not completed, due to its short length of 30m from the culvert to the creek. It averages 1.8m wide at the highwater mark, and <10cm deep. Banks are short and gentle, with the left bank averaging 20 cm and <15% slope. The right bank was highly variable because of the path to the top of the ravine, ranging from 0.3 m to over 3 m tall and from 35% to 70% steep. The slope of the watercourse is ~3%, with no large woody debris (LWD). The streambed was on average composed of 60% sand, silt and organics, 35% gravel, and 5% rocks and cobble.



A stormwater outfall releases into a naturalized side channel of Mackay Creek.



View of the watercourse from the nearby pathway.

4.5 Terrestrial Environment

The eastern edge of the property consists of Mackay Creek and surrounding forest. Most of the property west of the top of slope is highly modified, consisting of a school with a large football field and parking lot. Most of the developed area is impervious, except for the turf grass. There is a row of Western Red Cedars along the edge of the school and Edgewood Road, and a few scattered deciduous and coniferous trees throughout the developed part of the property.



View of the coniferous trees lining Edgewood Road.



Scattered deciduous and coniferous trees on the school site.



View of the field and parking lot



View of the side of the school.

Mackay Creek is located in a ravine east of the school. The ravine ranges from 110 to 140 m wide, and supports a second growth forest. The right ravine bank adjacent to the school faces east, and ranges from 40% to 80% slope. The understory is partially disturbed, with both formal and informal walking paths along the creek and the introduction of invasive species. There is a bridge that crosses the creek and formal walking path at the southern edge of the school property that runs south along Mackay Creek, and east across the creek. This formal walking path has high volumes of foot traffic from local residents and students. There are multiple informal walking paths in the area that lead down to the water.

This site is situated within the Coastal Western Hemlock Dry Maritime (CWHdm) subzone of the Biogeoclimatic Ecosystem Classification (BEC) System of BC. This subzone occurs at low elevations on the mainland, between sea level to approximately 650 m. It is associated with warm, relatively dry summers and moist, mild winters with little snowfall.

The soils in the natural areas below the top bank of the ravine originated from morainal deposits and are generally sandy loams, with ~35% coarse fragments. Humus types are mostly moders ranging from 2-10cm deep. The ravine slope has a moderate moisture regime and is classified as site series 05. At the base of the slope and on the flat slopes below the site series is a complex of 12 and 07.

4.5.1 Ravine slope

The forest stand on the ravine banks is a moderately dense second growth stand. There are numerous heritage stumps remaining. The dominant layer consists of Douglas-firs (*Pseudotsuga menziesii*). The co-dominant layer of the canopy consists of Western red cedar (*Thuja plicata*), Red alder (*Alnus rubra*), Western hemlock (*Tsuga heterophylla*), Douglas-fir, and Black cottonwood (*Populus trichocarpa*). Intermediate, suppressed and regenerating layers consist of Western hemlock and Western red cedar.

STAND CHARACTERISTICS					
Canopy Layer	Dominant Trees	Co-Dominant Trees	Intermediate Trees	Suppressed Trees	Regeneration
Species ¹ (% by volume; + denotes <10%)	Fd	Hw ₄ Cw ₃ Fd ₂ Dr ₁ Act ₊	Hw ₇ Cw ₃	Hw ₆ Cw ₄	Hw ₄ Cw ₆
Density (stems/ha)	10	150	200	100	50
Tree diameter at breast height (cm)	110	50	25	10	
Tree height (m)	45	32	20	8	
Live crown ratio	70	60	70	80	
Crown closure (%)	55				

¹ Species codes: Fd (Douglas-fir), Hw (western hemlock), Cw (western redcedar), Act (black cottonwood), Mb (bigleaf maple), Dr (red alder), Pr (bitter cherry), Ep – (Paper birch), W (willow)



Representative photo of the trees on the right ravine bank behind the school.



Representative photo of the trees on the right ravine bank behind the football field.

Understory vegetation is variable, averaging ~75% site coverage. However, invasive species makes up more than half of the understory vegetation on the ravine banks. Native understory vegetation on the ravine banks includes: 10% Vine Maple (*Acer circinatum*), 5% Sword fern (*Polystichum munitum*), 2% Red huckleberry (*Vaccinium parvifolium*), 2% Deer fern (*Blechnum spicant*), 2% dull Oregon grape (*Mahonia nervosa*), 1% Spiny wood fern (*Dryopteris expansa*), with Hazelnut (*Corylus cornuta*) and False azalia (*Menziesia ferruginea*) present.

4.5.2 Floodplain/Valley bottom

The flat area below the ravine bank and adjacent to Mackay creek is a moderately dense second growth stand. The dominant layer consists of Black cottonwoods. The co-dominant and intermediate layers consist of Western redcedar, Red alder, and Western Hemlock, with scattered Black cottonwoods; the intermediate layer contains a presence of Paper birch (*Betula papyrifera*). The suppressed and regenerating layers consist of Western redcedars and Western hemlock.

STAND CHARACTERISTICS					
Canopy Layer	Dominant Trees	Co-Dominant Trees	Intermediate Trees	Suppressed Trees	Regeneration
Species ¹ (% by volume; + denotes <10%)	Act	Hw ₂ Cw ₂ Dr ₆ Act ₊	Dr ₆ Hw ₃ Cw ₁ Ep ₊	Hw ₇ Cw ₃	Hw ₇ Cw ₃
Density (stems/ha)	25	300	150	100	
Tree diameter at breast height (cm)	75	35	25	10	
Tree height (m)	40	28	20	7	
Live crown ratio	70	60	60	80	
Crown closure (%)	50				

¹ Species codes: Fd (Douglas-fir), Hw (western hemlock), Cw (western redcedar), Act (black cottonwood), Mb (bigleaf maple), Dr (red alder), Pr (bitter cherry), Ep – (Paper birch), W (willow)



Representative photo of the forest canopy found at the valley floor.



View of the formal path adjacent to Mackay Creek, leading south away from the school.

Understory vegetation is discontinuous on the valley floor, with breaks where informal walking paths exist. Vegetation covers ~60-70% of the ground. Invasive species are also present here in large quantities, but overall it contains a lower quantity of invasive species than the ravine banks. Native understory vegetation in the valley includes: 15% Salmonberry (*Rubus spectabilis*), 7% vine maple, 5% Skunk Cabbage (*Symplocarpus foetidus*), 3-4% False lily-of-the-valley (*Maianthemum dilatatum*), 2% Sword fern, 2% deer fern, 2% lady fern (*Athyrium filix-femina*), 2% Red huckleberry (*Vaccinium parvifolium*), 2% Devil's club (*Oplopanax horridus*) 2% Pacific bleeding heart (*Dicentra formosa*), 1% black gooseberry (*Ribes lacustre*), 1% Indian plum (*Oemleria cerasiformis*), with a presence of: Red elderberry (*Sambucus racemosa*), salal (*Gaultheria shallon*), Sweet coltsfoot (*Petasites frigidus* var. *nivalis*), sitka mountain ash (*Sorbus sitchnesis*), goatsbeard (*Aruncus dioicus*), three-leaved floamflower (*Tiarella trifoliata* var. *trifoliata*) and Oval-leaved blueberry (*Vaccinium ovalifolium*).



Photos of the trees (left) along the northern bank of Hastings Creek.



Understorey vegetation on the right ravine bank below the school.

4.5.3 Invasive Species

The natural area below the top of bank is highly infested (20-50% cover) with invasive plant species. There are large areas covered with English ivy (*Hedera helix*). Other species are scattered throughout the forests. There are high concentrations near the pedestrian paths and creek crossing. In addition to ivy there is Cherry laurel (*Prunus laurocerasus*), Common periwinkle (*Vinca minor*), English holly (*Ilex aquifolium*), Himalayan blackberry (*Rubus armeniacus*), yellow archangel/lamium (*Lamium galeobdolon*), policeman's helmet (*Impatiens glandulifera*), Spurge laurel (*Daphne laureola*), Goutweed (*Aegopodium podagraria*), Japanese knotweed (*Fallopia japonica*), and bamboo (*Bambusoideae*). Non-native plants not currently considered invasive include Herb Roberts (*Geranium robertianum*).



Spurge laurel



English ivy climbing trees



English Holly is starting to establish on site



Common Periwinkle.



English Ivy (left) and Cherry laurel (right)

5 Riparian Protection

5.1 Provincial Riparian Areas Regulation

The minimum setback required following the provincial Riparian Areas Regulation was calculated using the detailed assessment method. This resulted in a minimum Streamside Protection and Enhancement Area (SPEA) setback for Mackay Creek of 21.1m, measured back from the highwater mark (HWM) (Figure 2). All 3 unnamed watercourses found in the natural area east of Handsworth secondary school require RAR setbacks of 10m measured back from the HWM (Figure 2).



Figure 2. Approximate location of the Riparian Areas Regulation setbacks from the 4 on-site watercourses.

The Provincial RAR also required that measures to be identified that will protect and maintain the SPEA. These include ensuring that the slope remain stable and the trees remain windfirm. In this case the measures would require that the existing stand of trees remain protected at the top of slope and that a suitable geotechnical setback be established.

5.2 District of North Vancouver Streamside Protection DPA

This property is within the Streamside Protection DPA in the District of North Vancouver. This DP requires a minimum of a 15 m setback from the top of bank (TOB) of all watercourses. Where the watercourse is set in a ravine over 60 m wide, the District of North Vancouver Streamside DPA requires a setback of 10m from the top of ravine bank. The width of the ravine associated with this site varies, but is generally between 100 and 150 m wide near the school, thereby requiring a setback of 10 m from the top of ravine bank (Figure 3, 4).

All trees along this edge will have to be protected and measures taken to protect the slopes stability. Any impervious surfaces within the 10 m setback will need to be removed, and the area restored. Upon completion of works, a permanent 1.8 m tall chain link fence will need to be installed along the 10m setback.



Figure 3. Approximate location of the District of North Vancouver Riparian Protection DPA 10m setback from the top of ravine bank.

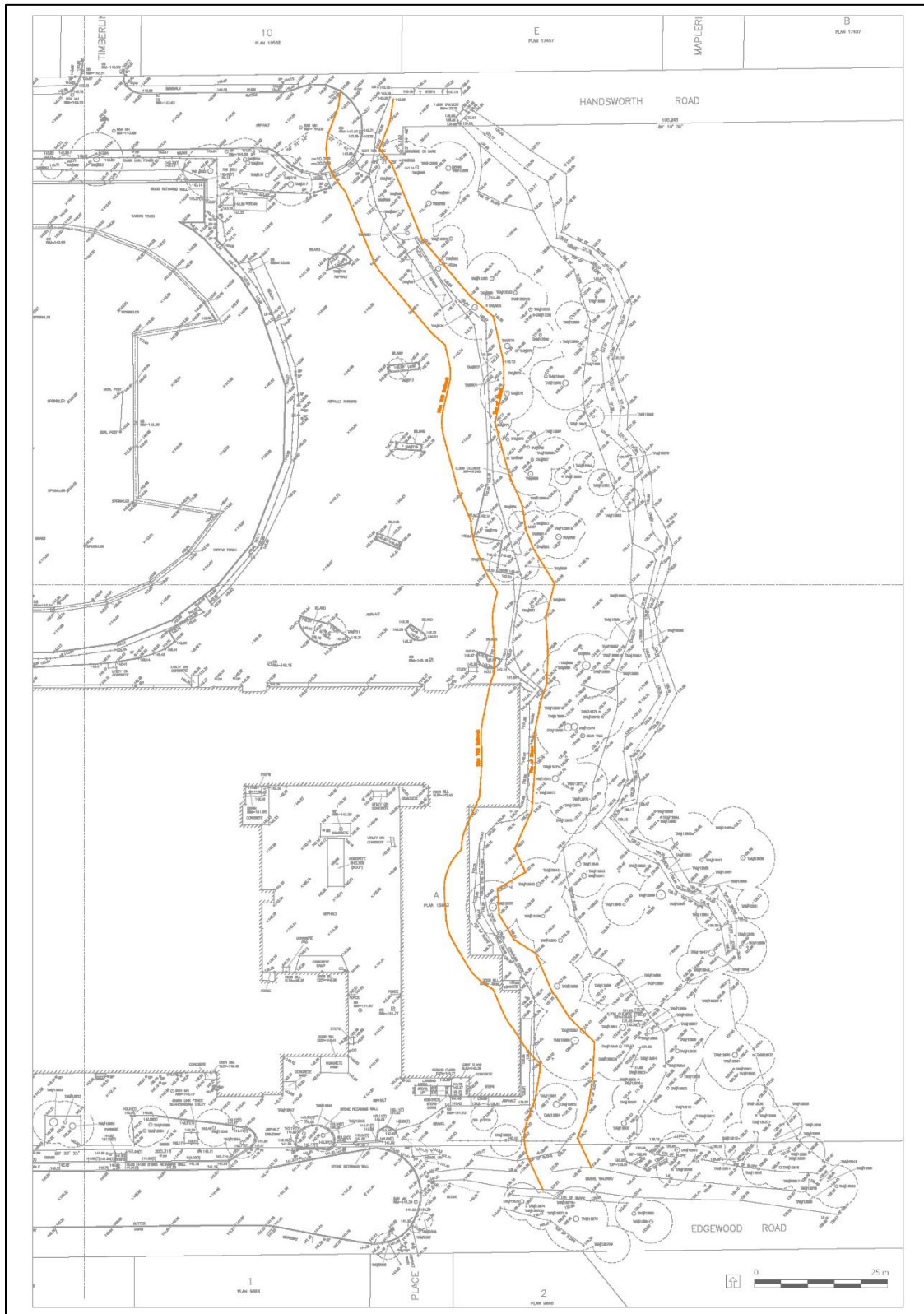


Figure 4: Location of the District of North Vancouver Riparian Protection DPA 10m setback from the ravine, using the site survey.

6 Opportunities for Enhancement

Invasive species are pervasive throughout the Mackay Creek ravine. There are opportunities in this natural area east of the site to manually remove these invasive species. Since invasives are so pervasive and in some areas dominate the ground cover, ecologically suitable native species will need to be replanted in order to prevent these invasive species from re-establishing on the site. Recommended tree and plant species communities are provided in Tables 1 and 2.

Table 1: Recommended plants for replanting below the toe of slope. Soil moisture is very wet and nutrients are rich.

Tree Layer	
<i>Alnus rubra</i>	Red Alder
<i>Populus trichocarpa</i>	Black Cottonwood
<i>Rhamnus purshiana</i>	Cascara
<i>Picea sitchensis</i>	Sitka Spruce
<i>Thuja plicata</i>	Western Red Cedar
Shrub Layer	
<i>Lonicera involucrata</i>	Black Twinberry
<i>Rubus spectabilis</i>	Salmonberry
<i>Crataegus douglasii</i>	Black hawthorn
<i>Ribes bracteosum</i>	Stink currant
<i>Cornus stolonifera</i>	Red-osier Dogwood
<i>Oplopanax horridus</i>	Devil's club
<i>Oemleria cerasiformis</i>	Indian Plum
<i>Sambucus racemosa</i>	Red elderberry
<i>Salix Sp</i>	Willow (Pacific, Scouler, Sitka)
<i>Spiraea douglasii</i>	Hardhack
<i>Physocarpus capitatus</i>	Pacific Ninebark

Table 2: Recommended plants for the ravine banks. Soil moisture is fresh to moist, nutrients are rich.

Tree Layer	
<i>Pseudotsuga menziesii</i>	Douglas-Fir
<i>Acer macrophyllum</i>	Broadleaf Maple
<i>Rhamnus purshiana</i>	Cascara
<i>Thuja plicata</i>	Western Red Cedar
Shrub Layer	
<i>Acer circinatum</i>	Vine Maple
<i>Symphocarpus albus</i>	Snowberry
<i>Corylus cornuta</i>	Beaked Hazelnut
<i>Gaultheria shallon</i>	Salal
<i>Ribes sanguineum</i>	Red Flowering Currant
<i>Polystichum munitum</i>	Sword Fern
<i>Oemleria cerasiformis</i>	Indian Plum
<i>Amelanchier alnifolia</i>	Saskatoon
<i>Mahonia nervosa</i>	dull Oregon-grape
<i>Rosa gymnocarpa</i>	Baldhip Rose

When development begins, the streamside setback should be protected. All edge trees should be protected with fencing constructed at distances specified in the project arborist report. This includes the development of an erosion and sediment control and stormwater management plan. Hardscape features should be avoided in the SPEAs.

The District of North Vancouver requires restoration of the 10m setback from top of bank for Handsworth secondary school. Species selected for this restoration work and their required are provided in Table 3. The cost of the enhancement works has been estimated, assuming that all work within the setback has been completed, after the current school has been demolished and the asphalt has been removed (Table 4).

Table 3: Plant species and quantity for restoration of the 10m setback from top of bank.

Area (m2) 1400						
RIPARIAN		PLANT LIST	Percent Cover	Size	Spacing	Space/plant
Soil Moisture: Moderately Dry - Soil Nutrients: Medium			%		m	m2
QTY	Botanical Name	Common Name				
Tree Layer			60			
13	<i>Prunus emarginata</i>	Bitter Cherry	20	1.2m ht	5.00	21.65
26	<i>Acer macrophyllum</i>	Broadleaf Maple	40	1.2m ht	5.00	21.65
26	<i>Rhamnus purshiana</i>	Cascara	40	1.2m ht	5.00	21.65
65						
Area (m2) 2600						
RIPARIAN		PLANT LIST	Percent Cover	Size	Spacing	Space/plant
Soil Moisture: Moderately Dry - Soil Nutrients: Medium			%		m	m2
QTY	Botanical Name	Common Name				
Shrub Layer			100			
495	<i>Acer circinatum</i>	Vine Maple	20	#1 Pot	1.10	1.05
248	<i>Corylus cornuta</i>	Beaked Hazelnut	10	#1 Pot	1.10	1.05
495	<i>Oemleria cerasiformis</i>	Indian Plum	20	#1 Pot	1.10	1.05
495	<i>Polystichum munitum</i>	Sword Fern	20	#1 Pot	1.10	1.05
124	<i>Ribes sanguineum</i>	Red Flowering Currant	5	#1 Pot	1.10	1.05
248	<i>Rosa gymnocarpa</i>	Baldhip Rose	10	#1 Pot	1.10	1.05
124	<i>Sambucus racemosa</i>	Red elderberry	5	#1 Pot	1.10	1.05
248	<i>Symphocarpus albus</i>	Snowberry	10	#1 Pot	1.10	1.05
2477						

Table 4: Estimated cost of enhancement works.

	Cost
Removal and disposal of invasive species	\$6,000
Purchase and delivery of plants and trees	\$31,700
Planting of plants and trees	\$15,000
Purchase and delivery of soil (30 cm) wood chip mulch (5cm)	\$25,000
Purchase and placement of woody debris (20)	\$4,000
Total Cost	\$81,700

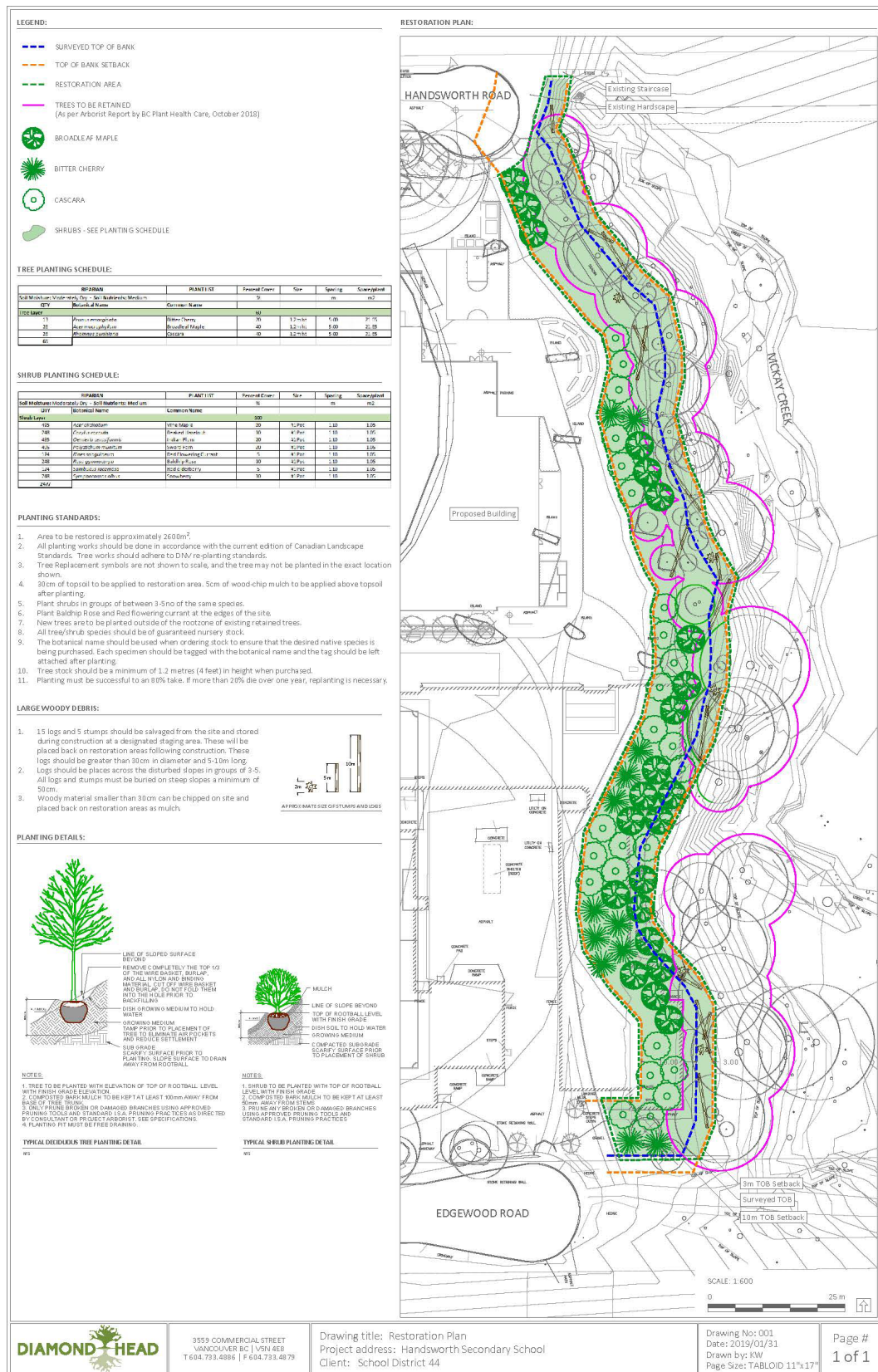


Figure 5: Restoration plan for the 10 m setback from top of bank for Handsworth Secondary School.

7 Erosion and Sediment Control Requirements

The riparian setback area for this creek must be protected at all stages of construction. The creek channel is located downslope and away from the construction area. It is recommended that a silt fence be installed above the existing top of bank. These fences must remain in place for the duration of the project. This fencing can be installed in the same location as the tree protection fencing.

The Contractor shall comply with all applicable laws governing sediment and erosion control. Care shall be exercised during all phases of the Work to control the release of sediments and other debris or deleterious substances into the watercourse. Specifically, the discharge of substances deleterious to fish or other aquatic life is prohibited.

Construction and excavation wastes, overburden, soil, or other substances deleterious to aquatic life must be disposed of or placed in such a manner by the Contractor to prevent their entry into any watercourse. All excavated material shall be stockpiled as far as possible away from the watercourses. Excavated soils should be covered and protected with polyethylene sheeting, and/or silt fencing installed and maintained along the toe of excavated slopes.

Sediment and erosion control measures (silt fence/hay bales) must be installed adjacent to work areas to control potential release of soils or sediment-laden water from entering the creek or the ocean.

The Contractor shall determine in consultation with the Owner's representative a monitoring program, with a schedule, test points and methodology to be used to measure the concentration of total suspended solids (TSS) in the runoff water discharged during the construction work. TSS concentrations shall be compared against criteria specified in the *Land Development Guidelines for the Protection of Aquatic Habitat* (DFO and MELP 1993) and the *B.C. Approved Water Quality Guidelines (Criteria) 1998 Edition*. Specifically, total suspended solids in runoff water shall not exceed 25 mg/litre above background suspended solid concentrations during normal dry weather operation, and shall not exceed 75 mg/litre of suspended solids above background levels during design storm events.

If sediment or other deleterious materials enter the creeks during any of the work activities, the Contractor shall immediately take remedial steps to control and contain the release. The Owner and its representatives shall have authority to immediately suspend without compensation to the Contractor, all activities which are resulting, or which could imminently result, in the release of sediment or other deleterious materials to any adjacent fish bearing water bodies.

8 General Environmental Construction Specifications

The Contractor shall conduct all operations in a manner which minimizes disturbances to environmental resources, and which complies with the requirements of all authorities having jurisdiction, including federal and provincial legislation, regulations, permits, approvals, authorizations, and guidelines applicable to the Project. In undertaking the Work, the Contractor shall be responsible for the actions of its agents, employees, subcontractors and everyone else engaged by or through the Contractor. Accordingly, the Contractor shall undertake all

reasonable actions to ensure that environmental protection measures are in place and working effectively throughout all areas affected by the Project.

In the event that an activity which contravenes these Environmental Construction Specifications occurs, the Owner may issue a Stop Work Order directing the immediate suspension of all or a portion of the activity(ies) causing the environmental impact and may order or at the Contractor's cost undertake remedial measures to be conducted as deemed necessary. The Contractor shall be solely responsible for all costs of all work stoppages and/or remedial works necessary, which result from the foregoing.

The Contractor shall notify the Owner in writing, immediately upon discovery, of the existence of any hazardous conditions, property, or equipment within or immediately adjacent to the Site. However, it shall be the Contractor's responsibility to take all necessary precautions against injury to the environment and to persons or damage to property from such hazards until corrected by the responsible party.

The Contractor shall comply with all applicable law, including all federal and provincial legislation. In the event of a discrepancy between any of the clauses of these Environmental Construction Specifications and the provisions of any applicable law, including any legislation, regulations, or municipal bylaws, the more stringent provisions resulting in the higher protection of the environment, the lower discharges of contaminants and the higher degree of environmental protection and safety shall prevail.

Impacts from construction activities to the existing riparian habitat will be minimized through the use of best management practices (BMP) and guidelines, including those found in the following documents:

- *"Users' Guide to working In and Around Water" 2005* - B.C. Ministry of Environment
http://www.env.gov.bc.ca/wsd/water_rights/cabinet/working_around_water_v5_2013.pdf
- *"Standards and Best Practices for Instream Works" 2004* - B.C. Ministry of Water, Land and Air Protection
<http://env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>
- *"Land Development Guidelines for the Protection of Aquatic Habitat" 1993* - Department of Fisheries and Oceans,
http://www.landfood.ubc.ca/sxd/9_resources/fed_files/fed_land_development_guidelines.pdf-search=%2211.%09Land%20Development%20Gui
- *Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia*, 2014 - B.C. Ministry of Environment
<http://www.env.gov.bc.ca/wld/documents/bmp/devwithcare/>

These BMP will be implemented to avoid, limit or mitigate impacts to water quality and quantity, aquatic and riparian habitats. The following is a summary of BMPs to be implemented that will ensure that practices comply with legislation. These are not comprehensive, however a qualified environmental monitor will use adaptive management to monitor construction activities and implemented additional measures where necessary.

Mitigation measures recommended for this project to ensure minimal or no impacts to aquatic resources and no net loss of habitat include but are not limited to the following:

- Ensure equipment and machinery are in good operating condition (power washed), free of leaks, excess oil, and grease. No equipment refuelling or servicing should be undertaken within 30m of any watercourse or surface water drainage.
- All construction materials must be clean, non-eroding and non-toxic to aquatic life. Ensure that all works involving the use of concrete, cement, mortars, and other Portland cement or lime-containing construction materials will not deposit, directly or indirectly, sediments, debris, concrete, concrete fines, wash or contact water into or about any watercourse. Concrete materials cast in place must remain inside sealed formed structures.
- Any materials that inadvertently fall into the stream or the ocean must be removed immediately.
- Sediment control measures are to be put in place prior to any work activities and remain in place until work is complete and the site is stable.

8.1 Environmental Monitoring

It is recommended that a qualified Environmental Monitor inspect, oversee, and report on the project with respect to environmental legislation, regulatory approvals, and best management practices (BMPs). During Construction, the Environmental Monitor will have the primary responsibility to evaluate the effectiveness of the environmental mitigation measures to achieve compliance with the terms and conditions of all regulatory permits, approvals, and environmental legislation. Environmental monitoring reports will be completed to document construction activities, mitigation measures, problems encountered, if any, and how they were managed. Following construction, the Environmental Monitor will prepare and submit an environmental monitoring completion report.

The role of the Environmental Monitor will be to inspect, evaluate and report on the performance of the construction activities and effectiveness of environmental control methods and mitigation measures with respect to applicable legislation, permits and approvals, and BMPs.

The key responsibilities of the Environmental Monitor include:

- Liaison with regulatory agencies, and other key stakeholders;
- Holding a pre-construction meeting with the Contractor to review and discuss the project approvals and the required environmental BMPs;
- Providing technical assistance on environmental matters to construction personnel and regulatory agencies;
- Inspecting activities during construction to evaluate and report on compliance with terms and conditions of environmental approvals and permits;
- Providing recommendations for modifying and/or improving environmental mitigation measures, as necessary;
- Documenting construction activities by field notes and photographs;

- Suspending construction activities that are causing, or potentially causing, risk of environmental damage;
- Preparing factual environmental monitoring summary reports throughout the duration of construction, to summarize activities and actions taken to minimize potential effects during each of the construction activities;
- Monitoring levels of turbidity and/or total suspended solids (TSS) relative to criteria established in the *Land Development Guidelines for the Protection of Aquatic Habitat* (25 mg/L above background levels and 75 mg/L above background levels during storm events); and
- Monitoring levels of pH to relative to criteria established by the Canadian Council of Ministers of the Environment for the protection of aquatic habitat.

The Environmental Monitor will have the authority to suspend construction activities if, in their opinion, the Contractor's actions contravene, or potentially contravene, the recommended BMPs or applicable legislation, permits, and approvals.

Appendix A: Statement of Limitations

This document was prepared by Diamond Head Consulting Ltd. Should this report contain an error or omission then the liability, if any, of Diamond Head Consulting Ltd. should be limited to the fee received by Diamond Head Consulting Ltd. for the preparation of this document. Recommendations contained in this report reflect Diamond Head Consulting Ltd.'s judgment in light of information available at the time of study. The accuracy of information provided by Diamond Head Consulting Ltd. is not guaranteed. This report is valid for 6 months from the date of submission. Additional site visits and report revisions are required after this point to ensure accuracy of the report.

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**Diamond Head Consulting Ltd.
Protection of the Natural
Environment DPA Assessment**

For:

**Handsworth Secondary School
District of North Vancouver, BC**



April 25th, 2018
Updated January 24th, 2019

Submitted to:

**Mark Thomson
North Vancouver School District #44
2121 Lonsdale Avenue
North Vancouver, BC, V7M 2K6**



The following Diamond Head Consulting staff performed the site visit and prepared the report. All general and professional liability insurance and individual accreditations have been provided below for reference.



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Senior Forester, Biologist
Certified Tree Risk Assessor (46)



Cassandra Cummings, R.P.Bio
Biologist, Planner
MSc. Biology, MSc. Planning

If there are any questions or concerns as to the contents of this report, please contact us at any time.

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Insurance Information

WCB: # 657906 AQ (003)
General Liability: Northbridge General Insurance Corporation - Policy #CBC1935506,
\$5,000,000
Errors & Omissions: Lloyds Underwriters – Policy #1010615D, \$1,000,000

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1 Introduction

Handsworth Secondary School is in need of seismic upgrades. Funding for a full replacement has been approved by the Ministry of Education, with a new school proposed to replace the existing school building on this lot. The new school building is planned to be built on the existing fields, so that the existing building can remain operational during construction. The property falls within the District of North Vancouver's Protection of the Natural Environment Development Permit Area (DPA), which is applicable to all residential, industrial and commercial uses. Diamond Head Consulting Ltd. (DHC) was retained to prepare a Natural Environment DPA Assessment for this site.

Civic address:	1044 Edgewood Rd, District of North Vancouver, BC, V7R 4G2
Legal description:	LOT A Blocks 8 to 10, District Lot 596 Plan 15603; PID 007-645-961
Client name:	Mark Thomson, North Vancouver School District #44
Date of site visit:	March 28 th , 2018, April 12 th , 2018

2 Natural Environment DP Requirements

This DP applies to properties that are adjacent to areas that are considered in a natural state. The objectives of this DP as stated in the Official Community Plan (OCP) include the following:

- Protect the District's natural setting, ecological systems and visual assets as a part of a rich natural heritage for the benefit of present and future generations;
- Protect wildlife corridors and the connectivity of ecosystems;
- Protect forested character and enhance the health of forests, trees and soils;
- Conserve environmentally sensitive areas in order to protect biodiversity;
- Protect forested areas inside watersheds in order to maintain or enhance hydrological functions.

Properties that must comply with this DP must attempt to protect existing natural features on and adjacent to the property. Key guidelines include:

- Efforts should be made to locate development away from:
 - habitat for species at risk
 - mature stands of trees
 - raptor nest sites
 - wetlands
 - wildlife corridors
- The proposed development should be located and designed so as to minimize any damage to natural environment protected areas and efforts should be made to protect and enhance natural tree cover and vegetation, drainage patterns and landforms.
- New structures should be located as far away from natural environmental protected areas as is feasible.
- Habitat compensation is required for the disturbance to natural environment protected areas.

Compliance with this DP requires that an assessment be completed to inventory all “natural” features on and adjacent to the property. Efforts must be shown through the design phase of the project to minimize any impacts to the features. If impacts are incurred, the District requires that some equivalent enhancement work be completed.

3 Project Description

3.1 Project location

This site is located on Edgewood Road, east of Capilano Road and north of Highway 1 in North Vancouver, BC (Figure 1). This site is zoned for Public Assembly Zone 2, and Natural Parkland Zone. The area surrounding the site consists primarily of single family residences and corresponding amenities, with Capilano River to the west and mountainous natural areas to the north.

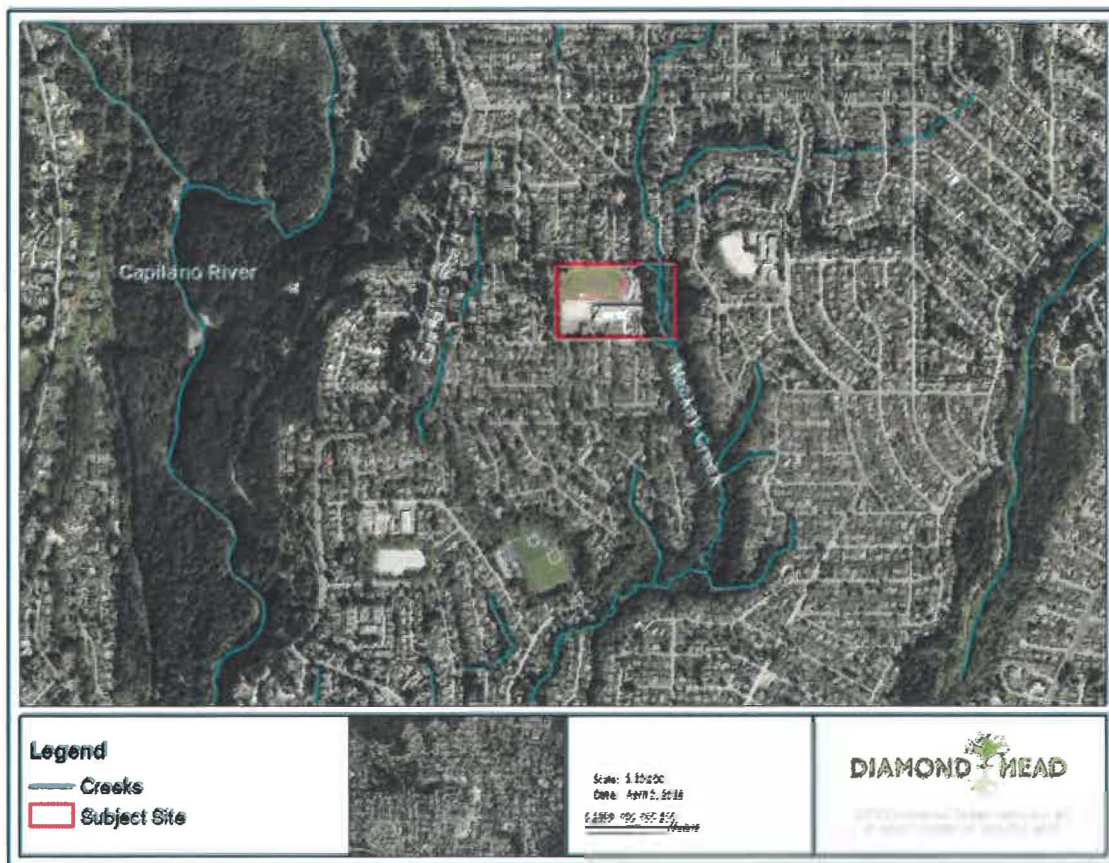


Figure 1. Project location – 1044 Edgewood Road, District of North Vancouver, BC. The subject site is west of Mackay Creek.

3.2 Construction Work Plan

Currently, the existing school building is set on the southern half of the property, with a football field on the northern half. A new school building is being proposed on the existing field, with plans to tear down the existing school and replace with a field after construction on the new

building is completed. Diamond Head Consulting was retained to determine the riparian setbacks for watercourses to the east, to ensure that the new building plans are outside of them.

4 Site Description

The western end of the site contains an existing school and field, with a second growth forest at the eastern edge. This area contains 4 watercourses east of the site: Mackay Creek, 2 ditches that flows into Mackay Creek, and an unnamed watercourse that runs along the toe of slope of the western ravine bank before flowing into Mackay Creek. Numerous large old growth heritage stumps provide evidence of previous logging..

4.1 Topography

The western end of the site contains the existing school and football field and is fairly flat (Figure 2). The eastern end of the site contains a ravine in which Mackay Creek and its tributaries are found. This ravine banks are quite steep, often over 100% slope. The site ranges from 127 m at Mackay Creek up to 143 m above sea level on the western end of the property.



Figure 2: Topography of Handsworth Secondary School.

4.2 Climate and Soils

This site is situated within the Coastal Western Hemlock Dry Maritime (CWHdm) subzone of the Biogeoclimatic Ecosystem Classification (BEC) System of BC. This subzone occurs at low elevations on the mainland, between sea level to approximately 650 m. It is associated with warm, relatively dry summers and moist, mild winters with little snowfall.

The soils in the natural areas below the top bank of the ravine originated from morainal deposits and are generally sandy loams, with ~35% coarse fragments. Humus types are mostly moders ranging from 2-10cm deep. The ravine slope has a moderate moisture regime and is classified as site series 05. At the base of the slope and on the flat slopes below the site series is a complex of 12 and 07.

4.3 Plant Communities

Plant communities are defined as units of vegetation with a relatively uniform plant species composition and physical structure. Two distinct plant communities, based upon specific tree and vegetation characteristics, were identified within the study area. One includes the banks of the ravine from the top of bank to the toe of the slope. The second is below the toe of the slope on the flat floodplain areas adjacent to Mackay Creek.

4.3.1 Ravine slope

The forest stand on the ravine banks is a moderately dense second growth stand. There are numerous heritage stumps remaining. The dominant layer consists of Douglas-firs (*Pseudotsuga menziesii*). The co-dominant layer of the canopy consists of Western red cedar (*Thuja plicata*), Red alder (*Alnus rubra*), Western hemlock (*Tsuga heterophylla*), Douglas-fir, and Black cottonwood (*Populus trichocarpa*). Intermediate, suppressed and regenerating layers consist of Western hemlock and Western red cedar.

STAND CHARACTERISTICS					
Canopy Layer	Dominant Trees	Co-Dominant Trees	Intermediate Trees	Suppressed Trees	Regeneration
Species ¹ (% by volume; + denotes <10%)	Fd	Hw ₄ Cw ₃ Fd ₂ Dr ₁ Act ₊	Hw ₇ Cw ₃	Hw ₆ Cw ₄	Hw ₄ Cw ₆
Density (stems/ha)	10	150	200	100	50
Tree diameter at breast height (cm)	110	50	25	10	
Tree height (m)	45	32	20	8	
Live crown ratio	70	60	70	80	
Crown closure (%)	55				

¹ Species codes: Fd (Douglas-fir), Hw (western hemlock), Cw (western redcedar), Act (black cottonwood), Mb (bigleaf maple), Dr (red alder), Pr (bitter cherry), Ep – (Paper birch), W (willow)



Representative photo of the trees on the right ravine bank behind the school.



Representative photo of the trees on the right ravine bank behind the football field.

Understory vegetation is variable, averaging ~75% site coverage. However, invasive species makes up more than half of the understory vegetation on the ravine banks. Native understory vegetation on the ravine banks includes: 10% Vine Maple (*Acer circinatum*), 5% Sword fern (*Polystichum munitum*), 2% Red huckleberry (*Vaccinium parvifolium*), 2% Deer fern (*Blechnum spicant*), 2% dull Oregon grape (*Mahonia nervosa*), 1% Spiny wood fern (*Dryopteris expansa*), with Hazelnut (*Corylus cornuta*) and False azalia (*Menziesia ferruginea*) present.

4.3.2 Floodplain/Valley bottom

The flat area below the ravine bank and adjacent to Mackay creek is a moderately dense second growth stand. The dominant layer consists of Black cottonwoods. The co-dominant layer of the canopy consists of Western red cedar, Red alder, and Western Hemlock, with scattered Black cottonwoods. Intermediate trees consist of the same, with a presence of Paper birch (*Betula papyrifera*). The suppressed and regenerating layers are composed of Western red cedars and Western hemlock.

STAND CHARACTERISTICS					
Canopy Layer	Dominant Trees	Co-Dominant Trees	Intermediate Trees	Suppressed Trees	Regeneration
Species ¹ (% by volume; + denotes <10%)	Act	Hw ₂ Cw ₂ Dr ₆ Act ₊	Dr ₆ Hw ₃ Cw ₁ Ep ₊	Hw ₇ Cw ₃	Hw ₇ Cw ₃
Density (stems/ha)	25	300	150	100	
Tree diameter at breast height (cm)	75	35	25	10	
Tree height (m)	40	28	20	7	
Live crown ratio	70	60	60	80	
Crown closure (%)	50				

¹ Species codes: Fd (Douglas-fir), Hw (western hemlock), Cw (western redcedar), Act (black cottonwood), Mb (bigleaf maple), Dr (red alder), Pr (bitter cherry), Ep – (Paper birch), W (willow)



Representative photo of the forest canopy found at the valley floor.



View of the formal path adjacent to Mackay Creek, leading south away from the school.

Understory vegetation is discontinuous on the valley floor, with breaks where informal walking paths exist. Vegetation covers ~60-70% of the ground. Invasive species are also present here in large quantities, but overall it contains a lower quantity of invasive species than the ravine banks. Native understory vegetation in the valley includes: 15% Salmonberry (*Rubus spectabilis*), 7% vine maple, 5% Skunk Cabbage (*Symplocarpus foetidus*), 3-4% False lily-of-the-valley (*Maianthemum dilatatum*), 2% Sword fern, 2% deer fern, 2% lady fern (*Athyrium filix-femina*), 2% Red huckleberry (*Vaccinium parvifolium*), 2% Devil's club (*Oplopanax horridus*) 2% Pacific bleeding heart (*Dicentra formosa*), 1% black gooseberry (*Ribes lacustre*), 1% Indian plum (*Oemleria cerasiformis*), with a presence of: Red elderberry (*Sambucus racemosa*), salal (*Gaultheria shallon*), Sweet coltsfoot (*Petasites frigidus* var. *nivalis*), sitka mountain ash (*Sorbus sitchnesis*), goatsbeard (*Aruncus dioicus*), three-leaved foamflower (*Tiarella trifoliata* var. *trifoliata*) and Oval-leaved blueberry (*Vaccinium ovalifolium*).



Photos of the trees (left) and the informal path and understory vegetation (right) along the northern bank of Hastings Creek.



Understorey vegetation on the right bank below the school.

4.4 Aquatic Habitat

There are 4 watercourses found on site. Mackay Creek is the largest, and only named watercourse. Three unnamed watercourses begin at various stormwater outfalls, and flow into Mackay Creek.

4.4.1 Mackay Creek

Mackay Creek flows south along the eastern edge of the property, before draining into Burrard Inlet. Mackay Creek is a fish-bearing watercourse, with several fish species recorded over the last 20 years including Chum Salmon, Coastal Cutthroat Trout, Coastrange Sculpin, Coho Salmon, Lamprey, Prickly Sculpin, Rainbow Trout, Signal Crayfish, Slimy Sculpin, Starry Flounder, Steelhead, and Threespine Stickleback¹.

The reach of Mackay Creek that is adjacent to the school is moderately wide, averaging 7.0 m wide at the highwater mark. Water depth averages 50 cm. The banks are moderately tall and steep, averaging 0.9 m metres on the right bank and 1.0 m on the left bank. Slopes were variable, averaging 70% on the left bank and 75% on the right. The average slope of this reach is 2.5%. Moderate amounts of large woody debris (LWD) is found in the creek. The streambed was on average composed of 15% rocks and boulders, 50% cobble, 25% gravel, and 10% sand and silt.



View of Mackay Creek from the northern edge of the property, facing south. Note the large amounts of LWD.



View of Mackay Creek from the southern edge of the property, facing south. The pedestrian crossing is visible in the background.

4.4.2 Unnamed Watercourse 1 – Along west ravine bank

Unnamed watercourse 1 starts at the north end of the site, flowing south along the western ravine bank, before connecting to Mackay Creek at the south end of the site. This watercourse starts at the largest of the 3 stormwater outfalls, and is the largest of the 3 unnamed watercourses. It averages 2.0 m wide at the highwater mark and 30 cm deep. Where distinct from the ravine bank, banks are short and steep averaging 0.7 m and 75%. The streambed is composed of 5% rocks and boulders, 15% cobble, 40% gravel, and 40% sand, silt and organic materials

¹ Habitat Wizard. 2017. Retrieved Oct. 11th, 2017 from <http://maps.gov.bc.ca/ess/sv/habwiz/>



View of the stormwater outfall at the northern end of the property.



View of the main side channel on the northern end of the site, facing north.

4.4.3 Unnamed Watercourse 2 – Side channel

Unnamed watercourse 2 starts from a stormwater outfall found under the school, halfway up the property. It flows east before joining with unnamed watercourse 1 and Mackay Creek. It is considered a fish bearing watercourse when there is sufficient water flow due to its connection to Mackay Creek. It has a highwater mark width of 0.55 m, and an average depth of 5 cm. The banks are short and steep, with the left bank averaging .25 m and 100%. The right bank averages 0.2 m and 90%. The average creek slope is ~5%. The streambed was composed mainly of sands and organic materials, with up to 10% gravel and 10% cobble.



Example photos of the side channel.



Stormwater outfall under the school

4.4.4 Unnamed watercourse 3 – Along southern pedestrian path

There is a culvert that releases stormwater from the surrounding area into a small side channel of Mackay Creek, roughly halfway up the site. This side channel then flows alongside the pathway from Edgewood Road into Mackay Creek. The lower portion of this is considered a fish bearing watercourse due to its connection to Mackay Creek. A detailed assessment of this ditch

was attempted but not completed, due to its short length of 30m from the culvert to the creek. It averages 1.8m wide at the highwater mark, and <10cm deep. Banks are short and gentle, with the left bank averaging 20 cm and <15% slope. The right bank was highly variable because of the path to the top of the ravine, ranging from 0.3 m to over 3 m tall and from 35% to 70% steep. The slope of the watercourse is ~3%, with no large woody debris (LWD). The streambed was on average composed of 60% sand, silt and organics, 35% gravel, and 5% rocks and cobble.



A stormwater outfall releases into a naturalized side channel of Mackay Creek.



View of the watercourse from the nearby pathway.

4.5 Wildlife Habitat

The natural areas associated with Mackay creek are part of a linear greenway that extends to the North Shore mountains and down slope to the Burrard Inlet. This corridor varies in width and is fragmented in places by roads and infrastructure, and provides a travel corridor for wildlife. At this site the ravine is wide and provides a variety of high value habitat features that supports a large diversity of wildlife, including mammals, birds, fish and amphibians.

Disturbance caused by the presence of nearby residential development and well used trails reduces the wildlife habitat value of the site. The wildlife community that inhabits this area includes mostly birds and small to medium mammals that are more tolerant of urban disturbance. Larger mammals are likely to use this area as part of a more extensive home range.

4.5.1 Bird Species

Bird surveys were not completed during this study. However, the survey was completed early in the nesting season and numerous common resident song birds were heard. A bald eagle was also observed flying not far above the canopy. Two high value wildlife trees were found and 4 large size trees that provide potential nesting and roosting sites for raptors.

The site provides terrestrial and aquatic habitat for a variety of birds. A diversity of habitat features is present to support nesting, foraging, and roosting. Bird species groups likely present include swallows, hummingbirds, warblers, woodpeckers, flycatchers, jays, crows, chickadees, nuthatches, thrushes, sparrows, wrens, kinglets, and finches.

4.5.2 Mammal Species

Mammal surveys were not completed during this study. The forest and shrub communities provide habitat to support a diversity of small mammals including squirrels, voles, shrews, and mice. Medium and large sized mammals likely to inhabit this area (as part of a larger range) include raccoon (*Procyon lotor*), skunk (*Mephitis mephitis*), coyote (*Canis latrans*), black-tailed deer (*Odocoileus hemionus*) and black bear (*Ursus americanus*).

4.5.3 Amphibian and Reptile Species

The high water table within this site, as well as the proximity to Mackay creek and the associated tributary, likely provide sufficient moist habitat to support native herpetofauna. This includes terrestrial and aquatic salamanders and frogs.

4.5.4 Fish Species

A fish survey was not conducted for this assessment. Mackay Creek is a fish-bearing watercourse, with several fish species recorded over the last 20 years including Chum Salmon, Coastal Cutthroat Trout, Coastrange Sculpin, Coho Salmon, Lamprey, Prickly Sculpin, Rainbow Trout, Signal Crayfish, Slimy Sculpin, Starry Flounder, Steelhead, and Threespine Stickleback³.

4.6 Ecological Features of Significance

No dens or raptors nests were noted during the site survey. One large stick nest was found in the crotch of a Hemlock tree where it was previously topped. This is likely used by racoon or squirrel. There are 4 trees of significance in terms of their size. These are all Douglas-fir tree that range in diameter from 125cm to 145cm diameter and are ~45m tall. These trees provide high value habitat and are potential nesting sites for raptors.

There are two dead standing wildlife trees that have numerous feeding and nesting cavities.

There are numerous heritage stumps throughout the site. Nine were identified as being of significance. These are large diameter stumps some of which have springboard notches. Many also are acting as nurse stumps and have mature hemlock trees growing out of them.

A summary of these significant features is provided in Table 1. Some features had survey tag numbers which are provided. Their locations are illustrated in Figure 3.

³ Habitat Wizard. 2017. Retrieved Oct. 11th, 2017 from <http://maps.gov.bc.ca/ess/sv/habwiz/>

Table 1 – Features of significance.

Tag # or ID	Type	Species	DBH	Height	Comment
T 12898	Significant Tree	Douglas-fir	145	42	Mid slope. Tree of significant diameter and age. Top 5m of this tree is dead. This is a high value wildlife tree.
T 12891	Significant Tree	Douglas-fir	134	45	Mid slope. Tree of significant diameter and age. This is a high value wildlife tree.
S 12949	Heritage Stump				Heritage stump 170cm diameter. Hemlock growing on stump which is 50cm diameter and 40m tall. Stilt roots around stump. Stump has springboard notches.
S 1	Heritage Stump				Heritage stump 200cm diameter. Hemlock growing on stump which is 35cm diameter and 27m tall. Stilt roots around stump. Stump has springboard notches.
S 2	Heritage Stump				Heritage stump 140cm diameter. Hemlock growing on stump which is 20cm diameter and 16m tall. Stilt roots around stump. Stump has springboard notches.
S 3	Heritage Stump				Heritage stump 220cm diameter. Hemlock growing on stump which is 40cm diameter and 30m tall. Stilt roots around stump.
S 4	Heritage Stump				Heritage stump 140cm diameter. 2 Hemlocks growing on stump which are 25cm and 35cm diameter and 25m tall. Stilt roots around stump.
W 1	Wildlife Tree	Douglas-fir	60	11	High value wildlife tree. Tree is dead with numerous cavities.
W 2	Wildlife Tree	Western hemlock	70	11	High value wildlife tree. Tree is dead with two stems and numerous cavities.
T 12970	Significant Tree	Douglas-fir	125	45	Mid slope. Tree of significant diameter and age. This is a high value wildlife tree.
T 854	Significant Tree	Douglas-fir	140	45	Mid slope. Tree of significant diameter and age. This is a high value wildlife tree.
S 5	Heritage Stump				Heritage stump 250cm diameter. Hemlocks growing on stump which 20cm diameter and 14m tall.
S 6	Heritage Stump				Heritage stump 180cm diameter. Stump has springboard notches.
S 7	Heritage Stump				Heritage stump 300cm diameter. Hemlock growing on stump which is 55cm diameter and 30m tall. Middle of stump is burned out.
S 12962	Heritage Stump				Heritage stump 220cm diameter. 7m tall with middle burned out.
N 890	Nest				Possible nest in platform of where previously topped. Not expected to be a raptors nest. Likely used by racoon or squirrel.

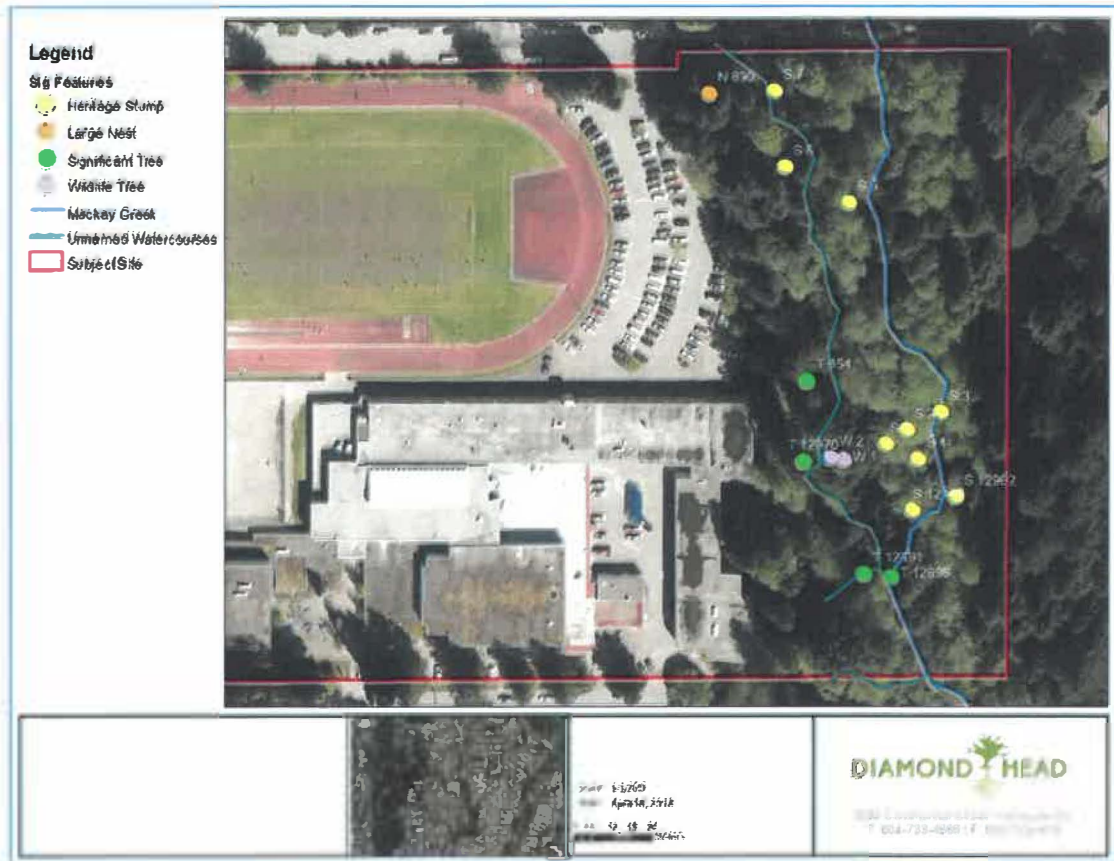
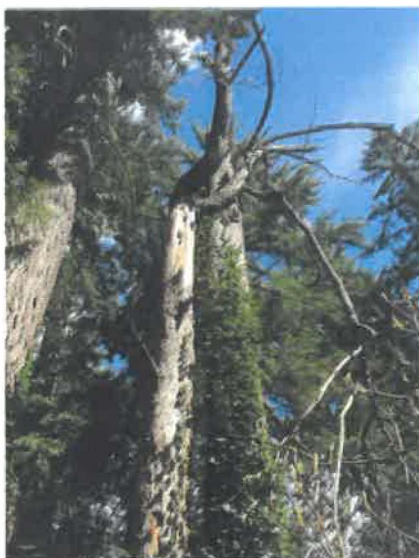


Figure 3: Location of features of significance.



Wildlife trees



Heritage/nurse stump



Heritage nurse stumps



Tree growing on top of a fallen tree



Significant size Douglas-fir

4.7 Species at Risk

The BC Conservation Data Centre (CDC) records BC's most vulnerable vertebrate animals and vascular plants, each of which is assigned to a provincial Red or Blue list according to their provincial conservation status rank. Species or populations at high risk of extinction or extirpation are placed on the Red list and are candidates for formal endangered species status. Blue-listed species are considered vulnerable to human activity and natural events.

No known species or habitats at risk were described in the CDC database for Handsworth Secondary school or the nearby areas.

Listed species identified by the CDC within a 5km radius are summarized in Table 2. One buffer for a sensitive masked occurrence exists 500m to the west and does not require further investigation.

Table 2 – Red and Blue-listed Species with recorded locations within five kilometres of project site.

Common Name	Scientific Name	Provincial Status
Pacific Water Shrew	<i>Sorex bendirii</i>	Red
Green Heron	<i>Butorides virescens</i>	Blue

The site is located within a natural area that provides potential habitat for a number of species at risk (Table 3). The most valuable habitat for species at risk consists of the areas that are within close proximity of the creeks on site.

Table 3 – Red and Blue-listed wildlife species that have the potential to inhabit the project site.

Common Name	Species Name	Provincial Status/ (SARA Schedule)	Habitat
Pacific Water Shrew	<i>Sorex bendirii</i>	Red	Terrestrial (mixed forest)
Keen's Myotis	<i>Myotis keenii</i>	Blue	Terrestrial; riparian; anthropogenic
Townsend's Big-eared Bat	<i>Plecotus townsendii</i>	Blue	Terrestrial; anthropogenic
Southern Red-backed Vole	<i>Myodes gapperi occidentalis</i>	Red	Terrestrial (forest); riparian
Red-legged Frog	<i>Rana aurora</i>	Blue	Aquatic; riparian, terrestrial
Band-tailed Pigeon	<i>Columba fasciata</i>	Blue	Terrestrial (forest); riparian
Western Screech Owl	<i>Megascops kennicottii</i>	Blue	Terrestrial (forest)
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Blue	Terrestrial (forest); riparian; lacustrine
Long-tailed weasel, altifrontalis subspecies	<i>Mustela frenata altifrontalis</i>	Red	Terrestrial (forest); riparian; wetland; grassland
Barn Swallow	<i>Hirundo rustica</i>	Blue	Anthropogenic; terrestrial (forest); lacustrine; wetland

Protection of habitat for these species will be achieved on site by protecting and enhancing the existing natural area associated with Mackay Creek.

4.8 Invasive Species

The natural area below the top of bank is highly infested (20-50% cover) with invasive plant species. There are large areas covered with English ivy (*Hedera helix*). Other species are scattered throughout the forests. There are high concentrations near the pedestrian paths and creek crossing. In addition to ivy there is Cherry laurel (*Prunus laurocerasus*), Common periwinkle (*Vinca minor*), English holly (*Ilex aquifolium*), Himalayan blackberry (*Rubus armeniacus*), Yellow archangel/lamium (*Lamium galeobdolon*), Policeman's helmet (*Impatiens glandulifera*), Spurge laurel (*Daphne laureola*), Goutweed (*Aegopodium podagraria*), Japanese knotweed (*Fallopia japonica*), and Bamboo (*Bambusoideae*). Non-native plants not currently considered invasive include Herb Roberts (*Geranium robertianum*).



Spurge laurel



English ivy climbing trees



English Holly is starting to establish on site



Common Periwinkle.



English Ivy (left) and Cherry laurel (right)

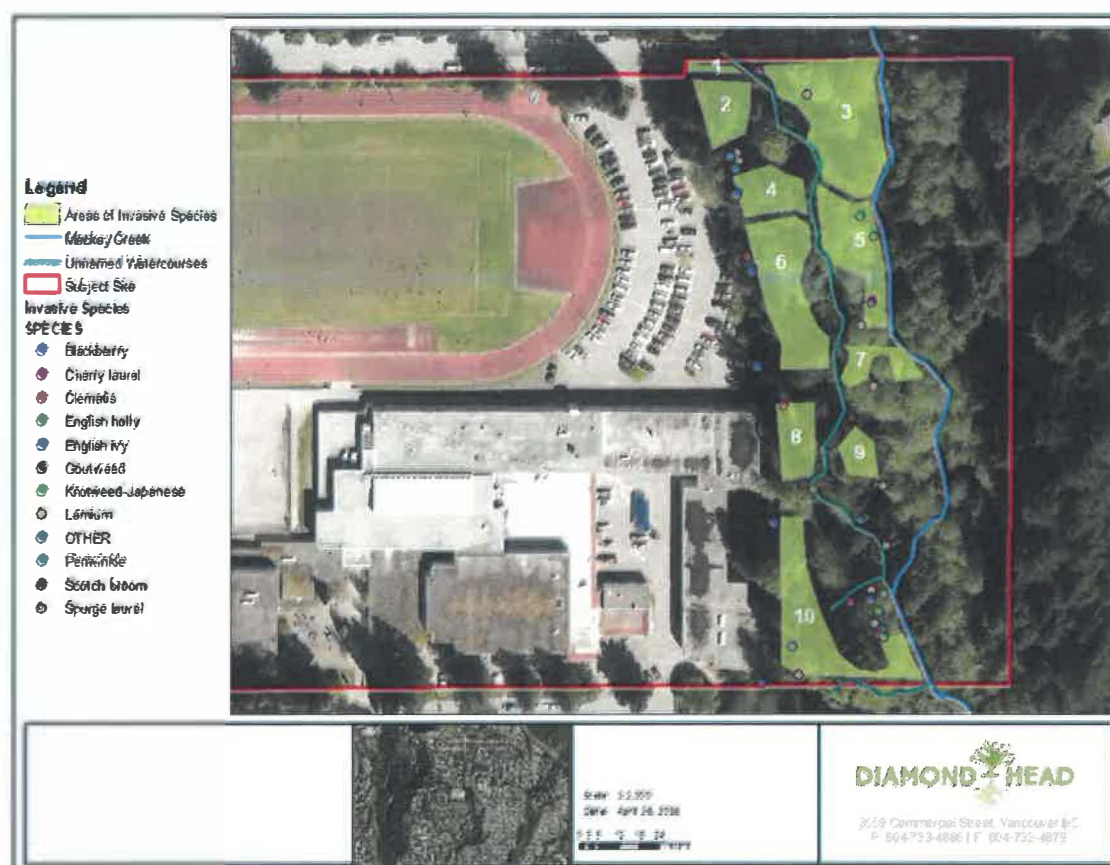


Figure 4: Invasive species located on site. Large areas with multiple species were grouped together in polygons, and are described in the following table.

Table 4 – Invasive species found on site, organized by location.

Polygon #	Species Present – % Site Coverage
1	Himalayan blackberry – 75-99%
2	Mostly Cherry laurel with some Spurge laurel, Common periwinkle, and Goutweed – 50-74%
3	Complex of Lamium, Goutweed, Common Periwinkle, English ivy, and scattered Cherry laurel – 75-99%
4	Cherry laurel – 35% English holly – 10% English ivy – 5%
5	Mostly English ivy with scattered Cherry laurel, English holly, and Goutweed – 50-74%
6	Mostly English ivy with Goutweed, English Holly, Cherry laurel – 25-49%
7	Mostly English ivy with some Goutweed – 50-74%
8	Mostly English ivy with scattered Cherry laurel, Himalayan Blackberry and one Spurge laurel – 75-99%
9	Japanese knotweed (12 m ²) – 50% cover
10	Mostly English ivy with scattered Cherry laurel and Common Periwinkle

5 Opportunities for Enhancement

The natural area at the east edge of the site and below the top of bank where the existing school facility is provides high value habitat for a diversity of species. The required setbacks for streamside protection requires that none of this natural area be disturbed. All development planning must ensure that the stability of slopes and trees are not compromised.

Streams and their riparian areas will be protected as per the District's DP requirements. No disturbance to trees is expected below the top of bank. There is a healthy diversity of important habitat features such as wildlife trees, woody debris, areas with dense shrub cover, water features and large diameter trees.

Invasive species are pervasive throughout the Mackay Creek ravine (Figure 4), including English Holly, cherry laurel, Himalayan blackberry, English Ivy, spurge laurel, common periwinkle, and goutweed. There are opportunities in this natural area on the east end of the site to manually remove these invasive species. Hardscape and invasive plant species in the 10m riparian setback area need to be removed in order to restore the function of this setback.

Mechanical removal is recommended for all seven species. Removal should also take place in a buffer zone of at least 3m below the top of bank to prevent re-colonization of any restored natural areas before native plant establishment can occur. Use of chemical treatment (herbicide) is not recommended for occurrences of these species due to the small scale and proximity to a watercourse.

The most common and cost-efficient method is manually removing the plants and the associated root structure. Above ground growth can be cut and root structures can be dug out using a shovel or other machinery. All removed plant materials should be properly disposed of in an appropriate green waste facility that accepts invasive vegetation. Care must be taken during transportation to ensure that no plant or root fragments are lost, as these can spread the plants to other areas. Follow up monitoring is strongly recommended for all removed species as regrowth can commonly occur if some plants or roots are missed in the initial treatment. Large plants such as mature cherry laurel or English holly may require additional effort to remove the root structure. If the root structure can not be completely removed, follow up monitoring and cutting will likely be required to control regrowth.

Since invasives are so pervasive, ecologically suitable native species will need to be replanted in order to prevent these invasive species from re-establishing on the site. Recommended tree and plant species communities that should be considered are provided in Tables 5-7.

Table 5 – Recommended plants for replanting below the toe of slope. Soil moisture is very wet and nutrients are rich.

Tree Layer	
<i>Alnus rubra</i>	Red Alder
<i>Populus trichocarpa</i>	Black Cottonwood
<i>Rhamnus purshiana</i>	Cascara
<i>Picea sitchensis</i>	Sitka Spruce
<i>Thuja plicata</i>	Western Red Cedar
Shrub Layer	
<i>Lonicera involucrata</i>	Black Twinberry
<i>Rubus spectabilis</i>	Salmonberry
<i>Crataegus douglasii</i>	Black hawthorn
<i>Ribes bracteosum</i>	Stink currant
<i>Cornus stolonifera</i>	Red-osier Dogwood
<i>Oplopanax horridus</i>	Devil's club
<i>Oemleria cerasiformis</i>	Indian Plum
<i>Sambucus racemosa</i>	Red elderberry
<i>Salix Sp</i>	Willow (Pacific, Scouler, Sitka)
<i>Spiraea douglasii</i>	Hardhack
<i>Physocarpus capitatus</i>	Pacific Ninebark

Table 6 – Recommended plants for replanting along the ravine banks. Soil moisture is fresh to moist and nutrients are rich.

Tree Layer	
<i>Pseudotsuga menziesii</i>	Douglas-Fir
<i>Acer macrophyllum</i>	Broadleaf Maple
<i>Rhamnus purshiana</i>	Cascara
<i>Thuja plicata</i>	Western Red Cedar
Shrub Layer	
<i>Acer circinatum</i>	Vine Maple
<i>Symphocarpus albus</i>	Snowberry
<i>Corylus cornuta</i>	Beaked Hazelnut
<i>Gaultheria shallon</i>	Salal
<i>Ribes sanguineum</i>	Red Flowering Currant
<i>Polystichum munitum</i>	Sword Fern
<i>Oemleria cerasiformis</i>	Indian Plum
<i>Amelanchier alnifolia</i>	Saskatoon
<i>Mahonia nervosa</i>	dull Oregon-grape
<i>Rosa gymnocarpa</i>	Baldhip Rose

Table 7 – Recommended plants for replanting above the ravine bank. Conifers are not recommended in order to comply with the wildfire report. Soil moisture is fresh to moist and nutrients are rich.

Tree Layer	
<i>Prunus emarginata</i>	Bitter Cherry
<i>Acer macrophyllum</i>	Broadleaf Maple
<i>Rhamnus purshiana</i>	Cascara
Shrub Layer	
<i>Acer circinatum</i>	Vine Maple
<i>Symphocarpos albus</i>	Snowberry
<i>Corylus cornuta</i>	Beaked Hazelnut
<i>Sambucus racemosa</i>	Red elderberry
<i>Ribes sanguineum</i>	Red Flowering Currant
<i>Polystichum munitum</i>	Sword Fern
<i>Oemleria cerasiformis</i>	Indian Plum
<i>Rosa gymnocarpa</i>	Baldhip Rose

When development begins, the streamside setback should be protected. All edge trees should be protected with fencing constructed at distances specified in the project arborist report. This includes the development of an erosion and sediment control and stormwater management plan. Hardscape features should be avoided in the SPEAs.

There are also numerous unauthorised trails that run through this area. A well used trail follows the right bank of Mackay creek. Efforts should be made to restore this trail and encourage users to follow existing authorised trails.

6 General Environmental Construction Specifications

The Contractor shall conduct all operations in a manner which minimizes disturbances to environmental resources, and which complies with the requirements of all authorities having jurisdiction, including federal and provincial legislation, regulations, permits, approvals, authorizations, and guidelines applicable to the Project. In undertaking the Work, the Contractor shall be responsible for the actions of its agents, employees, subcontractors and everyone else engaged by or through the Contractor. Accordingly, the Contractor shall undertake all reasonable actions to ensure that environmental protection measures are in place and working effectively throughout all areas affected by the Project.

In the event that an activity which contravenes these Environmental Construction Specifications occurs, the Owner may issue a Stop Work Order directing the immediate suspension of all or a portion of the activity(ies) causing the environmental impact and may order or at the Contractor's cost undertake remedial measures to be conducted as deemed necessary. The Contractor shall be solely responsible for all costs of all work stoppages and/or remedial works necessary, which result from the foregoing.

The Contractor shall notify the Owner in writing, immediately upon discovery, of the existence of any hazardous conditions, property, or equipment within or immediately adjacent to the Site. However, it shall be the Contractor's responsibility to take all necessary precautions against

injury to the environment and to persons or damage to property from such hazards until corrected by the responsible party.

The Contractor shall comply with all applicable law, including all federal and provincial legislation. In the event of a discrepancy between any of the clauses of these Environmental Construction Specifications and the provisions of any applicable law, including any legislation, regulations, or municipal bylaws, the more stringent provisions resulting in the higher protection of the environment, the lower discharges of contaminants and the higher degree of environmental protection and safety shall prevail.

Impacts from construction activities to the existing riparian habitat will be minimized through the use of best management practices (BMP) and guidelines, including those found in the following documents:

- *“Users’ Guide to working In and Around Water” 2005* - B.C. Ministry of Environment
http://www.env.gov.bc.ca/wsd/water_rights/cabinet/working_around_water_v5_2013.pdf
- *“Standards and Best Practices for Instream Works” 2004* - B.C. Ministry of Water, Land and Air Protection
<http://env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>
- *“Land Development Guidelines for the Protection of Aquatic Habitat” 1993* - Department of Fisheries and Oceans,
http://www.landfood.ubc.ca/sxd/9_resources/fed_files/fed_land_development_guidelines.pdf-search=%2211.%09Land%20Development%20Gui
- *Developing Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia*, 2014 - B.C. Ministry of Environment
<http://www.env.gov.bc.ca/wld/documents/bmp/devwithcare/>

These BMP will be implemented to avoid, limit or mitigate impacts to water quality and quantity, aquatic and riparian habitats. The following is a summary of BMPs to be implemented that will ensure that practices comply with legislation. These are not comprehensive, however a qualified environmental monitor will use adaptive management to monitor construction activities and implemented additional measures where necessary.

Mitigation measures recommended for this project to ensure minimal or no impacts to aquatic resources and no net loss of habitat include but are not limited to the following:

- Ensure equipment and machinery are in good operating condition (power washed), free of leaks, excess oil, and grease. No equipment refuelling or servicing should be undertaken within 30m of any watercourse or surface water drainage.
- All construction materials must be clean, non-eroding and non-toxic to aquatic life. Ensure that all works involving the use of concrete, cement, mortars, and other Portland cement or lime-containing construction materials will not deposit, directly or indirectly, sediments, debris, concrete, concrete fines, wash or contact water into or about any watercourse. Concrete materials cast in place must remain inside sealed formed structures.
- Any materials that inadvertently fall into the stream or the ocean must be removed immediately.

- Sediment control measures are to be put in place prior to any work activities and remain in place until work is complete and the site is stable.

6.1 Environmental Monitoring

It is recommended that a qualified Environmental Monitor inspect, oversee, and report on the project with respect to environmental legislation, regulatory approvals, and best management practices (BMPs). During Construction, the Environmental Monitor will have the primary responsibility to evaluate the effectiveness of the environmental mitigation measures to achieve compliance with the terms and conditions of all regulatory permits, approvals, and environmental legislation. Environmental monitoring reports will be completed to document construction activities, mitigation measures, problems encountered, if any, and how they were managed. Following construction, the Environmental Monitor will prepare and submit an environmental monitoring completion report.

The role of the Environmental Monitor will be to inspect, evaluate and report on the performance of the construction activities and effectiveness of environmental control methods and mitigation measures with respect to applicable legislation, permits and approvals, and BMPs.

The key responsibilities of the Environmental Monitor include:

- Liaison with regulatory agencies, and other key stakeholders;
- Holding a pre-construction meeting with the Contractor to review and discuss the project approvals and the required environmental BMPs;
- Providing technical assistance on environmental matters to construction personnel and regulatory agencies;
- Inspecting activities during construction to evaluate and report on compliance with terms and conditions of environmental approvals and permits;
- Providing recommendations for modifying and/or improving environmental mitigation measures, as necessary;
- Documenting construction activities by field notes and photographs;
- Suspending construction activities that are causing, or potentially causing, risk of environmental damage;
- Preparing factual environmental monitoring summary reports throughout the duration of construction, to summarize activities and actions taken to minimize potential effects during each of the construction activities;
- Monitoring levels of turbidity and/or total suspended solids (TSS) relative to criteria established in the *Land Development Guidelines for the Protection of Aquatic Habitat* (25 mg/L above background levels and 75 mg/L above background levels during storm events); and
- Monitoring levels of pH to relative to criteria established by the Canadian Council of Ministers of the Environment for the protection of aquatic habitat.

The Environmental Monitor will have the authority to suspend construction activities if, in their opinion, the Contractor's actions contravene, or potentially contravene, the recommended BMPs or applicable legislation, permits, and approvals.

Appendix A: Statement of Limitations

This document was prepared by Diamond Head Consulting Ltd. Should this report contain an error or omission then the liability, if any, of Diamond Head Consulting Ltd. should be limited to the fee received by Diamond Head Consulting Ltd. for the preparation of this document. Recommendations contained in this report reflect Diamond Head Consulting Ltd.'s judgment in light of information available at the time of study. The accuracy of information provided by Diamond Head Consulting Ltd. is not guaranteed. This report is valid for 6 months from the date of submission. Additional site visits and report revisions are required after this point to ensure accuracy of the report.

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BC PLANT HEALTH CARE INC.

ARBORIST REPORT

JOB NAME: North Vancouver School District 44 – 20171208-1

RE: Arborist Report for Development Purposes

SITE: Handsworth Secondary School
1044 Edgewood Road, North Vancouver

PREPARED FOR: North Vancouver School District 44 – Mark Thomson
Mark Thomson
2121 Lonsdale Avenue
North Vancouver, BC V7P 2K6
Phone: 778-772-0469
Email: mthomson@nv44.bc.ca

DATE: October 25th, 2018;
Revised November 19th, 2018,
Revised February 21st, 2019

PROJECT ARBORIST: Andrew C. MacLellan
ISA Certified Arborist #ON-1978A
ISA Tree Risk Assessment Qualification
Forestry Technician FTDipl

REVIEWED BY: Thomas Walz
ISA Board Certified Master Arborist #PN-5960BT
ISA Tree Risk Assessment Qualification
WUAA/HEBC Falling & Bucking Endorsement #98
TCIA Certified Treecare Safety Professional #866
BC C of Q Arborist Technician #00017-TA-10
BC C of Q Climbing Arborist #00007-TB-13
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1.0 Summary

This revision was initiated by Heather Pelz of *van der Zalm architects* on December 5th, 2018 requesting an updated tree preservation plan concerning a substation on the north west corner of the property. On December 14th, 2018, a document containing the *District of North Vancouver (DNV)* staff comments and public input regarding the detailed application to replace the existing school was received and distributed. An updated report responding to *DNV* staff comments and public input was requested by Georgia Fisher of *KMBR architects* on January 16th, 2019. A site meeting was conducted with Mark Thomson of *NVSD44*, Kate Lemon, Georgia Fisher, and Witmar Abele of *KMBR architects*, Heather Pelz of *van der Zalm architects*, and Bryson Caze of *Creus Engineering* on January 18th, 2019 to discuss the contents of the document. A series of action items was identified and presented to Robyn Hay, Development Planner with the *DNV*. Robyn Hay's response concerning these items was received on January 24th, 2019. On February 19th, 2019, the design team and Mark Thomson opted to retain the 2 giant sequoias (#216 and #217) on the north east of the property and distributed drawings co-ordinating the design team for their submission to the *DNV*. Items from these events that have been discussed in this report include:

- Retaining the trees associated with the removal of the retaining wall
- Referring to the arborist report detailing the heritage status to tree #837, Pacific Yew, and outlining a more robust preservation prescription
- Addressing new information regarding site grading
- The addition of the electrical substation
- The retention of trees #225 and #829
- Clarification of the health of the trees along the south, and additional information regarding drought related decline of *Thuja plicata*
- Discussion of observed conditions during the recent site visit
- Reference to the *I.S.A. TRAQ* assessment performed during the initial resource evaluation
- Clarification of the botanical name of 7 yellow cedar trees
- Clarification and discussion of the *I.S.A. BMP for Managing Trees During Construction*
- Detailed explanation of the difference between critical root zone (CRZ) calculations and CRZ diameter and their relationship to the *I.S.A. BMP for Managing Trees During Construction, ANSI A300 Part 5 – Management of Trees and Shrubs During Site Planning, Site Development, and Construction*, and the *BSI Standards Publication – Trees in relation to design, demolition and construction – Recommendations*
- Detailed prescriptions for tree protection during demolition
- Discussion of tree barriers
- Discussion of tree grates
- Discussions of tree soil volumes, silva cells, and similar
- Exploration of creative sidewalks retaining tree #845
- Exploration of a road bulge retaining tree #223
- Exploration of a narrow sidewalk retaining tree #123845
- Preservation of trees #216 and #217

[237] trees were inventoried, [13] of which were 'off-site': #2, #3, #4, #5, #6, #7, #8, #754, #791, #798, #799, #800, and #828. [38] trees are recommended for removal: #218, #219, #220, #221, #222, #224, #718, #721, #724, #725, #726, #727, #728, #729, #730, #731, #741, #742, #743, #744, #745, #746, #747, #748, #831, #832, #833, #834, #836, #840, #841, #842, #843, #844, #848, #850, #851, #853.

Based on varying site conditions, changes to the development plans, and changes to the health and condition of many trees now being preserved, pre-construction plant health care is recommended for [43] trees: #12845 - #12871, #223, #733 - #740, #824 - #830, #835, #837, #845 - #847. The prescription is as follows: deep root inject and aerate into the CRZs with slow release fertilizer, mycorise, moisture regulator and root conditioner to encourage plant health and pest resistance.

[16] trees conflict with the driveway. [7] are recommended for retention: #216, #217, #778, #825, #829, #830, #835. Arborist oversight will be required for activities near all of them. [3] trees will require robust root protection: #825, #829, #830. Geocell has been recommended to preserve CRZs. Canopy pruning may be required for tree #778 for the removal of the retaining wall and the installation of the water utility.

The new school will have 2m wide sidewalks installed on Handsworth and Edgewood Roads. This will impact [27] trees. [4] of these trees: #838, #839, #849, and #852 are recommended to be re-located. [17] are recommended for removal: #218, #219, #220, #221, #222, #742, #832, #833, #834, #836, #842, #843, #844, #848, #850, #851, and #853. Trees #223 and #845 will have significant CRZ conflicts. Geocell and pervious concrete have been recommended, as well as extended plant health care. The prescription is as follows: alleviate soil compaction through deep root injection with moisture regulator, slow release organic fertilizer with low nitrogen content, and microbial stimulant. Ensure solution and application rates are appropriate for soil type. Install 10cm composted bark mulch. Design options include road bulges and split sidewalks.

[8] trees are recommended for removal due to the proposed play field. #724 - #721. Most of these trees are containerized in planters and will not survive the removal of the planter nor suitable for re-location. [2] trees are recommended for re-location: #722 and #723.

Detailed demolition tree preservation prescriptions are included in this report. A 2 phase TPB has been recommended along with multiple construction related damage abatement opportunities. Please refer to section **5.4 Demolition Prescriptions**.

Water and storm utilities will be run on the west side of the project on either edge of the parking lot. Drainage ties into Edgewood Road near the impact buffer of heritage tree #837. Due to the political nature and the intolerance of Pacific yew trees to root pruning, this impact buffer shall not be violated during excavation. If possible, the drainage should be re-aligned to ensure minimal impact to tree #837's impact buffer. Discussions with KMBR and Creus resulted in the re-location of the storm water chamber system south of the play field to a location that does not impact the CRZs of any retained trees. This plan has not yet been reviewed. Water utility will impact [4] trees (#752, #778, #825, #830), but not to the extent that they will be impacted by driveway installation. Tree #732 will be impacted by the water main installation alone. Each tree with impacts has a Phase 1 TPB protecting the CRZ until which time roots can be properly pruned and structural stability can be assessed in-situ by the project arborist. Once potential impacts have been negated the TPB can be adjusted to the Phase 2 location. Arborist oversight is required for all activities near retained trees.

Currently, as far as has been communicated, cuts to the berm adjacent to the swale along the west side of the property will be reduced to achieve a more appropriate slope. These cuts will not impact retained trees other than the removal of a retaining wall near trees #777 - #779. It is unlikely there will be root habitat where the loc-block retaining wall currently sits, however, arborist oversight during this operation is prudent. In some instances, canopy conflicts may occur with the excavators. Pruning recommendations should be withheld until a pre-construction meeting to determine the size of equipment, magnitude of cut, and extent of pruning required. At the time of pruning this section of the project, clearance pruning for sign removal on the west corner shall occur as well.

The substation has since been re-located to the southeast of the island containing heritage tree #837. This raises some concerns, mainly the excavations for the electrical utility conductors and the substation itself. Most of the substation will be located where the existing Tartan track is located, however the TPB for tree #837, and by extension tree #835, is intended on being as oversized as possible to allow for maximum rooting habitat. It is imperative that the CRZ impact buffer for both these trees remain undisturbed during trenching for the substation. Should the substation sit in this proposed location, it is recommended that the screening be of taller plants which will eventually provide shade from the south for the Pacific yew.

Tree #837 is a 'Protected' tree. This tree has immense cultural value to the community and should be preserved. It is also a candidate for heritage tree status, however at this time it is unknown if a covenant has been signed constituting a legal realization of this status. A **Heritage Tree Arborist Report** has been performed by Guy Exley, DNV Community Forester on August 30th, 2012. This tree appears to have maintained its health since that assessment and may survive retention during the development process. These trees also have a dense fibrous root architecture which is not tolerant to disturbance. The sensitivity of these trees to abrupt site changes increases with age. Recognizing that this tree is mature (250 – 300 years of age), there are several intricacies regarding the preservation of this tree:

- The retention of tree #835 – a 133cm western red cedar in fair condition. This tree provides the shade necessary for the health of tree #837. By virtue of this, it must be afforded the same protections awarded to #837.
- The CRZ of this tree will be defined as DBHx6 plus 1.5m (the CRZ Impact Buffer). This roughly amounts to a CRZ calculation of DBHx8.
- Trees #835 and #837 must be prepared for potential impacts through extended plant health care action prior to the commencement of the development. Please refer to the **Detailed Spreadsheet** for recommendations.
- An oversized TPB of construction fencing is recommended to reduce any canopy conflict or stockpiling of refuse typical of TPBs along roadways. This construction fencing is to display orange snow fencing typical of TPBs in the DNV. This tree protection barrier is to be offset 30cm from the proposed driveway and sidewalk. Refer to the **Tree Preservation Plan** for detailed location. A Phase 1 TPB has been recommended for the area between tree #837 and the existing sidewalk.
- Other than the disturbance from the removal of the existing sidewalk and the Tartan Track, there shall be no intrusion of the Impact Buffer. Arborist oversight is required during these activities. Trenching for storm pipes should remain outside the prescribed TPB.

- A 25cm layer of mulch is to be applied to the entirety of the area within the TPB as soon as hardscape is lifted to protect any roots, nourish the trees, and regulate soil moisture and temperature.
- These trees require watering during the growing season. Specifications to be discussed with the prime contractor, project manager, and DNV.

[8] trees: #716 - #723, #838, #839, #849, #852 are recommended for re-location. Optimal timing for re-location is during the dormant season, when trees are least susceptible to stress. Trees recommended to be re-located will require root pruning prior to excavation and relocation to allow a root ball diameter of 10cm per cm of caliper, as per the *I.S.A. Best Management Practices for Tree Planting*. These trees should be re-located prior to the demolition of the building.

Since several of the trees are directly adjacent to the development area, the project arborist may determine that a tree may become de-stabilized or rapidly decline and die due to development impacts and recommend removal. Trees expected to require such assertions include but are not limited to: #778, #822, #825, #835, #837, #846, #12845, #12846, and #12847. Arborist oversight is recommended for development activities near these trees.

Applying an even layer of mulch over as much of the CRZ as practical for retained trees will conserve soil moisture, control weeds, buffer soil temperatures, fertilize and replenish organic matter. Mulch also helps prevent soil erosion and surface crusting. Composted cedar or fir bark mulch is recommended. Do not pile mulch against the trunk of the tree. Deep root fertilization with soil conditioner is intended to amend the soil and provide trees with the necessary nutrients for creating chemical and physical barriers against decay, as well as to create new wood fiber to replace or repair damaged or removed parts. Trees that are recommended to receive extended plant health care action include: #732, #835, #837, #846, #847, and #12863.

TPBs are to be constructed and maintained before construction commences as per *Bylaw 7671*. TPBs have a 2 phased approach in some instances to ensure protection of CRZs.

General Construction Guidelines are to be followed as outlined in this report.

Securities will be required at the discretion of the DNV.

Wildfire Hazard DP Area Assessment Report

Handsworth Secondary School
North Vancouver, BC

May 5, 2018
Updated January 22, 2019



Submitted to:

Mark Thomson
North Vancouver School District
mthomson@sd44.ca
604-903-3462



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1.0 Introduction

Diamond Head Consulting Ltd. (DHC) was retained to prepare an assessment of wildfire interface risks and mitigation measures for the proposed redevelopment of Handsworth secondary school (Figure 1).

Civic address:	1044 EDGEWOOD RD, District of North Vancouver
Legal Address:	LOT A Blocks 8 to 10, District Lot 596 Plan 15603; PID 007-645-961
Client name:	North Vancouver School District
Date of site visit:	March 23, 2018

This project includes one lot located within the District of North (DNV) Vancouver Wildfire Hazard Development Permit Area. The overall objective of this report is to assess the potential wildfire threat and provide recommendations and tools to reduce this threat to the development site. This detailed assessment report is meant to be submitted as a part of the Wildfire Development Permit application. It must be prepared and signed by a qualified professional and recommend whether a more detailed assessment is required. Specific goals for this assessment are:

- To assess interface fuels, determine the extent, location and presence of wildfire hazard;
- To recommend site-specific fuel treatments for adjacent high fuel hazards that will reduce the risk to structures, human lives, and critical natural features;
- To make recommendations for improving suppression capabilities in and around the proposed development, and;
- To make recommendations for access, building and landscape materials that will minimize wildfire threat.

1.1 Site Planning Documents Reviewed

Diamond Head Consulting was provided with the following documentation from the client that provides the basis for all comments and recommendations:

1. Arborist Report – Handsworth Secondary School, 1044 Edgewood Road, North Vancouver BC – Andrew MacLellan, BC Plant Health Care
2. Topographic Survey – Handsworth Secondary School, 1044 Edgewood Road, North Vancouver BC – Underhill Geomatics Ltd.
3. Site Plan – Handsworth Secondary School, 1044 Edgewood Road, North Vancouver, BC – KMBR Architects Planners Inc.
4. Landscape Drawings – Handsworth Secondary School, 1044 Edgewood Road, North Vancouver, BC – VDZ + A

Any changes to this report or survey should be provided to Diamond Head Consulting so that this wildfire report can be updated accordingly.

1.2 Policy Considerations for Wildfire Threat Mitigation

The Districts Wildfire Hazard Report Master Requirement SPE 115 was developed based on the recommendations of the Community Wildfire Protection Plan. The guidelines were developed with the intent of using precautionary measures to protect property in areas that are at risk from potential wildfire. Standards to achieve these objectives are identified, and reference NFPA-1144 (Standard for Reducing Structure Ignition Hazards from Wildland Fire). In some cases, these standards can be difficult to achieve for developments, and can result in more stringent restrictions than intended.

This assessment report considers both NFPA standards and Canadian FireSmart standards to assess hazard and guide recommendations for the design and construction of buildings and structures located within the boundaries of the Wildfire Development Permit Area (Figure 2).



Figure 1. Location of the subject site - Handsworth Secondary School in the District of North Vancouver.



Figure 2. Development Permit Areas (Wildfire) as defined by the District of North Vancouver.

2.0 Methodology

This project falls within the DNV Wildfire Hazard Development Permit Wildfire Risk and Interface Areas. One nearby stand of trees to the east of the site was identified as a potential risk in the Community Wildfire Protection Plan (CWPP, 2007). This stand was classified into fuel types. There are no fuel classifications specific to the coastal region in the Canadian Fire Behaviour Prediction System; instead, the site has been classified as the fuel type that best represents the fire behavior potential of the forest types most accurately. Fuel type interpretations can be reviewed in Appendix 2. Figure 4 is an aerial image with the fuel types located in relation to the project site.

Detailed fuel hazard assessments were completed within 500m of the lot using the provincial assessment system, “Rating Interface Wildfire Threats in BC” (Morrow, Johnson, Davies, 2008). These plots are shown on Figure 8. Data collected at each fuel plot included:

- Soil and humus characteristics;
- Slope, aspect and terrain classification;
- Forest stand composition by layer (species, density, age, diameter, height, etc.);
- Vertical and horizontal stand structure;
- Quantity and distribution of ladder fuels;
- Composition and coverage of understory brush, herbs and grasses; and
- Quantity and distribution of ground fuels by size class.

A Wildfire Hazard Assessment has been completed using:

1. Current forest fuel threat in and adjacent to the proposed development using the [2016 Wildfire Threat Assessment Guide and Worksheets](#) (MFLNRO, 2016); and,
2. Future structural hazard of the proposed development using the [FireSmart Homeowners Manual](#) (Partners in Protection and Province of BC, 2016).

3.0 Project Overview

This property (1044 Edgewood Road) is developed as a high school with a total area of approximately 5.6 hectares. The current high school occupies approximately 30% of the total lot area, with the remainder occupied by sports fields and parking lots. The vegetation on the site is comprised of manicured sports fields with short grass, and perimeter conifer trees along the south, west, and north property lines. The eastern portion of the subject site is occupied by greenspace that continues south and is connected with the Mackay Creek greenspace. This area is occupied by a mature native forest stand, which slopes steeply down to Mackay Creek itself.

A new high school will be built on site. It will be located in the north half of the property where the current sports field exists. The existing high school building will remain until the new building is completed. Figure 3 illustrates the new plans for the site as well as the outline of the existing school. A 12m setback will be remain undeveloped above the top of bank of the Mackay creek riparian area.

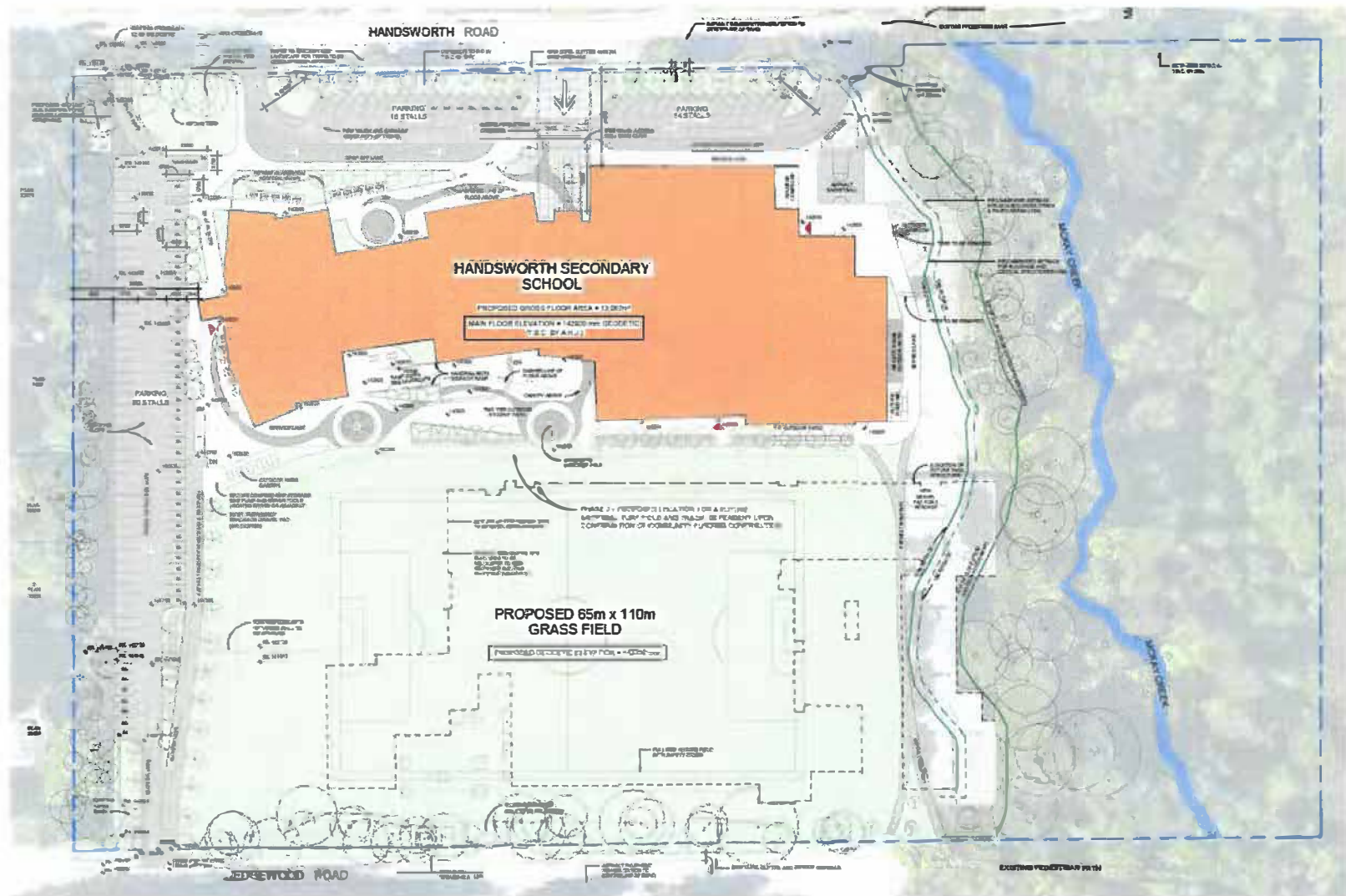


Figure 3. Site plan - by KMBR Architects Planners Inc.

Forested areas nearby the proposed development site were classified into the fuel types mapped in Figure 4. The fuels have been divided into classifications based on the sixteen national benchmark fuel types that are used by the Canadian Fire Behavior Prediction System (Appendix 3). Two fuel types were identified (C5 and M2). Detailed descriptions of these forest areas are provided in Appendix 2.



4.2 Summary of Wildfire Threat from surrounding forest

Each fuel type and distinct stand was assessed for wildfire threat using the Wildfire Urban Interface worksheet. Figure 5 outlines the wildfire threat and plot locations. The Wildfire Urban Interface (WUI) ratings and plot characteristics are summarized in Appendix 1. This assessment accounts for the fire behavior potential of these stands but does not consider plans for the future structure. The subject site in its current state has an overall moderate wildfire risk. This is largely driven by the adjacent forest in Upper Mackay Creek park, which has a conifer component directly adjacent to the site on a steep slope. This conifer forest transitions to a mixed deciduous and coniferous forest downslope and to the south.

The forest growing adjacent to the new building is on a steep slope and includes conifers with variable base crown heights, understory ladder fuels, and fine and large fuels on the ground. The proximity of these fuels to the school increases the vulnerability of this structure to wildfire. This vulnerability is also increased by the line of conifer trees along the north and south perimeter.

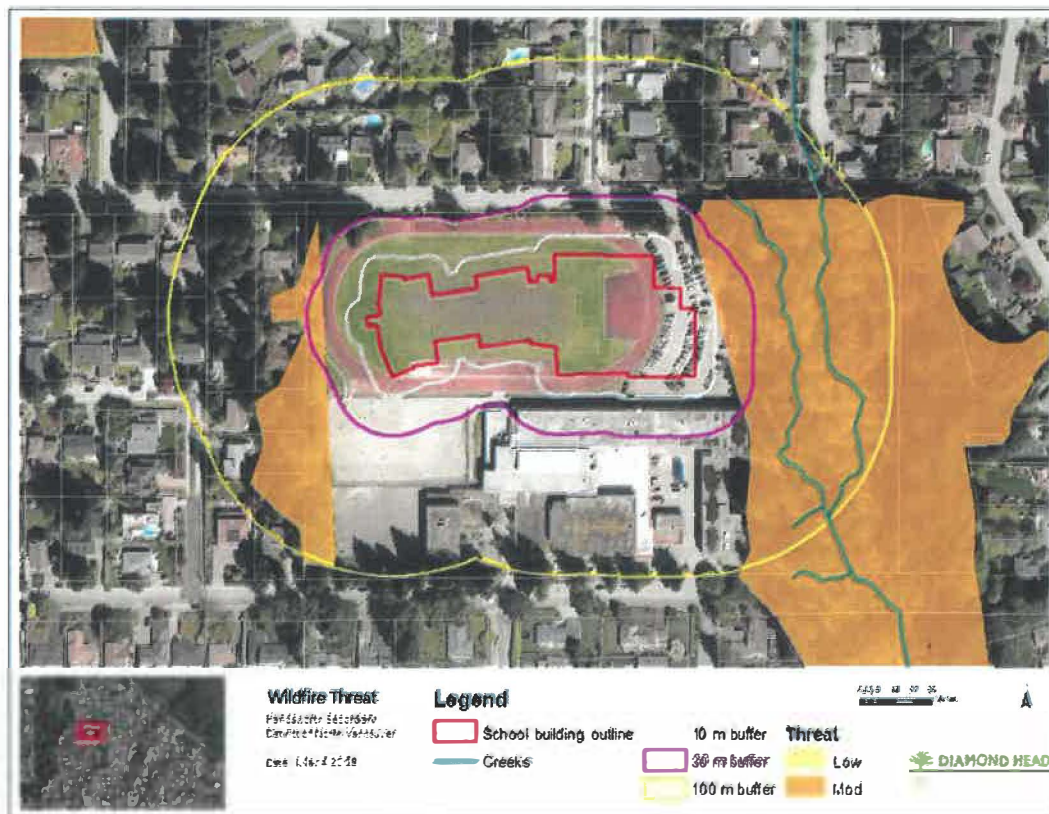


Figure 5. Wildfire threat mapping



Photo 1: View of existing school. Photo facing east at building. Adjacent fuels are visible behind.



Photo 2: There are currently numerous conifers within 10 meters of the existing structure.



Photo 3: The proposed new school will be located where this current sports field and track are. Photo from same vantage as Photo 1.

5.0 Wildfire Threat Mitigation Recommendations

The following are recommendations to mitigate risk to the development. Community and design recommendations focus on siting of structures, construction materials, access, water sources and utilities. These are factors that provide long term mitigation against a wildfire event. Vegetation fuels on and adjacent to the development will change over time and require maintenance. Recommendations are made for on-site landscaping as well as treatments and required maintenance for forest areas adjacent to the property.

At the time this assessment was completed, detailed architectural structural plans showing roofing and exterior siding were not available for review. It is the responsibility of the owner and their project team to understand the following restrictions and to comply with them.

5.1 Buildings setback from hazardous fuels

FireSmart recommends that a 10m fuel free zone be established and maintained between structures and hazardous fuels. The proposed location of the new school is located with a suitable fuel free buffer from the forested edge of the Mackay Creek riparian area. This setback includes a 12m setback for geotechnical considerations. There is also an additional 7-15 fuel free zone which includes a service lane, basketball court and landscapes area. This provides a suitable fuel free zone for wildfire mitigation.

5.2 Buildings and Construction

Generally, during a wildfire, homes are ignited as a result of embers landing and accumulating on vulnerable surfaces such as roofs, verandas, eaves and openings. Embers can also land on or in nearby flammable materials such as bushes, trees or woodpiles and, if the resulting fire is near the home, it could create enough radiant heat to ignite the walls of the home. Small fires in the yard can also spread towards the structures, beneath porches or under homes. Therefore, the building material and construction techniques are a paramount concern for homes in the interface.

Construction standards and requirements for roofs, chimneys, balconies, decks and porches apply to all new houses that are built within the wildfire DP area. These are outlined in Schedule B of the District of North Vancouver's Official Community Plan, which can be found at the District website (www.dnv.org/sites/default/files/edocs/wildfire-hazard-DPA-details-schedule-B-OCF.pdf). The DNV building standards along with additional recommendations are summarized in Table 1.

Table 1. Requirements for community design and construction

Feature	Requirements for building materials
Roofing	<ul style="list-style-type: none"> Class A or B rated roofing material* should be used, and asphalt or metal roofing should be given preference. Any spaces between roof decking and covering should be blocked. Screen or enclose rain gutters to prevent accumulation of plant debris.
Siding	<ul style="list-style-type: none"> Exterior vertical walls should be sheathed with non-combustible materials*. Preference should be given to stucco, metal, brick and concrete cladding. Ensure that fire resistant materials extend from the foundation to the roof.
Vents, openings, eaves, attics, overhanging projections, soffits	<ul style="list-style-type: none"> Vents should be screened using 3mm, non-combustible wire mesh, and vent assemblies should use fire shutters or baffles. Eaves, soffits, attics, overhanging projections and underfloor openings should be protected with non-combustible covers.
Exterior windows and doors	<ul style="list-style-type: none"> All windows should be multi-paned, or of glass block. Radiant faces exposed to the forest edge should be multi-paned with one pane glazed with annealed or tempered insulating glass. Limit the size and number of windows that face large areas of vegetation. Window screens should be non-combustible. Exterior doors on radiant faces exposed to the forest edge should be of fire resistant materials.
Decks, porches, balconies	<ul style="list-style-type: none"> Decks, porches and balconies should be sheathed with fire-resistant or non-combustible materials. Slotted deck surface allows needle litter to accumulate beneath the deck. Provide access to this space to allow for removal of this debris. Any covers should be built of the same ignition-resistant materials as a roof.
Exterior sprinklers	<ul style="list-style-type: none"> While exterior wall or roof sprinklers were considered, they are not presently recommended because of the lack of accepted standards for design and installation, and the uncertainty regarding maintenance and triggering of sprinklers during a wildfire event when homes are evacuated. Irrigation sprinklers should be installed on private property and in landscaped parks to keep plants healthy and fire-resistant. The switch for these should be made accessible to turn on in the case of a wildfire.
Fences	<ul style="list-style-type: none"> Where fencing is within 10 m of the building or accessory buildings, use fire-resistant or non-combustible materials.

Feature	Recommendations during construction
Combustible materials	<ul style="list-style-type: none"> During construction of houses, all waste construction materials including brush and land clearing debris; needs to be cleaned up on a regular basis, to minimize the potential risk. No combustible materials should be left at the completion of construction.
Hydrants	<ul style="list-style-type: none"> Prior to construction of any wood frame buildings, there must be fire hydrants within <u>operating range</u>.
Fire Suppression	<ul style="list-style-type: none"> The contractor should be familiar with the BC Wildfire Act and the current provincial standards for wildfire suppression and have the appropriate tools on-site for the duration of the project.

* **Non-combustible materials:** means that a material meets the acceptance criteria of CAN/ULC S114, (Standard Method of test for determination of non-combustibility in Building Materials)

Fire-resistant materials: means that a material meets the acceptance criteria of CAN/ULC-S101, (Fire Endurance Tests of Building Construction and Materials)

Rated roofing materials: Class A, B or C is a measure of the external spread of flame on a roof surface. Tests are conducted using CAN/ULC S107M methods of fire tests of roof coverings, or equivalent. The best rating achieved is Class A, which may be described as effective against severe fire exposure.

The following specification are very important to comply with. Roofing must be fire retardant. These have a Class A flame spread rating defined as "Class A roof coverings are not readily flammable, are effective against severe fire exposures, and do not carry or communicate (i.e., spread) fire". ANSI/UL 790, "Tests for Fire Re-sistance of Roof Covering Materials," and ASTM E 108, "Standard Test Methods for Fire Tests of Roof Coverings," are the fire-resistance capacity tests used to determine a product's or roof assembly's classification. Any products that are certificated as Class A with an "Assembly" requirement must have a project engineer or architect provide signed proof that the product has been installed as per the specifications of the manufacturer.

Exterior siding must be fire resistant. (Stucco, brick, fibre cement boards/panels and poured concrete). Untreated wood products do not meet this standard. Flame resistant coatings that require ongoing maintenance or reapplication are not acceptable. Exterior wall assemblies that have exterior wood that is untreated and rely on the interior wall for fire resistance are not acceptable. Wood products that have permanent treatments or are naturally fire resistant can be accepted as long as product specifications and certified testing is provided.

It is critical that the structure be designed and built to these standards. The District will require that the final structure be inspected to confirm it is compliant and in order to obtain permit for occupancy and bonding.

5.3 Firesmart Landscaping and Fuel Mitigation

Landscaping and maintenance for the site should follow FireSmart principals (Ministry of Forests Wildfire Management Branch, Firesmart Program. Planning and maintenance of this area should follow the requirements of priority zone 1 (<10m from structures) outlines in the Firesmart program. The goal in this zone is to remove hazardous fuels and convert vegetation to fire resistance species to produce an environment that does not support combustion. These recommendations include strategic selection of fire resistant replacement trees as well as landscaping and maintenance standards are summarised in Table 2.

Diamond Head Consulting is working with the School District to develop a restoration planting area that will be within 10m above the top of bank. No conifer trees or species that are highly flammable will be planned in this area.

Table 2. Requirements for Landscaping

Feature	Recommendations
Planting	<ul style="list-style-type: none"> Remove all highly flammable vegetation and other combustibles from around the building. This includes all conifer hedging. No conifer trees species should be planted within 10m of any buildings. Landscaping should incorporate species that are fire resistant. These types of plants tend to have moist, supple leaves with low amounts of sap or resin. They also have a tendency not to accumulate dead material. A list of fire resistant plants and trees can be found at the Firesmart Canada website¹. A list of suitable species has also be provided in Appendix 6. Ensure that vegetation will not grow to touch or overhang buildings. Irrigation sprinklers should be installed in landscaping.
Maintenance	<ul style="list-style-type: none"> Annual grasses within 10 meters of buildings should be kept mowed to 10 centimeters or less and watered regularly during the summer months; Ground litter and downed trees should be removed regularly and prior to the fire season.

5.4 Recommendations for Onsite and Neighboring Trees

Trees within the Mackay creek riparian zone will be retained. There is a wide enough fuel free zone between these trees and the school that no further mitigation is required. There will also be rows of existing trees retained along the north and west sides of the school. These trees will be separated from the new building by a parking lot and require no further mitigation.

5.5 Ongoing Maintenance

To ensure that FireSmart standards are maintained on the property, periodic re-treatment or maintenance is recommended in Table 3.

Table 3. Requirements for ongoing maintenance

Owner	Recommendation
School's responsibility	<ul style="list-style-type: none"> Regularly remove debris from roofs, gutters and beneath overhanging projections. Grass and landscaping should be kept mowed to 10 cm or less and watered regularly during the summer months. Landscape sprinkler systems should be installed and maintained by the homeowner. Remove any local accumulations of woody or combustible material (e.g., no woodpile or yard waste accumulations). Remove any over mature, dead or dying shrubs and trees. Plant only fire resistant trees and shrubs. A list of fire resistant plants and trees can be found at the fire smart canada website (https://www.firesmartcanada.ca/images/uploads/resources/FireSmart-Guide-to-Lanscaping.pdf).

6.0 Future Condition FireSmart Structure and Hazard Assessment

The form below provides an assessment of the proposed development using the FireSmart Structure and Hazard Assessment form. Assessment ratings are made assuming that the recommendations outlined in this report are adhered to. This assumes all exterior walls and roofing are made of fire resistant materials and all landscaping within 10m of the building consists of fire resistant species. This form can be revised once detailed architectural plans are complete.

Table 4. FireSmart Structure and Hazard Assessment

ZONE 1			
HOME/10 m	Criteria	Rating Options	RATING
What type of roofing material do you have?	Metal, clay tile, asphalt shingle or ULC rated shakes (may be affected by the condition of your roof)	0	0
	Unrated Wood Shakes	30	
How clean is your roof?	No needles, leaves or other combustible materials	0	0
	A scattering of needles and leaves	2	
	Clogged gutters and extensive leaves	3	
What is the exterior of your home built of?	Non-combustible material, stucco, metal siding or brick	0	0
	Logs of heavy timbers	1	
	Wood, vinyl siding or wood shakes	6	
	Tempered glass in all doors/windows	0	
How fire-resistant are your windows and doors?	Double-pane glass - small/medium (smaller than 1 metre x 1 metre)	1	2
	Double-pane glass - large (greater than 1 metre x 1 metre)	2	
	Single-pane glass - small/medium (smaller than 1 metre x 1 metre)	2	
	Single-pane glass - large (greater than 1 metre x 1 metre)	4	
	Closed eaves, vents screened with 3-millimetre wire mesh	0	
Are your eaves closed up and your vents screened?	Closed eaves, vents without mesh	1	0
	Open eaves, vents not screened	6	
Have you sheathed-in the underside of your balcony, deck, porch or open foundation?	Sheathed with fire-resistant materials	0	0
	Sheathed with combustible materials	2	
	Not sheathed	6	
Is your home set back from the edge of a slope?	Building is located on the bottom or lower portion of a hill	0	6
	Building is located on the mid to upper portion of a hill or the crest of a hill	6	
ZONE 1 HOME SCORE			8

ZONE 1			
YARD/within 10 m	Criteria	Rating Options	RATING
Where are your outbuildings (or adjacent buildings) located	More than 10 metres from home	0	0
	Less than 10 metres from home	6	
Where is your woodpile located?	More than 10 metres from any building	0	0
	Less than 10 metres away from any building	6	
What type of forest* grows within 10 metres of your home?	Deciduous trees	0	0
	Mixed wood trees (deciduous and conifer)	30	
	Conifer trees	30	
What kind of surface vegetation and combustible materials are within 10 metres of your home and outbuildings?	Well-drained lawn or non-combustible landscaping material	0	0
	Uncut grass or shrubs	30	
	Twigs, branches and tree needles on the ground	30	
ZONE 1 YARD SCORE			0

*a forest is considered a continuous intact treed area

ZONE 2			
YARD/10 – 30 m	Criteria	Rating Options	RATING
What type of forest surrounds your home?	Deciduous trees	0	10
	Mixed wood trees (deciduous and conifer)	10	
	Conifer trees separated	10	
	Conifer trees continuous	30	
What kind of surface vegetation grows within 10-30 metres of your home and around your buildings?	Well-drained lawn or non-combustible landscaping material	0	0
	Uncut grass or shrubs	5	
	Scattered twigs, branches and tree needles on the ground	5	
	Abundant twigs, branches and tree needles on the ground	30	
Are there shrubs and low branches (within 2 metres of the ground) in the surrounding forest?	None within 10-30 metres	0	0
	Scattered within 10-30 metres of buildings	5	
	Abundant within 10-30 metres of buildings	30	
ZONE 2 YARD SCORE			10

TOTAL SCORE			Rating
ZONE 1/ Home and Yard	Home	10 metres from home	8
			0
ZONE 2 / Yard		10 – 30 metres from home	10
TOTAL			18

HAZARD SCORE: Low: <21 Moderate: 21-29 High: 30 – 35 Extreme: >35

Following the recommendations in this report will achieve a FireSmart hazard score of LOW

7.0 Final Remarks

The District of North Vancouver requires that the proposed development is consistent with the Wildfire Development Permit Guidelines. Planners, engineers, and landscape architects should refer to this report and the FireSmart manual during the design phase of this development. All construction operations should be conducted according to the Wildfire Act and the regulations. Following these regulations will help reduce liability and protect the development.

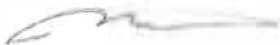
The District will require that an inspection be done following construction to ensure that the structure and landscaping meet these requirements.

If the recommendations made within this report and the requirements outlined by the District of North Vancouver are complied with, wildfire risk to life and property will be substantially mitigated and the development will meet FireSmart standards to a reasonable extent within the limitations of zoning and ownership.

If there are any questions or concerns as to the contents of this report, please contact us at any time.

Sincerely,

Supervisor:



Mike Coulthard, R.P.Bio., R.P.F.
Senior Forester, Biologist
Certified Tree Risk Assessor (46)

Project Staff:



Conor Corbett MSFM
ISA Certified Arborist (PN-8429A)
ISA Tree Risk Assessment Qualified (TRAQ)
Forester in Training



November 27, 2018

Reference: VAN-00241165-A1

School District No. 44 (North Vancouver)
2121 Lonsdale Avenue
North Vancouver, BC V7M 2K6

via email: mthomson@sd44.ca

Attention: Mark Thomson, Capital Project Manager

Re: **Geotechnical Slope Hazard Assessment Report
Handsworth Secondary School Replacement Project
East-Facing Slope on 1044 Edgewood Road, North Vancouver, BC**

Dear Mr. Thomson:

1.0 INTRODUCTION

As requested, EXP Services Inc. ("EXP") has carried out a detailed slope hazard assessment related to the above-referenced site. The objective of this assessment was to comment on the current condition of the existing slope located east of the school and recommend slope setbacks and development guidelines to minimize adverse impacts to the subject slope.

This letter report ("report") summarizes the site's subsurface conditions based on our in-house records, EXP's observations and assessment of the current slope's condition based on the site reconnaissance completed on October 22, 2018, and geotechnical recommendations for the above-noted project.

This detailed slope hazard assessment has been completed in accordance with widely-accepted standards and geotechnical engineering principles and practices for similar projects in this region. It should be noted that the assessment of environmental aspects of the site or chemical assessment of soil and groundwater are beyond the scope of this report.

Authorization to proceed with the work was provided by the School District No. 44 ("SD No. 44"). The scope of service rendered in the preparation of this report generally conforms to EXP's proposal dated October 9, 2018 (Ref. No. 999-00062224-PP).

Review and use of this report should be completed in accordance with the attached "*Interpretation & Use of Study and Report*" document. This document outlines the intended use and interpretation of this report. It is included as an integral part of this report and should be read in conjunction with all parts of this report.

2.0 SOURCE OF INFORMATION

The following sources of information were reviewed during the development of this report:

- Published Surficial Geology Maps of the area;
- Diamond Head Consulting Ltd. "*Streamside Protection DPA Assessment*" report dated April 24, 2018;

- EXP's geotechnical assessment report dated March 15, 2018 (File No. VAN-00241165-A0);
- Westrek Geotechnical Services Ltd.'s "*Mackay Creek Virginia Crescent & Sunnycrest Drive Landslide Assessment*" report dated February 8, 2018.
- KMBR Architect Planner Inc.'s "*Development Permit Pre-Application*" drawings of the proposed development dated October 4, 2018;
- EXP's site reconnaissance completed on October 22, 2018;
- Underhill Geomatics Ltd.'s topographic survey dated October 23, 2018;
- Contour data available from the district of North Vancouver's website; and,
- The District of North Vancouver ("DNV") Official Community Plan (Schedule B, part 4) dated July 23, 2018.

3.0 SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The school is located at 1044 Edgewood Road, North Vancouver, BC. The site is bounded by Handsworth Road to the north, Mackay Creek to the east, Edgewood Road to the south, and 1- to 2-storey single-family homes to the west. The northern half of the site is currently occupied by a sports field, a running track and a paved parking lot. The southwest quadrant of the site is occupied by a playground and three tennis courts, while the southeast portion is occupied by the existing school building.

Based on a review of the available topographic data, a relatively steep slope is present at the east portion of the site with slope crest bordering the east edge of the existing school (see Figure 1). The height of this slope varied from approximately 10m to 12m with an average gradient ranging of about 1.6 to 1.8H:1V (Horizontal:Vertical) with localized steeper gradient of up to 1H:1V. Six profiles through this slope were prepared and are presented in the attached Figures 3 to 5. According to the District of North Vancouver ("DNV") GEOWeb, this section of the slope is classified as *Slope Hazard Development Permit Area ("DPA")*.

Based on the design drawings provided by KMBR Architects Planners Inc. dated October 4, 2018, it is understood that the proposed new school development will consist of a sports field, an auxiliary building and a school building with no underground level. The finished site grades will generally match the existing site grades. The proposed school building would be located at the existing sports field (i.e., north portion of the site) and could be divided into two sections: a classroom section and a gymnasium section. The classroom section (i.e., west section) of the proposed building is 3-storeys high and the gymnasium section of the proposed building is about 9.4m in height (1-storey high). The proposed sports field and running track area would be located south of the proposed building which is currently occupied by the existing school building. A site plan showing the proposed development is attached as Figure 2.

4.0 SITE RECONNAISSANCE

At the time of the site reconnaissance on October 28, 2018, the slope was generally vegetated with bushes, shrubs and second growth trees. The observed second growth trees generally consisted of Douglas-firs, western red cedar, red alder, western hemlock and black cottonwood. Fallen trees and "pistol butts" (tree-trunk bases that have thickened and curved to the shape of an old pistol) were also noticed along the subject slope indicative of shallow translational slope movements. Old growth stumps were mainly observed along the base of the subject slope indicating the unlikelihood of large deep-seated slope movements.

Five (5) possible head scarps were noticed along the subject slope. Three (3) of the suspected head scarps were mainly located around the crest of the slope. These scarps generally appeared to be wide and shallow supporting the indication of shallow translational slope movements. It is worth noting that the most significant potential head scarp was located east of the existing school building with a portion of which appeared to have been undermined due to previous slope movement, see Figure 1.

During the site reconnaissance, seepage zones were also encountered. These zones were observed to extend mainly to about 1m to 3m above the toe of the slope. Vegetation indicating continuous wet area were also noticed at the base of the slope portion located adjacent to the existing school.

Outfall structures and a metal pipe were also noticed; however, no waterflow was observed at the time of our review. Approximate locations and extent of observed features are shown in Figure 1 and select photos of these features are included in Appendix A.

5.0 GROUND SUBSURFACE CONDITIONS

Interpretation of the subsurface soil and groundwater conditions around the subject slope is based on available published surficial geology maps, EXP's relevant and nearby experience, and select soils logs obtained from EXP's geotechnical assessment report dated March 15, 2018 (File No. VAN-00241165-A0). A copy of these soil logs (AH17-01, -06, AH18-07 to -09, and AH18-16) are included in Appendix B and the approximate locations of these test holes are shown in Figure 1.

A review of the published Geological Survey of Canada Surficial Geology Map (Map 1486A) indicates the subject property is underlain with Capilano Sediments consisting of raised deltaic and channel fill medium sand to cobble gravel up to 15m thick underlain by silty to silty clay loam.

Based on our review of the available subsurface information, a generalized stratigraphy around the slope area can be described as shown in Table 1 below.

Table 1: Summary of Soil Stratigraphy

Soil Unit	Thickness	Depth to Top of Unit	Description
A	0.5m to 1.5m	Surface	<u>VARIABLE FILL</u> This unit is variable in nature and generally ranged from: <ul style="list-style-type: none"> - loose to dense SAND, with some silt to silty, and some gravel to - firm/loose SILT and SAND, some gravel and wood fragments to - SANDY SILT with some gravel.
B	1.5m to >5.3m	0.5m to 1.5m	<u>SILTY SAND / SAND / GRAVELLY SAND</u> This unit generally ranged from: <ul style="list-style-type: none"> - dense SILTY SAND with trace to some gravel to - dense SAND with trace to some silt and trace to some gravel to - dense GRAVELLY SAND with trace to some silt, and, frequent/occasional cobbles. At some locations, the top of this unit ranged from loose to compact.
C	To the bottom of exploration depth	3.0m to 5.3m	<u>SANDY SILT / SILT</u> This unit generally ranged from: <ul style="list-style-type: none"> - stiff to hard SILT, with trace to some sand and trace clay to - stiff to very stiff SANDY SILT. In AH18-09, this unit was underlain by dense to very SILTY SAND

Groundwater was encountered in all testholes except at AH18-08 and AH18-16. Depth to groundwater ranged from about 1.8m to 3.7m below ground surface. The variability in groundwater elevations may indicate perched water tables on less permeable layers. It should be noted that groundwater level would fluctuate seasonally, with precipitation and with adjacent land use.

It should be noted that geological conditions are innately variable and the above-inferred subsurface stratigraphy should be considered as a generalized profile, as information obtained from the test holes represents discrete subsurface conditions at the test hole locations only. The subsurface conditions may vary between and beyond the test hole locations, and below the depths explored.

6.0 DEBRIS FLOW AND DEBRIS FLOOD HAZARD

According to DNV's GEOweb, the areas associated with debris flow and debris flood hazards are mainly located along the fan at the base of Grouse Mountain which is about 1km to 2km away from the subject slope. It is possible that the flow could "back up" toward Mackey Creek; however, the Mackay ravine/channel would confine debris and associated "flood water" to the bottom of the gully. As a result, the existing school as well as the proposed new school development is not expected to be directly affected by potential debris flood hazard.

7.0 EXISTING SLOPE CONDITION

As mentioned previously, signs of possible previous slope movements were observed. These signs included historic head scarps, tilting/leaning trees and pistol butts. Although the existing slope condition was found to be marginally stable, the observed signs generally indicate shallow movements that are limited to the upper 3m to 4m rather than deep seated failure modes. Causes of the failure may be attributed to the following factors:

1. Significant fill has been added to the crest of the slope, particularly at the south portion;
2. Possible increase of groundwater flow to the slope. Sources of the groundwater could include leaky perimeter drains, stormwater system leakage and/or natural flows;
3. Introduction of stormwater discharge to the slopes as observed by existing outfall structures and pipes daylighting near the crest of the slope;
4. Possible slope toe erosion due to increased flow in the creeks located near the toe; and,
5. The steep nature of the existing slope.

8.0 DISTRICT OF NORTH VANCOUVER SLOPE HAZARD GUIDELINES

Risk tolerance criteria have been utilized by DNV, on an interim basis, to manage landslide risk since early 2005. In February 2007, the DNV Council held a workshop to review the natural hazards management program and approved a plan which included, "establish a process to adopt risk tolerance criteria". The Natural Hazards Task Force was assembled in October 2007 "to provide a forum to gather input from an informed, broad-based community perspective regarding quantitative tolerable risk or risk acceptance criteria for landslides and other natural hazards". The task force presented their recommendations and policy guidelines for natural hazards risk tolerance for building permit and development applications were adopted by the Council in December 2009 (see DNV Official Community Plan, Schedule B, part 4, dated July 23, 2018).

Applicants for subdivisions, development approvals and building permits may be required to meet the



following conditions:

1. Demonstrate that natural hazards risks are reduced to As Low as Reasonably Practicable (ALARP); and,
2. In addition to ALARP, that:
 - a. The following risk tolerance criteria are satisfied (if a quantitative risk methodology is used):
 - i. Maximum 1:10,000 risk of fatality per year for re-developments involving an increase to gross floor area on the property of less than or equal to 25%;
 - ii. Maximum 1:100,000 risk of fatality per year for new developments and for re-developments involving an increase to gross floor area on the property of greater than 25%.
 - or,
 - b. The following Factor-of-Safety (FOS) criteria are satisfied (if factor-of-safety and/or slope displacement methodology is used):
 - i. For re-developments involving an increase to gross floor area on the property of less than or equal to 25%:
 1. Under static conditions the slope stability FOS must be greater than 1.3; and,
 2. Under non-static conditions (e.g., for earthquake ground motions) the slope stability FOS must be greater than 1.0 or predicted ground displacement must be less than 0.15m with a 1:475 annual chance of exceedance;
 - ii. For new developments and for re-developments involving an increase to gross floor area on the property of greater than 25%:
 1. Under static conditions the slope stability FOS must be greater than 1.5; and,
 2. Under non-static conditions (e.g., for earthquake ground motions) the slope stability FOS must be greater than 1.0 or predicted ground displacement must be less than 0.15 m with a 1:2475 annual chance of exceedance.

The assessment methodology is to be determined by a Qualified Professional in accordance with the Guidelines for Legislated Landslide Assessment for Proposed Residential Developments in BC published by the Association of Professional Engineers and Geoscientists of BC dated March 2006 (current version, revised May 2010).

Generally, the DNV's Natural Hazards Risk Tolerance Criteria can be summarized as follows:

Table 2: Summary of DNV Slope Hazard Requirements

	Type of Application / Development	Risk of Fatality per Year	Minimum Factor of Safety (FOS) under Static Conditions	Maximum Ground Displacement - Seismic Conditions
A	Building permit (<25% increase to gross floor area)	1:10,000 + ALARP	1.3	15cm (with a 1:475 annual chance of exceedance)
B	Building permit (>25% increase to gross floor area and/or retaining wall >1.2m)	1:100,000	1.5	15cm (with a 1:2,475 annual chance of exceedance)
C	Rezoning			
D	Subdivision			
E	New development			



Item B of Table 2 above is deemed to be applicable for the subject slope.

9.0 SLOPE STABILITY ANALYSIS AND METHODOLOGY

Slope stability analysis was completed using the Morgenstern and Price limit equilibrium method that is available in the commercially software, SLOPE/W, Version 9.0.2 developed by GeoStudio. The soil parameters used in the analysis are presented in the table below. It should be noted that these soil parameters are based on EXP's local experience, available test hole logs, observations made during the site reconnaissance, and back analysis of a critical profile cross-section. This profile cross-section was based on the topographic survey completed by Underhill and October 23, 2018. Typical slope cross-sections are shown in Figures 3 through 6 and the locations of the profiles lines are shown in Figure 2.

Table 3: Summary of Soil Parameters Used in the Analysis

Soil Name	Unit Weight (kN/m ³)	Effective Stress Analysis		Total Stress Analysis
		Friction Angle, Φ (degree)	Cohesion (kPa)	Undrained Shear Strength, s_u , (kPa)
Existing Sand Fill	18	33	-	-
In-situ Dense Sand	18	40	-	-
Stiff to Very Stiff SILT	17	28	15	100
Surficial Slope Soil	17	33	7	-

As described in Section 5.0, the thickness of the in-situ Sand ranged from about 1.5m to more than 5.3m. To account for the variability in soil conditions, the most critical soil profiles was selected for the analysis. The results outputs of the slope stability analysis are included in Appendix C.

To evaluate seismic performance, Site Class "C" in accordance with 2015 National Building Code of Canada was selected (EXP report dated March 15, 2018). For the design earthquake motion with a 2% probability of exceedance in 50 years, or a 1:2475-year return period, a Peak Ground Acceleration (PGA) value of 0.341 was selected for the analysis.

As discussed in Section 8.0 above, the required Factor of Safety ("FOS") of at least 1.5 under static conditions and a maximum ground displacement of about 15cm under earthquake with a 1:2475 annual chance of exceedance would apply to this development. It is EXP's understanding that the slope improvement techniques such as permanent shoring or armoring are not considered due to environmental and economical constrains. Therefore, the proposed school development should be setback sufficiently from the slope crest to achieve the required DNV's requirements as detailed in the section below.

10.0 DISCUSSION AND RECOMMENDATIONS

10.1 Summary

Based on EXP's site reconnaissance, site observations and results of the stability assessment, it is EXP's professional opinion that the subject slope is marginally stable; hence, appropriate setbacks for significant structures such as the new school building should be established as detailed in the following subsections.



10.2 Recommended Slope Setbacks

To achieve the minimum Factor of Safety required by the DNV (i.e., $FOS \geq 1.5$), it is recommended that the proposed new school building and other buildings that are classified as “buildings” under the current building code, be setback at least 12m from the crest of the slope. A 10m setback (i.e., $FOS=1.4$) is considered sufficient for the proposed sports field and running track area due to its nature and low importance. Recommended setback lines for the proposed development are presented in the attached Figure 2. It should be noted that the geotechnical recommended setbacks are based on EXP's understanding that the proposed development will be constructed with nominal site grade increase.

For a design earthquake motion with a 1:2475-year return period and a PGA value of 0.341, it is estimated that the horizontal displacement of the subject slope at 12m setbacks would be in the order of 9cm. Similarly, it is estimated that the horizontal displacement at 10m setbacks would be in the order of 13cm. It is also worth mentioning that based on the provided architectural drawings, the proposed new school building is setback at least 16.5m from the crest of the slope and it is estimated that the horizontal displacement under the design earthquake event would be minimal.

As shown in Figure 2, the proposed sports field and running track area does not meet the geotechnical setbacks stated above. It is recommended that the proposed sports field and running track area be shifted to the west to meet the geotechnical setbacks. Alternatively, ground improvement techniques such as geogrid reinforcement or soil geocells may be considered. It should be noted that ground improvement considerations are beyond the scope of this report.

10.3 Development Considerations

As mentioned previously, the stability of the subject slope is significantly influenced by the groundwater conditions, toe erosion, and surface erosion. To minimize adverse impacts to the slope, and, hence, neighbouring developments, the following items should be taken into considerations.

Stormwater Management:

- Stormwater collected in catch basins should be directed to the district storm sewers, or to appropriate outfall at the toe of slope that is designed against erosion;
- Surface flow should be directed away from this slope;
- Use of infiltration methods for stormwater management should be minimized as that could increase groundwater flow towards the slope; and,
- Existing outfall(s) and/or outlets located at the crest or mid-slope should be decommissioned.

Extreme Events:

As noted previously, no significant signs of active toe erosion were noted during the site reconnaissance. The toe erosion rate is dependent on the flow rate in the creeks along the slope toe. If an extreme event (i.e., 1:200-year rainfall) were to happen or signs of significant slope movement are noted, it is suggested that a Qualified Engineer be retained to review the condition of the slope.

10.4 Impact of Proposed Development

As the proposed school development will not have active construction on or near the crest of the slope, impact of the proposed school re-construction is not expected to have adverse impacts to the existing slope or neighboring properties.

11.0 CLOSURE

It should be understood that this report was prepared based on the information provided by the Client and EXP's understanding of project as described in Section 3 above. Also note that this report was prepared for the exclusive use of our client, School District No. 44 (North Vancouver), and their designated agents, and may not be used by any other parties without the written consent of EXP. The District of North Vancouver may use this report for the purpose of the development permitting process.

EXP Services Inc. should be given the opportunity to review final construction plans and make any needed modifications to our geotechnical report to reflect changes in the original design assumptions. If the construction plans change, or if during construction, the subsurface conditions are noted to differ from those described in this report, EXP should be notified immediately, and the recommendations provided regarding the geotechnical aspects of the development should be reviewed and, if deemed necessary, modified.

We trust this report meets your present requirements. Please contact the undersigned if you have any questions or require further assistance.

Sincerely,

EXP Services Inc.



Muhammed Al-Kustaban, E.I.T.
Geotechnical Engineer



Kai-Sing Hui P.Eng.
Manager, Geotechnical Discipline, Western Canada

Enclosures: Interpretation & Use of Study and Report
Figures 1 to 5
Appendix A – Select Site Photos (No.1 to 8)
Appendix B – Select Soil Logs (AH17-01, -06; AH18-07 to -09, AH18-16)
Appendix C – Slope Stability Analysis Output

COUNCIL AGENDA/INFORMATION			
<input type="checkbox"/> In Camera	Date:	Item #	
<input checked="" type="checkbox"/> Regular	Date: Apr 15 2019	Item #	
<input type="checkbox"/> Agenda Addendum	Date:	Item#	
<input type="checkbox"/> Info Package			
<input type="checkbox"/> Council Workshop	DM#	Date:	Mailbox:

Dept. Manager	Director	CAO
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The District of North Vancouver REPORT TO COUNCIL

March 28, 2019

File:

Tracking Number: RCA -

AUTHOR: Andy Wardell, GM, Finance & Technology / CFO

SUBJECT: 2019 Centennial Bursary Trust Fund

RECOMMENDATION:

"That Council award bursaries to seven students from the District of North Vancouver in the amount of \$775 per bursary."

BACKGROUND:

In 2018 Council approved seven bursaries in the amount of \$760 to students from the District of North Vancouver. There is an expectation from year to year that the amount of the bursary will be equal or greater than the year before to keep pace with inflation. It is proposed that the District increase the 2019 bursaries to \$775 (2% inflation rounded to the nearest \$5).

ANALYSIS:

Following Council's decision, letters will be sent to each of the seven high schools in North Vancouver inviting bursary nominations.

Under the terms of the trust:

- The District can charge an administrative fee of 5% of annual income (not currently charged)
- A minimum of \$1,500 must be disbursed in any one year.
- Bursaries are limited to a maximum of \$300 per bursary.
- Up to a maximum of 20% of the principal of the Trust together with the whole of the income of the trust can be distributed to eligible students in any one year.

The Trust has the capacity to support seven bursaries totalling \$2,100.

The amount of income available for distribution in 2019 is \$824 which means that \$1,276 will need to be contributed from the principal of the trust. This is well within the 20% maximum principal contribution available of \$6,663.

The bursary amount must be supplemented by \$3,325 from the Council Reserve in order to fund the \$775 amount of each bursary. The Council Reserve available is currently \$90,000.

Timing/Approval Process: The bursaries are granted annually. The solicitation of nominations occurred in April/May, the selection and award in June and the cheques distributed in September.

Options:

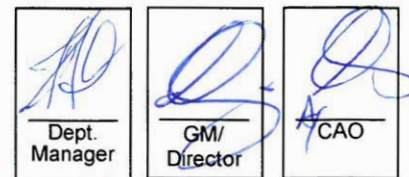
1. Award Bursaries at \$760 (same level as last year). Council contributes \$3,220 from Council Reserve to supplement the Trust minimum contribution of \$2,100.
2. Award Bursaries at \$775. Council contributes \$3,325 from Council Reserve to supplement the Trust minimum contribution of \$2,100.



Andy Wardell
GM, Finance & Technology / CFO

<u>REVIEWED WITH:</u>	<u>REVIEWED WITH:</u>	<u>REVIEWED WITH:</u>	<u>REVIEWED WITH:</u>
<input type="checkbox"/> Sustainable Community Development	<input type="checkbox"/> Clerk's Office	External Agencies:	Advisory Committees:
<input type="checkbox"/> Development Services	<input type="checkbox"/> Corporate Services	<input type="checkbox"/> Library Board	<input type="checkbox"/> _____
<input type="checkbox"/> Utilities	<input type="checkbox"/> Communications	<input type="checkbox"/> NS Health	<input type="checkbox"/> _____
<input type="checkbox"/> Engineering Operations	<input type="checkbox"/> Finance	<input type="checkbox"/> RCMP	<input type="checkbox"/> _____
<input type="checkbox"/> Parks & Environment	<input type="checkbox"/> Fire Services	<input type="checkbox"/> Recreation Commission	
<input type="checkbox"/> Economic Development	<input type="checkbox"/> Human resources	<input type="checkbox"/> Other: _____	
	<input type="checkbox"/> ITS		
	<input type="checkbox"/> Solicitor		
	<input type="checkbox"/> GIS		

AGENDA INFORMATION	
<input checked="" type="checkbox"/> Regular Meeting	Date: April 15, 2019
<input type="checkbox"/> Other:	Date: _____



The District of North Vancouver REPORT TO COUNCIL

April 5, 2019
File: 02.0740.40/000.000

AUTHOR: Monica Samuda, Energy Manager
Sacha Jones, Revenue Officer, Financial Services

SUBJECT: Grant funding application – District Hall Zone Control Optimization

RECOMMENDATION:

THAT Council supports the District Hall Zone Control Optimization Project and the application for grant funding through the *Investing in Canada Infrastructure Program Green Infrastructure – CleanBC Communities Fund*;

AND THAT the District of North Vancouver commits to its share (\$200,000) of the total project cost of \$700,000 to be funded through the Infrastructure Reserve;

AND THAT the 2019-2023 financial plan be amended prior to year-end to reflect the project.

REASON FOR REPORT:

A resolution of Council is required to support the District of North Vancouver's (DNV) grant application under the *Investing in Canada Infrastructure Program Green Infrastructure – CleanBC Communities Fund*.

The District Hall Zone Control Optimization Project is an upgrade to the building controls for heating and cooling throughout District Hall. The Project addresses an upcoming requirement in the Building Asset Management Plan to refurbish an outdated system and advances the District's efforts to bring corporate emissions to carbon neutrality.

SUMMARY:

In late 2018, the Government of Canada and the Province of British Columbia announced program funding through their *Investing in Canada Infrastructure Program – CleanBC Communities Fund*. The District Hall Zone Control Optimization Project is the best candidate as it meets the program objectives and delivers much-needed upgrades to extend the life and improve the performance and energy efficiency of existing equipment at District Hall. The DNV Strategic Energy Management Plan has identified this project as one of several

opportunities for energy and Greenhouse Gas (GHG) reductions at the Hall, which is one of the DNV's top energy consuming facilities.

This Project focuses on the building-wide devices that play a large part in occupant comfort and how much energy heats and cools the building.

The project will reduce energy usage in two ways:

- Better control of intentional energy delivered to building occupants, and
- Reduction of unintentional losses of energy due to outdated components and system design.

BACKGROUND

The DNV is a signatory of the BC Climate Action Charter and has been actively working to bring our corporate emissions to carbon neutrality and to reduce community emissions through various plans, policies and projects. The 2012 Official Community Plan (Chapter 10) calls for the community to reduce GHG emissions 33% from 2011 levels by 2030.

A new draft Community Energy and Emissions Plan (CEEP) is currently being finalized and has been presented in a recent council workshop. The CEEP identifies actions to be supported by the DNV to reduce community-wide emissions to zero by 2050.

The DNV aims to demonstrate actions to be replicated in the community and, since 2011, has been actively pursuing energy use and emission reduction targets for its own corporate operations that are more aggressive than the community targets. The corporate targets and actions are guided and regularly updated in the DNV's Strategic Energy Management Plan (SEMP).

The SEMP includes a review of the asset management plan and prioritizes systems requiring major maintenance or replacement. The District Hall fan coil system, which is outdated and in need of refurbishment, is critical to the proper functioning of the heating and cooling of this key District facility. This District Hall Zone Control Optimization project takes advantage of a need to refurbish an outdated system in order to also optimize the building's energy, emissions and comfort performance. This project is exactly the type of upgrade to an existing building that will create meaningful energy and emissions reductions.

ANALYSIS:

The District Hall Zone Control Optimization Project will upgrade the controls from the existing outdated devices to work with the building's Building Automation System (BAS). Full control of the energy investment in operating this facility will only be possible by addressing the user-level comfort system: the zone-controlled fan coil system distributed throughout the facility. The fan coils are also the system that delivers conditioned air to building occupants. This project will deliver more consistently comfortable work areas.

Reducing the total building energy load will make future projects, such as low-carbon electrification, even more feasible. Accurate control of heating and cooling is key in reducing overall energy consumption and GHG emissions. Electronic space temperature sensors will allow the boilers and fans in the system to operate at their optimal level to keep work zones comfortable for users.

This project is expected to reduce District Hall's GHG emissions by over 25% and total energy consumption by over 10%, while extending the life of critical building components and improving occupant comfort.

Timing/Approval Process:

The deadline for submission of a Council resolution supporting this application is April 27, 2019.

Financial Impacts

The total capital cost of the District Hall Zone Control Optimization Project is estimated at \$700K, of which the DNV portion will be \$200K if the grant application is successful. Annual energy cost savings are estimated to be approximately \$14,000.

If the grant application is not successful, the full cost of the project will need to be funded within the next 5 years in order to avoid failure of the District Hall fan coil controls.

Environmental Impact:

This project is expected to reduce District Hall's GHG emissions by over 25% and total energy consumption by over 10%.

Conclusion:

The District Hall Zone Control Optimization Project provides an opportunity to renew existing equipment and add the refined level of controls needed to deeply reduce energy consumption and emissions from the Hall's heating and cooling systems. As fundamental infrastructure work, the project is a strong candidate to receive funding under the *Investing in Canada Infrastructure Program Green Infrastructure – CleanBC Communities Fund* grant so that this work can be done sooner, and at a lower cost, than otherwise planned.

Monica Samuda
Energy Manager

Sacha Jones
Revenue Officer

REVIEWED WITH:		
<input type="checkbox"/> Community Planning	_____	<input type="checkbox"/> Clerk's Office
<input type="checkbox"/> Development Planning	_____	<input type="checkbox"/> Communications
<input type="checkbox"/> Development Engineering	_____	<input checked="" type="checkbox"/> Finance
<input type="checkbox"/> Utilities	_____	<input type="checkbox"/> Fire Services
<input type="checkbox"/> Engineering Operations	_____	<input type="checkbox"/> ITS
<input type="checkbox"/> Parks	_____	<input type="checkbox"/> Solicitor
<input type="checkbox"/> Environment	_____	<input type="checkbox"/> GIS
<input type="checkbox"/> Facilities	_____	<input type="checkbox"/> Real Estate
<input type="checkbox"/> Human Resources	_____	<input type="checkbox"/> Bylaw Services
		External Agencies:
		<input type="checkbox"/> Library Board
		<input type="checkbox"/> NS Health
		<input type="checkbox"/> RCMP
		<input type="checkbox"/> NVRC
		<input type="checkbox"/> Museum & Arch.
		<input type="checkbox"/> Other:

AGENDA INFORMATION	
<input checked="" type="checkbox"/> Regular Meeting	Date: <u>April 15, 2019</u>
<input type="checkbox"/> Other:	Date: _____

Dept. Manager	GM/ Director	CAO
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The District of North Vancouver REPORT TO COUNCIL

March 22, 2019

File:

AUTHOR: Lisa Muri, Councillor

SUBJECT: UBCM Resolution: Change the Requirements for Public Notification

RECOMMENDATION:

THAT the UBCM resolution regarding Change the Requirements for Public Notification attached to the March 22, 2018 report of Councillor Muri is supported;

AND THAT the resolution is to be forwarded to the UBCM for consideration as a resolution at the 2019 UBCM Convention.

Timing/Approval Process:

UBCM resolutions for the 2019 Convention are due June 30, 2019 and must be Council endorsed. Unless deemed an emergency resolution, resolutions received after the deadline are entered in the resolutions cycle for 2020.

Options:

1. THAT Council support the submission of a resolution to the 2019 UBCM Convention to request the Province to change the requirements for public notification;
2. THAT Council support the same resolution for the next Lower Mainland Local Government Association Annual General meeting (May 2020);
3. THAT Council does not support a resolution.

Respectfully submitted,

Lisa Muri
Councillor

Attachment 1 – UBCM Resolution

Attachment 2 – Staff Report – February 23, 2015

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REVIEWED WITH:					
<input type="checkbox"/> Community Planning	_____	<input type="checkbox"/> Clerk's Office	_____	External Agencies:	
<input type="checkbox"/> Development Planning	_____	<input type="checkbox"/> Communications	_____	<input type="checkbox"/> Library Board	_____
<input type="checkbox"/> Development Engineering	_____	<input type="checkbox"/> Finance	_____	<input type="checkbox"/> NS Health	_____
<input type="checkbox"/> Utilities	_____	<input type="checkbox"/> Fire Services	_____	<input type="checkbox"/> RCMP	_____
<input type="checkbox"/> Engineering Operations	_____	<input type="checkbox"/> ITS	_____	<input type="checkbox"/> NVRC	_____
<input type="checkbox"/> Parks	_____	<input type="checkbox"/> Solicitor	_____	<input type="checkbox"/> Museum & Arch.	_____
<input type="checkbox"/> Environment	_____	<input type="checkbox"/> GIS	_____	<input type="checkbox"/> Other:	_____
<input type="checkbox"/> Facilities	_____	<input type="checkbox"/> Real Estate	_____		
<input type="checkbox"/> Human Resources	_____	<input type="checkbox"/> Bylaw Services	_____		

Attachment 1 – UBCM Resolution

Change the Requirements for Public Notification

WHEREAS the Local Government Act and the Community Charter require that all Public Notices be published in a newspaper;




AND WHEREAS printed newspapers are no longer the only or most effective means of giving Public Notice;

THEREFORE BE IT RESOLVED that UBCM request the provincial government amend the Local Government Act and the Community Charter to allow statutorily required Public Notices to be published using a variety of media channels, including but not limited to: newspapers, social media, web sites and online advertising, as long as reasonably equivalent or better reach than that of solely using printed newspapers can be demonstrated.

Submitted by the District of North Vancouver

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AGENDA INFORMATION	
<input checked="" type="checkbox"/> Regular Meeting	Date: <u>February 16, 2015</u>
<input type="checkbox"/> Workshop (open to public)	Date: _____

 Dept. Manager	 GM/ Director	 CAO
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The District of North Vancouver
REPORT TO COUNCIL

February 23, 2015

File:

AUTHOR: Mairi Welman, Manager Strategic Communications & Community Outreach

SUBJECT: Proposed UBCM Resolution to change the *Local Government Act* and the *Community Charter* requirements for Public Notification

RECOMMENDATION:

That Council adopt and forward the attached motion regarding Public Notification requirements to the LMLGA in time for inclusion in its package of resolutions to the 2015 UBCM conference. (Deadline March 2, 2015)

REASONS FOR REPORT:

1. The current requirements for Public Notification under the *Local Government Act* and the *Community Charter* are outdated and no longer accomplish the desired outcome of generating wide public awareness. They are also not cost-effective.
2. This resolution will enable the DNV Communications team to achieve Council's desire to reach and hear from a broader audience in an efficient and cost-effective manner.

SUMMARY:

This resolution seeks to have the Province amend the *Local Government Act* and the *Community Charter* to update the way local governments meet the requirements for statutory public notification by allowing municipalities to use communication channels other than print newspapers*.

BACKGROUND:

The *Local Government Act* and the *Community Charter* set out the requirements that municipal governments must follow when publishing statutorily required Public Notifications, such as Public Hearing notifications.

Instances where Public Notice is mandated are clearly defined, as are the rules for when and how these notices must be published. When Public Notification is mandated the *Local Government Act* states that "the notice must be given by publication in a newspaper" and the *Community Charter* defines newspapers as "a publication or local periodical that contains items of news and advertising".

The current Public Notification requirements are outdated and reach a steadily diminishing audience. Traditionally printed newspapers were once considered the most effective way to communicate with a large cross-section of citizens however that is no longer the case. The increasing popularity of social media combined with online citizen engagement has now reached an intersection point with the steady decline in print readership. There are now alternate methods for reaching residents that are equally or more effective than print-edition newspapers and periodicals.

The way in which people get their news is evolving rapidly, particularly for citizens under the age of 45. Younger Canadians turn to online sources first for their news and few interact with print newspapers. To engage the 18-35 year old demographic in particular, municipalities must meet them where they live: online.

Print newspapers, which can track their total distribution and likely reach, cannot definitively prove how many people see and/or read a Public Notice advertisement. Digital media channels (including online versions of newspapers) offer more sophisticated tracking and analytics that can verify their reach. The burden will be on municipalities to track and prove that the communication channels they select to disseminate a Public Notice is a reasonably equivalent alternative to notices in printed newspapers.

The purpose of this resolution is not to remove printed newspapers from the requirement, but rather to amend the legislation to allow municipalities to choose from a wider variety of media to reach residents while meeting all the necessary requirements for Public Notice. Supporting data, including analytics proving the reach of channels utilized, will be tracked and recorded. Allowing municipalities to combine different media channels to satisfy their statutory Public Notice requirements will enable them to reach as wide an audience as possible in the most cost-effective manner possible.

*In the District, we will continue to advertise in print newspapers, however we will reduce the overall size of the ads and use them to point the public to up to date online sources of more detailed information. The print ad will become an invitation to get more information, as opposed to a stand-alone source for all the information.

EXISTING POLICY:

Please see attached relevant sections of the *Local Government Act* and the *Community Charter*.

ANALYSIS:

Comparing the cost and reach of print and online channels is difficult as their business models differ so greatly. However we can compare some variables:

Print newspapers:

- have large distribution but no verifiable tracking on specific ad views
- charge a one-time cost to reach their entire potential audience
- differentiate their audiences by geography

Online channels:

- have an infinite reach and can measure the number of actual views
- charge an increasing amount depending on how many views your specific post gets
- highly differentiated audiences – more granular targeting of content

The ability to choose a combination of channels (e.g. print and online publications, social media, online advertising) is the most effective approach, both from a costing and a reach perspective.

Timing/Approval Process:

This resolution must be submitted to LGLMA by March 2, 2015 in order to be considered for inclusion in this year's package of resolutions to UBCM.

SUBJECT: Proposed UBCM Resolution to change the *Local Government Act* and the *Community Charter* requirements for Public Notification

February 5, 2015

Page 3

Concurrence:

Clerk's Office

Financial Impacts:

Using new methods to disseminate Public Notices will not necessarily decrease our costs however it will ensure we reach a much larger group of residents. Tracking and analysis will be required to determine which methods work best for our specific population.

Liability/Risk:

None

Social Policy Implications:

None

Environmental Impact:

Reduced use of paper, reduced need for transportation, and reduced need for recycling/processing.

Public Input:

We intend to ask the public at every opportunity how they heard about our public meetings and public hearings and public hearings to measure channel effectiveness.

Our public hearings will also continue to be promoted through on-site signage, delivery of letters to residents within a prescribed radius to any development project, and with information on our web site.

Conclusion:

The proposed resolution for submission to the LMLGA for the 2015 UBCM conference is:

OPTIONS FOR PUBLIC NOTIFICATION

North Vancouver District

A resolution to update the method for Public Notification that will ensure a greater number of citizens are aware of statutory notifications from local governments.

WHEREAS the *Local Government Act* and the *Community Charter* require that all Public Notices be published in a newspaper;

AND WHEREAS printed newspapers are no longer the only or most effective means of giving Public Notice:

THEREFORE BE IT RESOLVED that UBCM request the provincial government amend the *Local Government Act* and the *Community Charter* to allow statutorily required Public Notices to be published using a variety of media channels, including but not limited to: newspapers, social media, web sites and online advertising, as long as reasonably equivalent or better reach than that of solely using printed newspapers can be demonstrated.

SUBJECT: Proposed UBCM Resolution to change the *Local Government Act* and the *Community Charter* requirements for Public Notification

February 5, 2015

Page 4

Options:

1. Adopt the resolution
2. Amend and adopt the resolution
3. Reject the resolution

Respectfully submitted,

Mairi Welman
Manager, Strategic Communications & Community Outreach

REVIEWED WITH:

☐ Sustainable Community
Dev.

☐ Development Services

☐ Utilities

☐ Engineering Operations

☐ Parks & Environment

☐ Facilities

☐ Human resources

x Clerk's Office

x

Communications

☐ Finance

☐ Fire Services

☐ ITS

☐ Solicitor

☐ GIS

External
Agencies:

☐ Library Board

☐ NS Health

☐ RCMP

☐ Recreation
Com.

☐ Museum &
Arch.

☐ Other:

Local Government Act

How notices must be published in a newspaper

- 6.4 If this Act requires that notice be given by publication in a newspaper, the notice must be published in accordance with section 94 (1) (b) [requirements for public notice] of the *Community Charter*.

Redefinition of boundaries

21. (1) The Lieutenant Governor in Council may, by letters patent, redefine or alter the boundaries of a municipality if it appears to the satisfaction of the Lieutenant Governor in Council that any of the following circumstances apply:
- (a) the boundaries are uncertain;
 - (b) the boundaries do not follow legal property boundaries;
 - (c) the boundaries do not conform to those of an adjacent municipality;
 - (d) the whole or part of a highway on or adjacent to the boundary should be included or excluded;
 - (e) the whole or part of adjoining foreshore and any area below low water mark should be included or excluded;
 - (f) the whole or part of the adjoining foreshore along a river, stream or lake, or the foreshore and land covered by water, should be included or excluded;
 - (g) land adjacent to and owned by the municipality should be included.
- (2) Before exercising the powers of subsection (1), the Lieutenant Governor in Council may direct that a notice of intention to redefine or alter the boundaries of a municipality be given at municipal expense once in the Gazette and once in a newspaper.

Reduction of municipal area

26. (1) On the request of the council made in accordance with this section, the Lieutenant Governor in Council may, by letters patent, reduce the area of a municipality.
- (2) Before making a request for reduction, a council must
- (a) give public notice of its proposed request in at least 2 consecutive issues of a newspaper and once in the Gazette,

- (b) obtain the consent in writing of at least 60% of the electors of the area proposed to be excluded, and
 - (c) receive the assent of the electors, unless this requirement is waived under subsection (4).
- (3) A request for reduction

Costs of elections

40. (1) The costs of an election, including the costs of registration of electors for the election, are the responsibility of the municipality or regional district for which the election is held unless otherwise agreed.
- (2) The costs of an election may be shared under an agreement between the local government and another local government, the council of the City of Vancouver or a board of school trustees for the conduct of the election by one party for the other or in conjunction with an election of the other.
- (3) A local government that is a party to an agreement under subsection (2) may, by bylaw, provide that the bylaws of the other party respecting elections apply to elections conducted under the agreement.
- (4) An agreement referred to in subsection (2) may provide for a party to conduct only some of the election proceedings for or in conjunction with the other party.
- (5) An election to which an agreement referred to in subsection (4) applies is valid despite the agreement and any bylaws in relation to it having the effect of creating differences in election proceedings between different parts of the election area for which an election is held.
- (6) Without limiting subsection (4), an agreement referred to in that subsection may allow a local government to restrict the persons who may vote at the election proceedings conducted under the agreement to persons who are entitled to be registered as electors in relation to a specified part of the election area for which the election is held.
- (7) If a restriction under subsection (6) applies, on any day on which an advance voting opportunity conducted under the agreement is open to electors of only part of the election area for which the election is held, an advance voting opportunity must be open to all electors of that election area on the same day.
- (8) So long as any required advance voting opportunities are provided, no bylaw is necessary for an advance voting opportunity required by subsection (7), and the voting opportunity may be held at the place and for the voting hours established by the chief election officer.
- (9) The chief election officer **must give notice** of a voting opportunity to which subsection (8) applies in any manner the chief election officer considers appropriate, including in the notice the date, place and voting hours for the voting opportunity.

Public notices

44. (1) If this Part requires notice to be given in accordance with this section, the notice must be given by publication in a **newspaper**, and for these purposes section 6.4 [*how notices must be published in a newspaper*] applies.
- (2) Notices to which this section applies may be combined as long as the requirements of all applicable sections are met.

Declaration of candidates

74. (1) Immediately following the end of the nomination period, the chief election officer must declare as candidates for an elected office all persons who have been nominated for the office.
- (2) If there are fewer persons declared as candidates than there are to be elected, additional nominations must be received by the chief election officer from the time of the declaration under subsection (1) up until 4 p.m. on the third day after the end of the nomination period.

- (3) If reasonably possible, the chief election officer **must give notice** to the public of an extended time for receiving nominations under subsection (2).
- (4) At the end of the time for receiving additional nominations under subsection (2), the chief election officer must declare as candidates for an elected office all additional persons who have been nominated for the office.

Additional general voting opportunities

96. (1) A local government may, by bylaw,

- (a) establish or authorize the chief election officer to establish additional voting opportunities for general voting day, and
 - (b) designate the voting places and set the voting hours for these voting opportunities or authorize the chief election officer to do this.
- (2) As a limit on subsection (1), the voting hours established for an additional general voting opportunity must not extend later than 8 p.m. on general voting day.
- (3) The chief election officer **must give notice** of an additional general voting opportunity in any manner the chief election officer considers appropriate, including in the notice the date, place and voting hours for the voting opportunity.

Required advance voting opportunities

97. (1) *Repealed.* [2008-5-26]

- (2) At least 2 advance voting opportunities must be held for an election by voting,
 - (a) one on the 10th day before general voting day, and
 - (b) the other on another date which the local government must establish by bylaw.
- (3) As an exception to subsection (2) in relation to a municipality or electoral area with a population of 5 000 or less, the local government may, by bylaw, provide that the advance voting opportunity referred to in subsection (2) (b) is not to be held for the municipality or electoral area.
- (4) Voting hours for the required advance voting opportunities must be from 8 a.m. to 8 p.m.
- (5) As soon as practicable after the declaration of an election by voting, the chief election officer must designate voting places for the required advance voting opportunities.
- (6) At least 6 but not more than 30 days before a required advance voting opportunity, the chief election officer **must give notice** in accordance with section 44 [*public notices*] of
 - (a) the date, location of the voting places and voting hours for the voting opportunity, and
 - (b) the documents that will be required in order for a person to register as an elector at the time of voting.

Additional advance voting opportunities

98. (1) A local government may, by bylaw,

- (a) establish or authorize the chief election officer to establish dates for additional voting opportunities in advance of general voting day, and
 - (b) designate the voting places and set the voting hours for these voting opportunities or authorize the chief election officer to do this.
- (2) *Repealed.* [2008-5-27]
- (3) The chief election officer **must give notice** of an additional advance voting opportunity in any manner the chief election officer considers appropriate, including in the notice the date, place and voting hours for the voting opportunity.

Special voting opportunities

99. (1) In order to give electors who may otherwise be unable to vote an opportunity to do so, a local government may, by bylaw, establish one or more special voting opportunities under this section.
- (6) The chief election officer **must give notice** of a special voting opportunity in any manner the chief election officer considers will give reasonable notice to the electors who will be entitled to vote at it.

Mail ballot voting

100. (1) Subject to this section and any regulations under section 156, a local government may, by bylaw, permit voting to be done by mail ballot and, in relation to this, may permit elector registration to be done in conjunction with this voting.
- (5) The chief election officer must give notice of an opportunity to vote by mail ballot in any manner the chief election officer considers will give reasonable notice to the electors who will be entitled to vote by this means.

Who may vote at assent voting

161. (1) In order to vote at assent voting, a person must meet both the following requirements:
- (6) If subsection (5) applies, at least 6 but not more than 30 days before the date established under paragraph (a) of that subsection, the chief election officer **must give notice** in accordance with section 44 of
- (a) how a person may register in advance, and
 - (b) the date after which advance registration will not apply for the purposes of the assent voting.

Publication of intention to provide certain kinds of assistance

185. (1) A board must publish in a **newspaper** its intention to provide any of the following assistance:
- (a) disposing of land or improvements, or any interest or right in or with respect to them, for less than market value;
 - (b) lending money;
 - (c) guaranteeing repayment of borrowing or providing security for borrowing;
 - (d) assistance under a partnering agreement.
- (2) The notice must be published before the assistance is provided and must include
- (a) the intended recipient of the assistance, and
 - (b) the nature, term and extent of the proposed assistance.

Notice of proposed disposition

187. (1) A board intending to dispose of land or improvements must publish notice of its intention in a **newspaper** in accordance with subsection (2) or (3), as applicable.
- (2) If the disposition is a disposition referred to in section 186 (2), the notice must include
- (a) a description of the land or improvements,
 - (a.1) the person or public authority who is to acquire the property under the proposed disposition,
 - (b) the nature and, if applicable, the term of the proposed disposition, and
 - (c) the consideration to be received by the regional district for the disposition.

District municipality drainage works

- 315.2(1) A district municipality may
- (a) collect the water from any highway by means of drains or ditches, and
 - (b) convey the water to, and discharge the water in, the most convenient natural waterway or watercourse.

SUBJECT: Proposed UBCM Resolution to change the *Local Government Act* and the *Community Charter* requirements for Public Notification

February 5, 2015

Page 9

- (2) A municipality proposing to construct drains or ditches authorized by subsection (1) must publish a notice in accordance with subsection (3) in a newspaper once a week for 4 consecutive weeks.
- (3) The notice under subsection(2) must state that
 - (a) the municipality intends to undertake the works,
 - (b) plans and specifications of the works may be inspected at the municipal hall, and
 - (c) all claims for damages or compensation arising out of the construction, maintenance, operation or use of the works must be filed with the municipality within one month from the date of the fourth publication of the notice.

Notice of tax sale

- 405.** (1) Notice of the time and place of the tax sale and the description and street address, if any, of the property subject to tax sale must be published in at least 2 issues of a newspaper.
- (2) The last publication under subsection (1) must be at least 3 days and not more than 10 days before the date of the tax sale.

Application of surplus from tax sale

- 416.** (1) If the property is not redeemed, money received by the collector at the tax sale above the upset price must be paid without interest to the owner at the time of the tax sale, on written application to the council.
- (2) The money must not be paid to the owner if a claim to the surplus is made by another person on the ground that the property belonged to the other person, or that the other person is otherwise entitled to the surplus.
- (3) If a claim referred to in subsection (2) is made, the money must, without leave, be paid into the Supreme Court, accompanied by
 - (a) a copy of the certificate of sale under section 409, and
 - (b) a statement of the municipal corporate officer setting out the facts under which the payment into court is made and the names of both the owner at the time of the tax sale and the claimant.
- (4) Money paid into court under subsection (3) is payable out of court to the party entitled on a court order to be made on application in a summary manner and subject to the giving of the notices directed by the court.
- (5) If surplus money remains unpaid 6 months after the end of the redemption period, in the next month the council must have published in a newspaper a notice stating
 - (a) the name of the owner to whom the surplus is payable,
 - (b) the date it became payable, and
 - (c) the amount of the surplus.

Meeting procedure

- 739.** (1) The board of trustees must, by bylaw, do the following:
- (a) establish the procedures that are to be followed for the calling of meetings of the board and for the conduct of its business, including the manner by which resolutions may be passed and bylaws adopted;
 - (b) establish the procedures that are to be followed in calling and conducting
 - (i) meetings of select and standing committees of the board,
 - (ii) meetings referred to in section 741 [annual general meeting], and
 - (iii) meetings of any other committee composed solely of trustees of the improvement district acting in that capacity;

- (c) establish the procedures for giving advance public notice respecting the date, time and place of meetings referred to in section 741 [*annual general meeting*] and any other meetings required to be open to the public by a regulation under section 739.1 (a) [*regulations for public access to board meetings*].
- (2) The inspector or the chair of the trustees may call a meeting of the trustees for any purpose and the chair must do so when requested in writing by the inspector or by a majority of the trustees.
- (3) The chair or the officer assigned responsibility under section 738.2 [*corporate administration*] must give notice to each trustee of each meeting of the board of trustees in accordance with the procedures established by bylaw under subsection (1) of this section.
- (4) *Repealed.* [2000-7-71 (B.C. Reg. 402/2007)]

Annual reporting on regional district finances

- 814.1(1)** By June 30 in each year, a regional district must hold a board meeting or other public meeting for the purpose of presenting
- (a) the audited financial statements of the preceding year, and
 - (b) the report under section 168 [*reporting of remuneration, expenses and contracts*] of the *Community Charter*.
- (2) The board must give notice of the meeting by publication in a newspaper, including
- (a) the date, time and place of the meeting, and
 - (b) a statement that the financial statements and any reports to be presented at the meeting are available for inspection at the regional district offices.

Notice of public hearing

- 892.** (1) If a public hearing is to be held under section 890 (1), the local government must give notice of the hearing
- (a) in accordance with this section, and
 - (b) in the case of a public hearing on an official community plan that includes a schedule under section 970.1 (3) (b), in accordance with section 974.
- (2) The notice must state the following:
- (a) the time and date of the hearing;
 - (b) the place of the hearing;
 - (c) in general terms, the purpose of the bylaw;
 - (d) the land or lands that are the subject of the bylaw;
 - (e) the place where and the times and dates when copies of the bylaw may be inspected.
- (3) The notice must be published in at least 2 consecutive issues of a newspaper, the last publication to appear not less than 3 and not more than 10 days before the public hearing.

Notice if public hearing waived

- 893.** (1) If a local government waives the holding of a public hearing under section 890 (4), it must give notice in accordance with this section.
- (2) The notice must state
- (a) in general terms, the purpose of the bylaw,
 - (b) the land or lands that are the subject of the bylaw, and
 - (c) the place where and the times and dates when copies of the bylaw may be inspected.
- (3) Section 892 (3), (4) and (5) to (7) applies to a notice under subsection (2), except that

- (a) the last publication under section 892 (3) is to be not less than 3 and not more than 10 days before the bylaw is given third reading, and
- (b) the delivery under section 892 (4) (b) is to be at least 10 days before the bylaw is given third reading.

Temporary use permits

921. (1) On application by an owner of land, a local government may issue a temporary use permit

- (a) by resolution, in relation to land within an area designated under section 920.2, or
- (b) by bylaw, in relation to land within an area outside a municipality, if there is no official community plan in effect for the area.

(2) Repealed. [2000-7-167(a)]

(3) A temporary use permit may do one or more of the following:

- (a) allow a use not permitted by a zoning bylaw;
- (b) specify conditions under which the temporary use may be carried on;
- (c) allow and regulate the construction of buildings or structures in respect of the use for which the permit is issued.

(4) If a local government proposes to pass a resolution allowing a temporary use permit to be issued, it **must give notice** in accordance with subsections (5) and (6).

(5) The notice must

- (a) state
 - (i) in general terms, the purpose of the proposed permit,
 - (ii) the land or lands that are the subject of the proposed permit,
 - (iii) the place where and the times and dates when copies of the proposed permit may be inspected, and
 - (iv) the date, time and place when the resolution will be considered, and
- (b) be published in a **newspaper** at least 3 and not more than 14 days before the adoption of the resolution to issue the permit.

Heritage designation procedure

968. (1) Before a heritage designation bylaw is adopted, the local government must hold a public hearing on the proposed bylaw for the purpose of allowing affected parties and the general public to make representations respecting matters contained in the proposed bylaw.

(2) Sections 890 (2) to (3.1) and (5) to (9), 891 and 894 apply with respect to the public hearing and enactment of the heritage designation bylaw.

(3) At least 10 days before the public hearing, a notice in the prescribed form must be given in accordance with section 974 to

- (a) all persons who, according to the records of the land title office, have a registered interest in real property that would be designated, and
- (b) all occupiers of real property that would be designated.

(4) A notice in the prescribed form must also be published in at least 2 consecutive issues of a **newspaper**, with the last publication to be at least 3 days but not more than 10 days before the public hearing.

Giving notice to owners and occupiers

974. (1) Any notice required to be given to an owner or occupier under section 970.1 (4) [designation of heritage conservation area] or this Part must be given to the owner or occupier in accordance with this section.

- (2) A notice to an owner is sufficiently given to the owner if
 - (a) it is served personally on the owner,
 - (b) it is sent by registered mail, or by a method of delivery that provides proof of delivery, to the person's actual or last known address,
 - (c) in the circumstances described in subsection (4), it is published in accordance with that subsection, or
 - (d) it is given as authorized by regulation under section 978.
- (3) A notice to an occupier is sufficiently given to the occupier if
 - (a) the notice is given individually to each occupier in accordance with subsection (2), or
 - (b) the notice is posted on or near the property in accordance with section 975.
- (4) If a notice cannot be served personally on an owner or occupier and the person's actual or last known address cannot be determined after reasonable steps for the purpose have been taken, the notice may be given by publication in 2 issues, at least one week apart, of a **newspaper** having general circulation
 - (a) in the area where the owner or occupier to be given notice was last known to reside or carry on business according to the information available to the person giving the notice, or
 - (b) in the area where the land to which the notice relates is situated.
- (5) A notice given in accordance with subsection (2) (b) is deemed to be received on the earlier of
 - (a) the date the person to whom it is sent actually receives the notice, and
 - (b) the end of 10 days after the date on which the notice was sent.

Notice requirements for initiation of a scheme

989. (1) Before initiating a replotting scheme, the council must have notice of the scheme published in a **newspaper**.

Community Charter

"**newspaper**" means, in relation to a requirement or authorization for publication in a **newspaper**, a publication or local periodical that contains items of news and advertising;

Publication of intention to provide certain kinds of assistance

24. (1) A council **must give notice** in accordance with section 94 [*public notice*] of its intention to provide any of the following forms of assistance to a person or organization:
- (a) disposing of land or improvements, or any interest or right in or with respect to them, for less than market value;
 - (b) lending money;
 - (c) guaranteeing repayment of borrowing or providing security for borrowing;
 - (d) assistance under a partnering agreement.
- (2) The notice must be published before the assistance is provided and must
- (a) identify the intended recipient of the assistance, and
 - (b) describe the nature, term and extent of the proposed assistance.

Requirements for public notice

94. (1) If this section applies, the applicable notice must be
- (a) posted in the public notice posting places, and

- (b) published in accordance with this section.
- (2) Subject to subsection (4), publication under subsection (1) (b)
 - (a) must be in a **newspaper** that is distributed at least weekly
 - (i) in the area affected by the subject matter of the notice, and
 - (ii) if the area affected is not in the municipality, also in the municipality, and
 - (b) unless otherwise provided, must be once each week for 2 consecutive weeks.
- (3) The obligation under subsection (2) may be met by publication of the notice in more than one **newspaper**, if this is in accordance with that subsection when the publications are considered together.
- (4) If publication under subsection (2) is not practicable, the notice may be given in the areas by alternative means as long as the notice
 - (a) is given within the same time period as required for publication,
 - (b) is given with the same frequency as required for publication, and
 - (c) provides notice that the council considers is reasonably equivalent to that which would be provided by **newspaper** publication if it were practicable.
- (5) As an exception, subsection (4) (b) does not apply in relation to an area if the alternative means is by individual distribution to the persons resident in the area.
- (6) If the same matter is subject to 2 or more requirements for publication in accordance with this section, the notices may be combined so long as the requirements of all applicable provisions are met.
- (7) A council may provide any additional notice respecting a matter that it considers appropriate, including by the Internet or other electronic means.

Annual meeting on report

- 99.** (1) The council must annually consider, at a council meeting or other public meeting,
- (a) the annual report prepared under section 98, and
 - (b) submissions and questions from the public.
- (2) The annual meeting must occur at least 14 days after the annual report is made available for public inspection under section 97.
- (3) The council **must give notice** of the date, time and place of the annual meeting in accordance with section 94 [public notice].

Updating the parcel tax roll

- 208.** (1) The collector may amend the parcel tax roll in relation to a matter referred to in section 205 (1) [grounds for complaints to review panel] on receiving a request under subsection (2) or on the collector's own initiative.
- (2) A person who owns a parcel included on a parcel tax roll may request that the roll be amended under this section respecting a matter referred to in section 205 (1), but only in relation to the person's own property.
- (3) In each year after the first year in which a parcel tax is imposed, the municipality must publish in a **newspaper** a notice indicating the following:
- (a) the parcel tax roll is available for inspection at the municipal hall during its regular office hours;
 - (b) a person who owns a parcel included on the parcel tax roll may request that the roll be amended respecting a matter referred to in section 205 (1) [complaints to review panel], but only in relation to the person's own property;
 - (c) the time by which a request must be made in order to be considered for that year.

Local area service on council initiative subject to petition against

- 213.** (1) If a council proposes to undertake a local area service on its own initiative in accordance with this section, it **must give notice** of this intention
- (a) in accordance with section 94 [public notice], and
 - (b) to the owners of parcels that would be subject to the local service tax.
- (2) The notice under subsection (1) must include
- (a) the information required under section 212 (2) [information requirements for petition],
 - (b) if the council is proposing that all or part of the costs may be waived or reduced in accordance with section 201 (3) [property subject to parcel tax], the amount that the property owner will be required to pay for this purpose, and
 - (c) a statement indicating that the council may proceed with establishing the service unless a petition against the service is presented within 30 days after notice has been given in accordance with this section.
- (3) For the purposes of subsection (1) (b), the corporate officer must mail the notice to the applicable address as set out in the last revised assessment roll.
- (4) Council may proceed with the local area service in accordance with the notice unless it receives a sufficient petition against the service within 30 days after the second publication under subsection (1) (a).
- (5) Section 212 (3) to (6) [rules respecting petitions for local service] applies to a petition under this section.
- (6) If a council has been prevented from undertaking a local area service because of a petition under this section, the council must not propose the same service on its own initiative within a period of one year after the presentation of the petition.
- (7) As an exception to subsection (6), a council may again propose a local area service on its own initiative within the period referred to in that subsection if the service is varied from or less expensive than that originally proposed to be undertaken.

Notice of permissive tax exemptions

- 227.** (1) A council **must give notice** of a proposed bylaw under this Division in accordance with section 94 [public notice].
- (2) Subject to subsection (3), the notice under subsection (1) must
- (a) identify the property that would be subject to the bylaw,
 - (b) describe the proposed exemption,
 - (c) state the number of years that the exemption may be provided, and
 - (d) provide an estimate of the amount of taxes that would be imposed on the property if it were not exempt, for the year in which the proposed bylaw is to take effect and the following 2 years.
- (3) In the case of a bylaw under section 226 (4) [revitalization program bylaw], the notice under subsection (1) of this section must include a general description of each of the following:
- (a) the reasons for and the objectives of the program;
 - (b) how the proposed program is intended to accomplish the objectives;
 - (c) the kinds of property, or related activities or circumstances, that will be eligible for a tax exemption under the program;
 - (d) the extent, amounts and maximum terms of the tax exemptions that may be provided under the program.

Recovery of taxes by the legal remedy of distress

- 252.** (1) Despite any Act, with the approval of the council, a collector may, directly or by agent, levy the amount of taxes due, with costs, by distress of one or more of the following:

- (a) the output of the taxed property;
 - (b) goods and chattels of the person liable to pay the taxes;
 - (c) any goods and chattels in British Columbia in the possession of the person liable to pay the taxes;
 - (d) any goods and chattels found on the premises of the person liable to pay the taxes;
 - (e) any goods and chattels found on the property of or in the possession of another occupant of the premises of the person liable to pay the taxes that would be subject to distress for arrears of rent due to a landlord.
- (2) Subject to subsection (3), the costs chargeable on distress under this section are those payable as between landlord and tenant.
- (3) A council may, by bylaw, regulate and alter the scale of costs payable in cases of distress under this section.
- (4) A collector who makes distress **must give notice** in accordance with section 94 [public notice] of
- (a) the time and place of the sale, and
 - (b) the name of the taxpayer whose property is to be sold.
- (5) At the time given in the notice under subsection (4), the collector or agent must sell at public auction the seized property or as much as may be necessary.
- (6) If there is a surplus from the sale over the amount of the taxes and costs, the surplus must be paid to the person in possession of the property when it was seized, unless claim to it is made by another person on the ground that the property sold belonged to the other person, or that the other person was entitled by lien or other right to the surplus.
- (7) If a claim is made by the person for whose taxes the property was distrained and the claim is admitted, the surplus must be paid to the claimant.
- (8) If the claim referred to in subsection (7) is contested, the surplus must be retained by the collector until the rights of the parties have been determined.
- (9) A person receiving a surplus under this section must give a receipt for it.

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AGENDA INFORMATION	
<input type="checkbox"/> Regular Meeting <input type="checkbox"/> Other:	Date: _____ Date: _____

Dept. Manager	GM/ Director	CAO
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The District of North Vancouver

REPORT TO COUNCIL

March 18, 2019
File:

AUTHOR: Jim Hanson, Councillor

SUBJECT: UBCM Resolution: Legal Aid Funding

RECOMMENDATION:

THAT the UBCM resolution regarding Legal Aid Funding attached to the March 18, 2019 report of Councillor Hanson is supported;

AND THAT the resolution is to be forwarded to the UBCM for consideration as a Resolution at the 2019 UBCM Convention.

REASON FOR REPORT:

Legal Aid is a critical aspect of a fair, balanced and accessible legal system. Without proper funding of legal aid, many persons lack proper access to justice. Deficiencies in legal-aid funding have the most profound impact on vulnerable populations, such as persons with disabilities, single parents, persons on limited incomes, seniors and others without access to financial resources necessary to engage private lawyers.

Without adequate legal aid, our justice system fails to provide access to the Court to those most in need of justice.

Timing/Approval Process:

UBCM resolutions for the 2019 Convention are due June 30, 2019 and must be Council endorsed. Unless deemed an emergency resolution, resolutions received after the deadline are entered in the resolutions cycle for 2020.

Conclusion:

The upcoming 2019 UBCM Convention presents an ideal forum to platform and gain support for a resolution requesting the Province to change funding for Legal Aid.

Options:

1. THAT Council support the submission of a resolution to the 2019 UBCM Convention to request the Province to restore Legal Aid funding;
2. THAT Council support the same resolution for the next UBCM Lower Mainland Local Government Association Annual General meeting (May 2020); or,

3. THAT Council does not support a resolution.

Respectfully submitted,

~~Jim Hanson~~
~~Councillor~~

Attachment 1 – UBCM Resolution

REVIEWED WITH:					
<input type="checkbox"/> Community Planning	_____	<input type="checkbox"/> Clerk's Office	_____	External Agencies:	
<input type="checkbox"/> Development Planning	_____	<input type="checkbox"/> Communications	_____	<input type="checkbox"/> Library Board	_____
<input type="checkbox"/> Development Engineering	_____	<input type="checkbox"/> Finance	_____	<input type="checkbox"/> NS Health	_____
<input type="checkbox"/> Utilities	_____	<input type="checkbox"/> Fire Services	_____	<input type="checkbox"/> RCMP	_____
<input type="checkbox"/> Engineering Operations	_____	<input type="checkbox"/> ITS	_____	<input type="checkbox"/> NVRC	_____
<input type="checkbox"/> Parks	_____	<input type="checkbox"/> Solicitor	_____	<input type="checkbox"/> Museum & Arch.	_____
<input type="checkbox"/> Environment	_____	<input type="checkbox"/> GIS	_____	<input type="checkbox"/> Other:	_____
<input type="checkbox"/> Facilities	_____	<input type="checkbox"/> Real Estate	_____		
<input type="checkbox"/> Human Resources	_____	<input type="checkbox"/> Bylaw Services	_____		

Attachment 1 – UBCM Resolution

Legal Aid Funding

WHEREAS legal aid is an essential service which provides the marginalized, vulnerable and poor with access to justice;

WHEREAS legal aid has been chronically underfunded for over 25 years making it very difficult for the marginalized, vulnerable and poor to get legal assistance from a lawyer;

WHEREAS many studies and reports, including those commissioned by Government, have noted the serious consequences for society by the continued chronic underfunding of legal aid;

WHEREAS the Association of Legal Aid Lawyers have been attempting to negotiate appropriate levels of funding for legal aid;

AND WHEREAS over 575 members of the Association of Legal Aid Lawyers voted overwhelmingly to withdraw services on April 1, 2019, to protest the intolerable levels of funding;

THEREFORE, be it resolved that the UBCM recognizes that legal aid is an essential public service that provides legal representation to the most vulnerable, marginalized and impoverished members of our city and that the chronic underfunding of legal aid has led to a serious inequality in the delivery of legal services in our communities and

THEREFORE, be it also resolved that the UBCM encourages the Province of British Columbia to resolve this matter with the Association of Legal Aid Lawyers and restore funding to Legal Aid.

Submitted by the District of North Vancouver

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AGENDA INFORMATION	
<input checked="" type="checkbox"/> Regular Meeting	Date: <u>APRIL 15, 2019</u>
<input type="checkbox"/> Other:	Date: _____



The District of North Vancouver REPORT TO COUNCIL

April 1, 2019
File: 01.0380.20/074.000

AUTHOR: Brett Dwyer, Interim Manager Community Planning

SUBJECT: Naming of New Streets in Lions Gate Village

RECOMMENDATION:

THAT "Lions Gate Lane Street Naming Bylaw 8372, 2018", is given FIRST, SECOND, and THIRD reading.

REASON FOR REPORT:

At the Regular Meeting of Council on October 29, 2018, Council passed the following motion: that "*Lions Lane, Street Naming Bylaw 8372, 2018*" be referred back to the Place Naming Committee for further consultation with the local community".

This report outlines the subsequent consultation efforts with the local community and the resulting recommended street name from Place Naming Committee.

EXISTING POLICY:

Council approved the *Naming Selection Criteria and Procedures Policy* on February 16, 2015 (**Attachment 1**). Since then, the Place Naming Committee has been working on OCP implementation efforts to identify streets that will require a name and/or renaming in the future.

ANALYSIS:

The shared street provides a strategic north/south connection through the neighbourhood and will be a multi-modal space with the highest priority given to pedestrians. This street is to be constructed as part of the LARCO project (2035 Fullerton Avenue) located between Fullerton Avenue and Curling Road, approx. 40m west of Capilano Road. On November 15, 2014, Council gave final approval to bylaw 8041 to rezone the subject site from C5 to Comprehensive Development Zone 79 (CD79) to enable the development of a mixed use project with 451 residential units. The development permit (for building design) was issued by Council on July 25, 2016. Construction of this project is expected to be complete in 2019.

As per the policy, naming of public streets that are not identified on Development Permit plans are to be approved by Council by bylaw. Since the development permit for this project has already been issued, a highway naming bylaw is required to officially name this street.

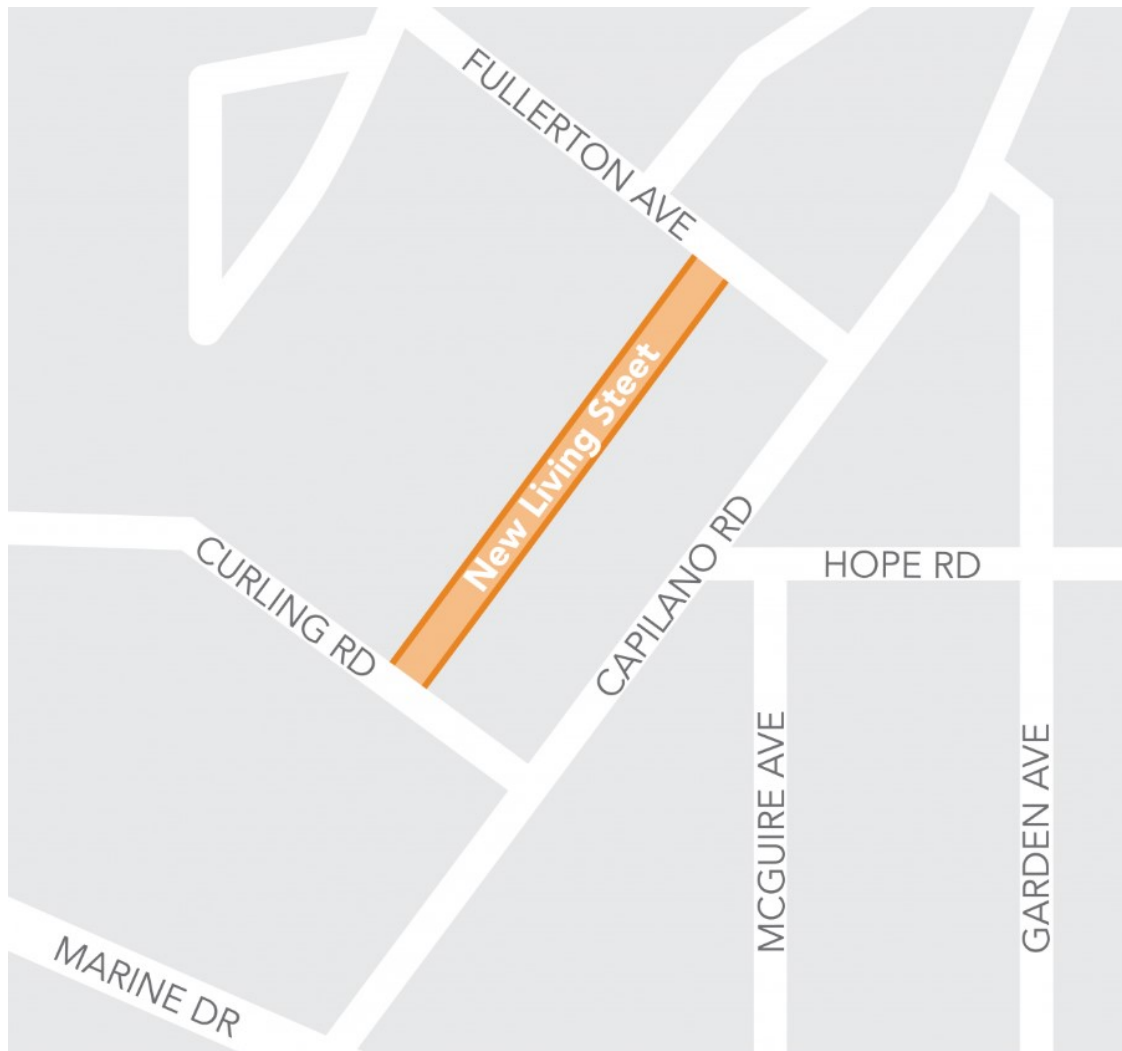


Figure 1: Street to be named.

As per Council direction, staff undertook further consultation with the local community. Engagement efforts included:

- Letter drop to Lions Gate Village residents and businesses, Lower Capilano Community Association, Lions Gate Community Association, and Woodcroft Estates management to ask for naming suggestions (total of 449 letters),
- 2 on site signs at street locations were posted,
- District website and social media (Facebook and Twitter) outreach, and
- Survey (DNV.org/NameThisStreet) which ran from January 10 to February 1, 2019 on the District's website.

A total of 116 responses were received, containing over 150 unique naming suggestions as part of the above-mentioned engagement efforts (**Attachment 2**).

The highest number of responses (24) was using a variation of a name beginning with 'Lions', with the most frequently mentioned variation being: Lions Gate Lane/Promenade/Way.

Guided by criteria contained in the *Naming Selection Criteria and Procedures Policy* and results of the engagement efforts, the Place Naming Committee met on February 13, 2019 and recommended Lions Gate Lane for the name of the shared street as detailed in the Lions Gate Lane, Street Naming Bylaw 8372, 2018 (**Attachment 3**). Possible alternate names recommended by the Place Naming Committee for this street include 'Lions Lane' or 'Chinook Lane'.

As additional street names are required in the Lions Gate Village centre staff will bring forward recommendations with names selected from the recent consultation.

Timing/Approval Process:

Construction of the shared street is now underway. As part of the issuance of permits for this development in Lions Gate Village, a legal street name needs to be registered with the Province, which allows legal addresses for new buildings. Fire Services, Policing, etc. also require legal addresses for new buildings.

Conclusion:

The Highway Bylaw is required for the shared street as the development permit has been issued and the project is under construction. The Place Naming Committee recommends that the new street in the Larco project be named "Lions Gate Lane".

Options:

1. THAT "Lions Gate Lane Street Naming Bylaw 8372, 2018", is given FIRST, SECOND, and THIRD reading;

OR

2. Council provide alternative direction for street naming in Lions Gate Village Centre.

Respectfully submitted,



Brett Dwyer
Interim Manager Community Planning
Manager Development Services

Attachment 1: *Naming Selection Criteria and Procedures Policy*

Attachment 2: Lions Gate Village Naming the 'Living Street' – Survey Suggestions, February 2019.

Attachment 3: "Lions Gate Lane – Street Naming Bylaw 8372, 2018"

REVIEWED WITH:					
<input type="checkbox"/> Community Planning	_____	<input type="checkbox"/> Clerk's Office	_____	External Agencies:	
<input type="checkbox"/> Development Planning	_____	<input type="checkbox"/> Communications	_____	<input type="checkbox"/> Library Board	_____
<input type="checkbox"/> Development Engineering	_____	<input type="checkbox"/> Finance	_____	<input type="checkbox"/> NS Health	_____
<input type="checkbox"/> Utilities	_____	<input type="checkbox"/> Fire Services	_____	<input type="checkbox"/> RCMP	_____
<input type="checkbox"/> Engineering Operations	_____	<input type="checkbox"/> ITS	_____	<input type="checkbox"/> NVRC	_____
<input type="checkbox"/> Parks	_____	<input type="checkbox"/> Solicitor	_____	<input type="checkbox"/> Museum & Arch.	_____
<input type="checkbox"/> Environment	_____	<input type="checkbox"/> GIS	_____	<input type="checkbox"/> Other:	_____
<input type="checkbox"/> Facilities	_____	<input type="checkbox"/> Real Estate	_____		
<input type="checkbox"/> Human Resources	_____	<input type="checkbox"/> Bylaw Services	_____		



The Corporation of the District of North Vancouver

COUNCIL POLICY

Title	Naming Selection Criteria and Procedures
Section	Corporate Administration

POLICY

It is the policy of Council that there be Naming Selection Criteria and Procedures to provide a consistent and transparent approach to the naming of streets, parks, community facilities and places in the District of North Vancouver and to inform the work of the Place Naming Committee and Council decision making regarding name selection.

Policy approved on: February 16, 2015

PROCEDURE

The following procedures are used to implement this policy, but do not form part of the policy. These procedures may be amended from time to time at the discretion of the Chief Administrative Officer.

General procedures apply to the naming of all categories - streets, parks, community facilities and places. Specific procedures that follow provide additional detail that applies to individual categories only.

Definitions:

For the purposes of this policy:

“Community facilities” shall include community recreational or social facilities may include community recreational facilities, indoor/outdoor sports facilities (e.g. tennis courts) libraries, theatres, galleries, arts and other facilities and public buildings as well as interior rooms or spaces, that serve as places for social, recreational, cultural and other related purposes and may be District owned and operated, or operated by the North Vancouver Recreation Commission, Library Services or other agency or non-profit for the benefit of District residents.

“Parks” shall include District park land and park assets such as sports fields, golf courses, playgrounds, fountains, trails, multi-use pathways and bridges, natural open space and village greens.

“Places” shall include town and village centres, neighbourhoods and may also include public plazas and public art.

“Streets” shall include public and private roads, highways, lanes, bridges and other road designations as per Appendix A. May also include trails and multi-use pathways that are not park land.

General Name Selection Criteria:

Consider names that:

- have a strong connection to the local community;
- reflect cues from the local context and have historical, social or cultural relevance;
- may reference local geographic and environmental features such as mountains, rivers, creeks, coves, flora and fauna;
- engender a positive image;
- are not the same as or sound similar to existing North Shore names;
- avoid duplicating existing MetroVancouver names, where possible;
- generally avoid honourific or personal names except in occasional circumstances as warranted;
- avoid difficult pronunciation and spelling; and
- do not lend themselves to inappropriate abbreviations or acronyms.

General Consideration of Honourific or Personal Names:

Consideration of honourific names will first be deliberated by Council prior to community engagement.

Where honouring of special persons and use of personal names is warranted, then names should only be considered:

- a. posthumously for those individuals who have been deceased for at least two years, with exceptions to be approved by Council;
- b. with informed written consent of the named party's next of kin;
- c. where there is indication of broad District or neighbourhood support for this name;
- d. when the nominated person is well-respected, well-recognized and has made an exceptional positive contribution to community civic and/or community health and well-being; and
- e. where there is a clear connection between the community contribution of the individual or family and the street, park, facility or place being named.

Persons currently holding elected office, persons currently working for the District, persons actively serving the District on and standing or advisory committees, or local developers, shall not be considered for naming.

If an honourific name is selected, the family of the individual or family who is being honoured by the naming will be invited to a Council meeting and the Mayor will read and present a framed naming proclamation or plaque.

These procedures for honourific naming are not intended to provide direction for corporate and sponsorship name recognition which are instead addressed in the Corporate Sponsorship Policy.

Engagement Process:

The public engagement used for any given project will be determined by the level of community significance and/or the number of community members potentially impacted by, or who may have an interest in the name selection.

For smaller-scale naming or renaming projects (e.g. local streets or a neighbourhood park) the public engagement process may include input from the local neighbourhood surrounding the site.

For larger-scale naming or renaming projects (e.g. community facility or town centre) the public engagement process may include a larger portion of the District or possibly the entire District.

Both scenarios will include multiple channel opportunities for public input including online, in person, by phone and in writing.

Decision Making and Approval Process:

Council retains final decision making authority for the approval of all new names, unless specified otherwise by Council.

Council may, at its discretion and at any time, determine if a new or existing name (honourific or otherwise) is no longer appropriate and move to consider a new name.

Facilities, places and other areas for Corporate Sponsorship and Place Naming consideration are to be coordinated on an annual basis and reviewed by the Executive Committee.

Administration of New Name:

Following the selection of a new name, District staff will notify relevant public utility organizations, government agencies, emergency responders, internal departments (for updates to databases and GeoWEB), Google Maps, and other groups as needed, of this change. Updates to various plans and/or bylaws may also be needed, as appropriate.

SPECIFIC PROCEDURES

The following specific procedures apply to individual categories as identified only.

Street Naming Procedures:

Street Name Selection Criteria

In addition to the general criteria listed above, the following criteria will also be considered for street naming:

- The name should be concise and easy to pronounce.

- Extensions of a common name should generally be limited to one duplication (e.g. Byron Road and Byron Place) and take into account the Road Designations per Appendix A.
- Where a collector street changes direction, it shall retain its same name.

Street Name Administration Process

1. Naming of new private roads does not require bylaw adoption and can be implemented by the Planning Department through the Development Permit process, prior to building addressing.
2. New public road names are generally, however not mandatorily, introduced through the subdivision application process.
3. Naming or renaming of public streets that are not identified on Development Permit plans will be approved by Council by bylaw.
4. Once such bylaw is adopted, the District will send notification to property owners and residents and advise them to change their address and notify any contacts. (Canada Post generally provides a one-year grace period).

Parks Naming Procedures:

Parks Related Definitions:

“Ease of Locating” means a name that assists in the finding of a park by citizens unfamiliar with its location within the District.

“Special Person” means a person(s) who has broad District or broad neighbourhood recognition and acceptance for their community work, and is recommended for such recognition in a public manner, in a public place.

Parks Name Selection Criteria

In addition to the general criteria listed above, the following criteria will also be considered for park naming:

- The District of North Vancouver will name parks after adjacent streets or known neighbourhoods for ease of locating;
- Existing parks that are already named are generally not to be renamed after special persons either living or dead;
- Parks that are not named at the time of their approval, (through the appropriate dedication or zoning) or later, at their time of development or any other time, are only to be given names that follow adjacent street names or the names of the neighbourhood in which they are located, or adjacent geographic features such as mountains rivers, creeks and coves, or names of adjacent community centres.
- Small, locally used parkettes may be exempted from the policy, only if they do not currently have a name and there is a direct association of the parkette and the community contribution of the individual being honoured.

Use of Honourific Names

Honourific or personal names should not be considered for the naming of public parks, but may be considered for assets within parks such as a sports fields, golf courses, play grounds, fountains, trails, benches, park facilities, multi-use pathways and bridges, picnic shelters and gardens, as long as there is a clear connection between the community contribution of the individual and the facility or area being named.

- The funding of the approved means to honour a special person (i.e. plaques, landscape amenities, etc. and all the installation or renovation costs) is generally to be fully covered by the proponents.

Administration Process for Naming Parks

Council approval, but no bylaw is needed to administer the name change.

Consultation with potentially affected local or community groups and the general public on name ideas may occur if, and as directed by Council.

Community Facility Naming Procedure:

Community Facility Selection Criteria

In addition to the general criteria listed above, the following criteria will also be considered for community facility naming. The name may:

- reflect the geographic location of the facility including but not limited to: a well-known street, natural feature, neighbourhood or subdivision;
- reflect or share the name of an adjacent park;
- commemorate an historic event (e.g. centennial) or event of cultural significance (e.g. Olympics);
- help create an identity appropriate to public communications and marketing as well as civic and community goals; and
- reflect user programs and services as a secondary naming consideration.

Features and spaces within a facility can be named separately from the facility.

Use of Honourific Names

Honourific or personal names should not be considered for the naming of community recreation facilities, libraries, theatres, galleries, arts and other facilities centres, but may be considered for the naming of individual rooms and interior spaces within these facilities.

Where a facility is operated by NVRC, Libraries, other agency or non-profit group for the benefit of District residents, Council may at its discretion, consider the names of special persons or other names recommended by these agencies for the interior spaces and rooms within community facilities; or Council may delegate the naming of these interior spaces and rooms to the relevant organization or agency.

Administration Process for Naming Community Facilities

Council approval, but no bylaw is needed to administer the name change.

Consultation with potentially affected local or community groups and the general public on name ideas may occur if, and as directed by Council.

Place Naming Procedure:

Place Naming Selection Criteria

In addition to the general criteria listed above, the following criteria will also be considered for place naming. The name should:

- take cues from the local, geographic, historical, social or cultural context;
- have a strong positive connection to the local community;
- consider the emerging identity and character for town and village centres; and
- contribute to the establishment of community identity and sense of place.

It is anticipated that place naming will require substantive community engagement.

Use of Honourific Names

Honourific or personal names should not be considered for the naming of neighbourhoods, towns or village centres, but may be considered for the naming of outdoor spaces and public plazas.

Administration Process for Naming Places

Council approval, but no bylaw is needed to administer the name change.

Consultation with potentially affected local or community groups and the general public on name ideas may occur if, and as directed by Council.

Appendix A: Types of Road Designations

Road Designation	Description	Example
Avenue	Straight through-road, generally north-south	Tatlow Avenue
Boulevard	Landscaped major road	Grand Boulevard
Close	Short cul-de-sac	Ashley Close
Court	Cul-de-sac	Francisco Court
Crescent	Curved through road	Tempe Crescent
Drive	Continuous route of some length	Marine Drive
Gardens	Centrally landscaped residential road	Ottawa Gardens
Gate	Entrance road to a subdivision	Parkgate
Highway	Provincial arterial road	TransCanada Highway
Lane	Basic legal term for a narrow public way	Parkside Lane
Parkway	Ideally, a landscaped or scenic highway	Mount Seymour Parkway
Path	Basic legal term for a public pedestrian way	Bridal Path
Place	Single or double cul-de-sac	Trillium Place
Point	Central road on a promontory of land	Lookout Point
Road	Basic legal term for a public way	Lynn Valley Road
Street	Straight through-road, generally east-west	29 th Street
Trail	Wooded pedestrian way	Baden-Powell Trail
Way	Meandering residential road	Starlight Way
Walk	Improved pedestrian way	Sea Walk

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LIONS GATE VILLAGE

Naming the 'Living Street' - Survey Suggestions

February 2019

INTRODUCTION

As part of redevelopment in Lions Gate Village, a new north-south street is being built between Fullerton Avenue and Curling Road. It is modeled on a 'woonerf', or living street, which is a street designed for all people to share, whether they're walking, cycling, or driving. After consulting residents, conducting research through the North Vancouver Museum and Archives, and collecting other inputs, the Place Naming Committee recommended that Council adopt "Lions Lane" as the name for the new street. However, at their October 29, 2018 regular meeting, Council directed instead to refer the name back to the Place Naming Committee for further consultation with the local community.



Location of new 'Living Street'

To solicit further naming suggestions from the community for this street and others in the area, a survey was created that invited members of the community to submit their suggestions. This survey was open on the District's website (DNV.org/NameThisStreet) from January 10 to February 1, 2019. In total, 116 survey responses were received, containing over 150 unique naming suggestions. Three emails containing naming suggestions and other comments were also received. The complete list of names and comments can be found in Appendix A.

ENGAGEMENT NOTIFICATION

We used several methods of communicating the opportunities for input, including:

- District's website (DNV.org) and social media (Facebook and Twitter);
- Signs posted in the Lions Gate area
- Mail-out to Lions Gate Village residents and businesses (449 letters were sent)

The North Shore News also picked up this story and ran an article about it in their publication on January 22, 2019.



Sign posted in Lions Gate Village inviting people to submit suggestions

SHORTLISTED NAMES

The list of over 150 unique naming suggestions was short listed by staff using the *Naming Selection Criteria and Procedures Policy* as a guide. The short list was then discussed with the Place Naming Committee. The Committee's recommendations for naming the 'Living Street' and surrounding streets in the area will be presented to Council in March, 2019.

SURVEY HIGHLIGHTS

The most frequently mentioned suggestions included the following:

- 24 responses suggested some variation of a name beginning with 'Lions', with the most frequently mentioned variation being: Lions Gate Lane/Promenade/Way.
- 14 responses and several comments suggested giving the street a name relating to the First Peoples of the area, or consulting with local First Nations on an appropriate name. Bilingual street signs with both the English and Indigenous versions of the street name were also suggested.
- 8 responses supported the previously recommended name 'Lions Lane'.
- 7 responses suggested naming the street after local salmon or trout species, such as 'Chinook' or 'Coho'.
- 7 responses suggested naming the street after Tim Jones, a former North Shore Rescue Team Leader who passed away in 2014.

APPENDIX A: LIST OF SUBMITTED NAMES & COMMENTS

- 703-2016 Fullerton Avenue
- Agrarian Way or Avenue
- Alive Drive
- Anemone
- Aspen Way
- Átsnach Lane
- Bryan Adams Avenue
- Camino Lane or Street
- Campbell Lane
- Capilano Commons or Corridor or Crawl or Crossing or Way
- Ch'ich'iyúy Elxwikn
 - (or Twin Sisters Lane) - the Indigenous name for what are now called the Lions
- Chief Gibby Jacob Drive
 - From the Squamish Nation, is now retired, played an instrumental role in bringing the 2010 Olympics to Vancouver, and had a tremendous relationship with surrounding North Shore communities
- Chinook Drive or Lane
- Chuchu Lane
 - Halkomelem word for 'away from the shore' or 'toward the river'
- Cleveland Street or Place
- Coho Crescent or Drive or Way
- Communico
 - Latin for 'share', 'common space'
- Creekside
- Croftwood
- Curling Lane
- Dank Street
- Dean Drive
 - StellaJo Dean
- Docker Lane
- Dockworker Lane
- Don Bell Lane
- Eagle Lane or Street or Way
- Eagle Point or View
- Eagle View
- Eden Drive
- Effie Sutherland
 - Submitter believes Effie Sutherland was very involved in the inception of the Capilano Winter Club
- Eliana Avenue
- Elon Musk Street
- Epic Games Street
- Ertonwood
- Evergreen Court or Road or Way or Place or Mews
- Flower Lane or Street
- Fullerton Lane or Place
- Fullwood
- Gateway Lane
- Gatewood
- Gladden Avenue
- Green Lane
- Greenway Boulevard or Lane
- Grouse View Street
- Guinness Street or Lane
 - Guinness family, financed the Lions Gate Bridge
- Harmony Way
 - Nearby Harmony Arts festival and community is designed to bring about a harmonious community-living area
- Henderson Street
- Honey Lane or Street
- Huckleberry Street
- Hughes Street
- Hummingbird Lane or Street
- Humulchstn Lane
- John Cena Parkway
- Jones
 - Tim Jones of North Shore Rescue
- Juan Street
- Kiap Street
- Langworthy Street
- Levin Corridor
 - Dutch for 'live', or 'life'; similar to woonerf, meaning a living street
- Liberty or liberté Lane or Street
 - French for 'liberty'
- Linden Way
- Lion Main Lane
- Lion's Main Lane
- Lions Gate Lane or Place or Promenade or Road or Street or Terrace or Way
- Lions Gateway
- Lions Lane
- Lions Mane
- Lions Promenade or Road or Street or Stroll
- Lions View Street
- Lions Walk
- Lionsbay Lane or Street
- Lionsview Street
- Lionswood
- Living River Driver
- Log Driver Lane
- Lucky Lions Lane

- Lulling Lane
- Lumberjack Lane
- Lynx Lane
- Magnolia Court
- Mandela Walk
- Marega Lane
 - Charles Marega, created lion sculptures at the foot of the Lions Gate Bridge
- Marysville Way or Marysville Avenue
 - Mary's husband was Chief Joe Capilano; near Capilano Road
- Mathias Way
- Mauboula Street
 - Annie Mauboules
- McCardell Walk or Mike McCardell Way
- Meme Avenue
- Meristem Street
- Modern Road
- Montagne Lane or Street
 - French for 'Mountain'
- Mountain Waters Walk
- Mountainview Street
- Mt. Washington or Washington Lane or Street
- Mulberry Place
- Nature's Way
- Nord Drive
- Nordjack Drive or Lane
- Nordstradamous Ave
- North Shore is the Best Shore
- North Shore Person Mall
- Oostindie Ave
- Owl Lane
- Parkway
- Paulina Street
- Peace and Brotherhood Lane
 - The 'twin sisters' had two offspring, 'Peace' and 'Brotherhood'
- Pebble Boulevard
 - Related to the sport Curling, as it will intersect with Curling Road
- Peters Street
- Pewdiepie Street
- Polina Street
- Rain Lane
- Raindrop Road
- Redwood Road
- Ridgewood
- River Lane
- River Link Street
- River Road or Street or Edge or Walk
- Rock Street
- Rogan Road
 - Seth Rogan
- Rose Lane or Street
- Rosewood
- Rugby Road
- Ryan Reynolds Road
 - Ryan Reynolds
- Saffron
 - acknowledging the main residents of that area
- Salish Lane or Street
- Salmon Road or Street
- Salmon Run Way
- Sedin Street
 - Sedin brothers
- Sequoia Drive
- Shackleton Ave
- Shipyard Shackle Road
- Singh Street
- Skishore Place
- Sockeye Street
- Soper Stroll
 - former Canadian ice dancing champions Barry and Louise Soper from the Capilano Winter Club
- Spakwus
 - Squamish word for 'Eagle'
- Spring Lane or Street
- Squamish Lane
- Steelhead Run
- Stone Street
 - Related to the sport Curling, as it will intersect with Curling Road
- Street Name
- Streety (or Streetie) McStreetface
- Summer Lane
- Sunshore Place
- Sutherland Way
- Suzuki Street
 - David Suzuki
- Svend Street
 - Svend Robinson
- Swordfern Lane
- Tanúyap
 - Squamish word for 'Everyone'
- The Lions Promenade
- Three Peak Living Street
- Tim Jones Way or Place or Road or Boulevard
 - Tim Jones of North Shore Rescue
- Tims
 - Tim Jones of North Shore Rescue
- Tonewood
- Twin Sisters Street
- Two Sisters Street or Lane or Place or Road or Way
- Unaffordable Blvd
- VancuHa
 - Stands/sounds for Vancouver + Heart
- Vander Ave
- Village Boulevard or Lane

- Village Wood
- Walk to Fishing
 - Former pathway along eastern riverbank of Capilano River, near or along where the Woonerf will be, was known to local Squamish residents as "walk to fishing" as it lead to the mouth of the river
- Weir Lane
- Wilderness Way
- Winter Club Way or Wynd
- Wintergreen
- Wiseau Way
 - Tommy Wiseau
- Wiz Ave or Lane or Road
- Wood Tone
- Woodgate
- Woonerf Way

Other comments:

- "Members of the Community Heritage Advisory Committee (CHAC) suggested that the First Nations who have traditional territory in the area and be involved in the placenaming process"
- "...The creation of this new neighborhood at the feet of the two sisters would be a great opportunity to honor this tradition and further reconciliation efforts with First Nations"... "By the way, it could be a opportunity to start using bilingual street signage as it is the case in the Squamish municipality."
- "It would be appropriate to reinstitute this name description [Walk to Fishing] as an acknowledgement of the heritage and character of this place. Squamish speakers can furnish an accessible phonetic rendering of the name in a form that satisfies English pronunciation, but re-iterates the deep cultural and biological and colloquial connections. Recognized Squamish-speaking leaders had several years earlier offered a suitable title."
- "I suggest we consult Squamish Nation on an appropriate name that would be relevant to geography and reconciliation spirit"... "other streets could also follow this principle"
- "A Squamish or Tsleil-Waututh Nation word should be sought. We need to do much more to recognize the First Peoples of the District. This is a great oppprtunity to advance reconciliation and to not ignore the place names, languages and words that we here long before the District existed."
- "The City of Vancouver has set a precedent by renaming 2 public plazas in Indigenous languages. I think that DNV residents can learn to say Ch'ich'iyúy Elxwíkn as a sign of respect and of reconciliation."
- "...reflect some of the historic occupations in the woods and waterfront of North Vancouver."
- "I like Lions Lane!"
- "note: lane would be a misnomer, due to it functioning as an address for high rise buildings...."
- "I like the current suggestion for naming the street "Lions Lane"."
- "Lions Lane sounds good to me."
- "...I can see artwork at the beginning and ending of the "woonerf" (meaning "living way"/shared way") in honour of the the beautiful legend of the Two Sisters and their way of peace."
- "I tried searching who founded the Capilano Winter Club as this is the property this new area sits on. I believe a lady named Effie Sutherland had a lot to do with the inception. So why not acknowledge that"
- "The playing surface in curling is called "the sheet."..."The sheet is covered with tiny droplets of water that become ice and cause the stones to "curl," or deviate from a straight path. These water droplets are known as "pebble.""
- "[name it something related to the sport Curling] As they will intersect with Curling it would be a fun reference as well as our mountains being rocky"
- "We moved into [redacted]. The Fullertons lived in their house at that time, most mornings Mr Fullerton would stroll through the area, a very stately gentleman surveying the neighbourhood very proudly. If I could choose a name I would like it to be and I'm sorry I don't know Mr. Fullertons' first name with a Lane or Walk attached. I'm sure you have Mr. Fullertons' file available to search his name."
- "I am in opposition to the planned New Living Street to be shared by slow moving vehicles, cyclists and pedestrians. It is not wide enough to allow for the three. Instead you should plan to maintain the walkway at Belle Isle which is a great convenience for Woodcroft residents. Bell Isle is being taken over by developers but this walkway must be maintained and should not be closed. The proposed New Living Street is too far for Woodcroft residents to take advantage of. By the way the LARCO building is an ugly site and does not speak well for the talents of BC architects. What an eyesore. Only the hungry developers will benefit. Has changed the entire character of the neighbourhood."

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The Corporation of the District of North Vancouver**Bylaw 8372**

A bylaw to name portions of highways

The Council for The Corporation of the District of North Vancouver enacts as follows:

Citation

1. This bylaw may be cited as "Lions Gate Town Centre, Street Naming Bylaw 8372, 2019".

Naming of Highway

2. The east frontage road from Curling Road to Fullerton Avenue, as dedicated by subdivision plan EPP64497 of Lot H, Block 15, District Lot 764, G1, NWD, Explanatory Plan LMP11271 and shown hatched in red on the plan attached hereto as Schedule A to this bylaw is hereby named "Lions Gate Lane".

READ a first time

READ a second time

READ a third time

ADOPTED

Mayor

Municipal Clerk

Certified a true copy

Municipal Clerk

Schedule A to Bylaw 8372

