

May 24, 2022

Nicole Olenick
Coriolis Consulting Corp.
500-1130 West Pender Street
Vancouver, BC V6E 4A4

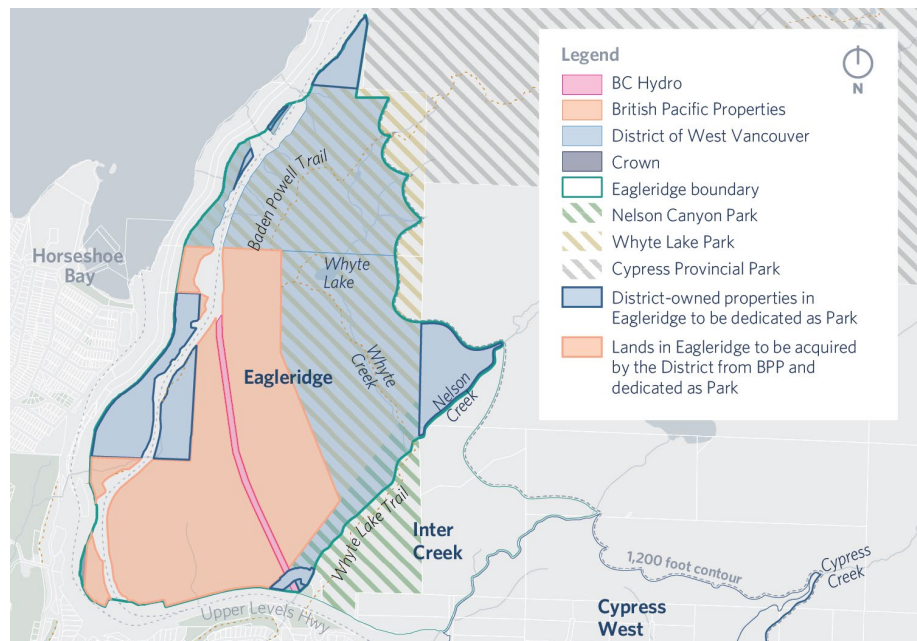
BY EMAIL: nolenick@coriolis.ca

Dear Nicole,

Solstice Sustainability Works Inc. undertook research and analysis to prepare the report of July 17, 2019 titled “West Vancouver’s Natural Capital Assets: A Preliminary Inventory” and a technical appendix (collectively “the original report”).

You have requested a specific application of the original report’s results to the lands in Eagleridge that are owned by British Pacific Properties Limited (BPP), shown in the map below as the orange shaded parcels. These Eagleridge lands owned by BPP were already included in our inventory for the District of West Vancouver as a whole. This letter provides the results of our calculations for the portion of the inventory attributable to the lands in Eagleridge owned by BPP (“the Eagleridge lands”). It includes notes on possible limitations. It would be appropriate to use the results in this letter for general communication or high level planning purposes. It would not be suitable for financial valuation purposes.

Location of the Eagleridge lands



Description of work done

Land cover classification and area

We relied on data supplied by you and District staff for determination of the area (in hectares) within the Eagleridge lands, classified by land cover type. Relevant land covers for the Eagleridge lands are forests, shrubs, grasslands, and creeks. The original report distinguished between forests above the 1200 foot elevation (“upper forest”) from forests below (“urban forest”). Since the Eagleridge lands lie below the 1200 foot elevation line, we used values for the urban forest, noting also that you have characterized it as second growth forest. Most of the Eagleridge lands are classified as forest (90.6%). The area of shrub and grassland is relatively small (0.3%) and was used only in one aspect of the calculation. The balance of the area (9.1%) was attributed to creeks.

Identification of ecosystem services

We referred to the original report to identify the main ecosystem services provided by the types of landcover within the Eagleridge lands. For forests, these services include clean water (water absorption, supply, and filtration), clean air, climate regulation, habitat, recreation and tourism, health and wellness, and aesthetic and cultural services. Creeks provide services related to clean water supply, water regulation and storm water management, waste treatment, habitat, and recreation. Refer to the original report for more information.

Calculation of annual and perpetuity values

We used the same ecosystem service values per hectare (in \$2019 CDN) as in the original report and extended them using the hectares you supplied to arrive at annual values per hectare. This represents the ecosystem benefits provided by nature each year. Consistent with our methodology in the original report, we also calculated the natural capital asset values that could result if ecosystems were maintained to produce the same flow of services in perpetuity. We used the same discount rate for the perpetuity calculation (3%) as in the original report¹.

Considerations and limitations

Users of this letter should interpret the results with consideration to the following limitations:

1. The original report was intended for the purpose of general communication to the public and to provide “a high level inventory of natural capital assets within the boundaries of the District of West Vancouver, whether on District owned or private land.” It was not intended for land or business valuation and does not follow methods generally accepted for those forms of valuation.
2. The original report included disclaimers and limitations as to methodology which would also apply here.
3. The Eagleridge area owned by BPP is a small portion (approximately 1.4 %) of the total District land base. Some ecosystem services, such as habitat for biodiversity, may not function the same way on a small parcel as they do across a larger landscape. For example, there could be a loss of service function if populations are isolated. Conversely, there could be greater value if the small parcel protects unique or rare habitat. Further research would be needed to determine any impact of the change in scale.
4. Riparian buffers are an integral part of the ecosystem of creeks. In the original report we determined the area of creeks using data from Metro Vancouver’s Sensitive Ecosystem Inventory, which included some visual observations of the riparian width and condition. We understand that the creek area determined for the Eagleridge lands was based on geographic information system (GIS) techniques that located the midpoint of each creek and applied a standard buffer of 15 metres each side. This may produce a slightly different allocation between forest and creek

¹ The rate of 3% is a central value typically used for this kind of analysis and represents the rate recommended by Canada’s Treasury Board Secretariat Analysis Guide, <https://www.tbs-sct.gc.ca/rtrap-parfa/analys/analys-eng.pdf>

area to what was in the original report, but as the area of creeks for the Eagleridge lands is only 9% of the total area, we do not believe it would affect the overall value significantly.

- For the calculation of carbon storage, we have used the same social cost of carbon as in the original report. The social cost of carbon is a measure of the damage resulting from an extra tonne of carbon emissions. This figure represented the value used by the Intergovernmental Panel on Climate Change (IPCC) of \$60.97 per tonne in 2014, updated to \$66.17 in 2019 dollars. Values for the social cost of carbon vary, but current estimates in use by Canadian and international scientists are closer to \$47 to \$50 per tonne of carbon dioxide. The impact of this is noted in Results.

Results

Carbon storage

Consistent with the original report, we present the results for carbon storage separately from the other values because, as explained in the original report, “stored carbon represents all the carbon accumulated in plants and soils at a point in time.” It is a stock, as opposed to a flow. The forests, shrubs and grassy areas of the Eagleridge store carbon in trees, plants and soils. Our estimate included only the carbon in soils and trees.

We estimate the total value of carbon storage applicable to the Eagleridge lands as \$3.6 million in 2019 dollars. If we applied a current, lower cost of carbon of \$50 per tonne, the value would be closer to \$2.7 million today.

Table 1 Carbon Storage

Landcover	hectares	carbon/ha (tonnes)	Value/tonne (\$2019)	Total value of carbon storage (\$2019)
Forest	96.15	564.5	66.17	\$3,591,488
Shrubs	0.15	240	66.17	\$2,382
Grasslands and meadows	0.15	142	66.17	\$1,409
Totals	96.45			\$3,595,279

Summary of annual values

Other ecosystem services can be valued on an annual basis. We estimate the total value of ecosystem services provided by forests and creeks on the Eagleridge lands between \$354,000 and \$1 million annually in 2019 dollars. If the natural capital is maintained so that it can reliably deliver services year after year, we can estimate the value of this capital between \$11.8 million to \$34.4 million. An analysis of forest and creek values, by ecosystem service is shown in Tables 3 and 4. As the values for carbon sequestration (the annual addition to carbon storage) are also based on the social cost of carbon, the same caveat mentioned for carbon storage would apply.

Table 2 Summary of Annual Values

Values by landcover type	hectares	Low annual estimate (\$2019)	High annual estimate (\$2019)	Low estimate perpetuity (\$2019)	High estimate perpetuity (\$2019)
Forest	96.15	\$326,910	\$923,905	\$10,897,000	\$30,796,845
Creeks	9.62	\$27,100	\$108,850	\$903,318	\$3,628,343
Totals	105.77	\$354,010	\$1,032,756	\$11,800,318	\$34,425,188

Table 3 Forest Ecosystem Service Values


Forest ecosystem services	hectares	Low value/ha (\$2019)	High value/ha (\$2019)	Low annual estimate (\$2019)	High annual estimate (\$2019)	Low estimate perpetuity (\$2019)	High estimate perpetuity (\$2019)
Clean water supply and filtration	96.15	\$2,405	\$6,079	\$231,241	\$584,496	\$7,708,025	\$19,483,195
Stormwater management	96.15	\$780	\$1,906	\$74,997	\$183,262	\$2,499,900	\$6,108,730
Clean air	96.15	\$16	\$629	\$1,538	\$60,478	\$51,280	\$2,015,945
Carbon sequestration	96.15	\$50	\$221	\$4,808	\$21,249	\$160,250	\$708,305
Habitat	96.15	\$4	\$37	\$385	\$3,558	\$12,820	\$118,585
Recreation	96.15	\$145	\$737	\$13,942	\$70,863	\$464,725	\$2,362,085
Totals				\$326,910	\$923,905	\$10,897,000	\$30,796,845

Table 4 Creek Ecosystem Service Values

Creeks ecosystem services	hectares	Low value/ha (\$2019)	High value/ha (\$2019)	Low annual estimate (\$2019)	High annual estimate (\$2019)	Low estimate perpetuity (\$2019)	High estimate perpetuity (\$2019)
Water regulation	9.62	\$1,758	\$8,029	\$16,912	\$77,239	\$563,732	\$2,574,633
Water filtration	9.62	\$901	\$2,405	\$8,668	\$23,136	\$288,921	\$771,203
Habitat	9.62	\$31	\$144	\$298	\$1,385	\$9,941	\$46,176
Recreation	9.62	\$127	\$737	\$1,222	\$7,090	\$40,725	\$236,331
Totals				\$27,100	\$108,850	\$903,318	\$3,628,343

I trust this meets your needs. Should you have any questions, please feel free to contact me at susan@solsticeworks.ca.

Sincerely yours,



Susan Todd, President
Solsticeworks Sustainability Works Inc.



March 28, 2024

District of West Vancouver
750 - 17th Street
West Vancouver, BC
V7V 3T3

BRITISH PACIFIC
PROPERTIES LIMITED
SUITE 1001, 100 PARK ROYAL
WEST VANCOUVER, BC
V7T 1A2 CANADA
T 604.925.9000
BRITISHPROPERTIES.COM

Attention: Jim Bailey, Director of Planning and Development Services

Dear Mr. Bailey,

Re: Chippendale Road Realignment

The District of West Vancouver (“District”) and British Pacific Properties Limited (“BPP”) agree that: (i) they have received good and valuable consideration for their respective agreements hereunder, and (ii) the terms of this letter are binding upon them.

In connection with the development of Cypress Village, BPP intends to realign Chippendale Road to facilitate access to certain lands within Cypress Village (the “Chippendale Road Realignment”). A portion of the proposed area for the Chippendale Road Realignment will be located within lands currently dedicated to the District as park.

To facilitate the Chippendale Road Realignment, the District intends to:

- (i) bring forward to the Council for consideration the following bylaws (collectively, the “District Bylaws”):
 - a. Road Closure and Removal of Highway Dedication Bylaw No. 5208, 2024 for the purpose of closing to traffic and removing the highway dedication to those portions of Chippendale Road totaling approximately 1,075.2 m² shown outlined in bold on Reference Plan EPP136131 attached hereto as Appendix “A” (the portions labelled “Road to be Closed” which together form the “New Park Area”); and
 - b. Park Exchange Bylaw No. 5302, 2024 for the purposes of authorizing the disposal of that approximately 955 m² area of park shown outlined in bold on Reference Plan EPP136132 attached hereto as Appendix “B” (the portions labelled “Park to be Disposed” which form part of the “New Road Area”) in exchange for dedication of the New Park Area portions as park; and



- (ii) dedicate those portions labelled “Road” totaling approximately 1205.1 m² shown outlined in bold on Reference Plan EPP136133 attached hereto as Appendix “C” as road via deposit of Reference Plan EPP136133 in the Land Title Office.

BPP agrees that, subject to Council’s final adoption of the District Bylaws, BPP will, to the satisfaction of the Director of Planning and Development Services, acting reasonably: (i) deactivate the existing emergency access road within the New Park Area by re-contouring the grades to a naturalized state; (ii) construct a secondary trail in place of the previous emergency access route; and (iii) revegetate and landscape the New Park Area under the direction of a registered professional forester to match the surrounding forest character and species (collectively, the “Park Works”).

The District will permit BPP and its authorized employees, engineers, contractors, subcontractors and agents, to enter upon the New Park Area, at no cost, for the purposes of carrying out the Park Works in accordance with this letter.

In connection with carrying out the Park Works, BPP covenants and agrees with the District that:

- (i) BPP will provide the District with reasonable written notice prior to commencing the Park Works;
- (ii) BPP will not commence the Park Works until:
 - a. BPP has entered into an agreement with the District in substantially the same form as the Template Servicing Agreement attached to the Cypress Village Phased Development Agreement as Schedule M under which the Park Works are included in the definition of “Works” for the purposes of such agreement and undertaken in accordance with the terms of such agreement, or
 - b. if the Cypress Village Phased Development Agreement is not yet executed, BPP has entered into an agreement with the District on similar terms to the Template Servicing Agreement and acceptable to the Director of Planning and Development Services that addresses the following in relation to the Park Works: design, deposits, approval after construction, warranty and acceptance by the District, indemnities, and insurance;
 - c. BPP has constructed an alternative emergency access road; and



- (iii) BPP will commence the Park Works after the construction of the alternative emergency access road, to be outlined in the Agreement pursuant to (ii) a. or (ii) b. above, and will complete the Park Works within 3 months of commencing such works, or within such longer period of time as the Director of Planning and Development Services may agree to, acting reasonably.

If the foregoing terms are acceptable to the District, please sign and date where indicated below and return a full signed copy to us for our records.

Sincerely,

BRITISH PACIFIC PROPERTIES LIMITED

Geoffrey E.G. Croll
President

Bryce R. Tupper
Vice President, Planning & Development

The terms of this Letter Agreement are hereby approved by the District of West Vancouver as of this 4 day of April, 2024.

Jim Bailey
Director of Planning and Development
Services

Appendices:

- A - Reference Plan EPP136131
- B - Reference Plan EPP136132
- C - Reference Plan EPP136133

**REFERENCE PLAN TO ACCOMPANY ROAD CLOSURE AND REMOVAL OF
HIGHWAY DEDICATION BYLAW NO.5208, 2024 (DISTRICT OF WEST VANCOUVER)
TO CLOSE PARTS OF ROAD DEDICATED ON PLAN EPP94863 AND EPP76455,
DISTRICT LOT 888, GROUP 1, NEW WESTMINSTER DISTRICT**

MAR 12, 2024

PURSUANT TO SECTION 120 OF THE LAND TITLE ACT AND
SECTION 40 OF THE COMMUNITY CHARTER
BCGS 92G035



THE INTENDED PLOT SIZE OF THIS PLAN IS
560 mm IN HEIGHT BY 432 mm IN WIDTH (C SIZE)
WHEN PLOTTED AT A SCALE OF 1:750



PRELIMINARY

GRID BEARINGS ARE DERIVED FROM DUAL FREQUENCY
GNSS RTK OBSERVATIONS AND ARE REFERRED TO THE
CENTRAL MERIDIAN OF UTM ZONE 10 (123° WEST LONGITUDE).

THIS PLAN SHOWS HORIZONTAL GROUND-LEVEL DISTANCES
UNLESS OTHERWISE SPECIFIED. TO COMPUTE GRID DISTANCES,
MULTIPLY GROUND-LEVEL DISTANCES BY THE AVERAGE COMBINED
FACTOR OF 0.XXXXXX. THE AVERAGE COMBINED FACTOR HAS BEEN
DETERMINED BASED ON A MEAN ELLIPSOIDAL ELEVATION OF XXX METRES.

THE UTM COORDINATES AND ESTIMATED ABSOLUTE
ACCURACY ACHIEVED ARE DERIVED FROM
DUAL FREQUENCY GNSS RTK OBSERVATIONS TO
VANCOUVER ACP-1 (GCM875884)

THIS PLAN LIES WITHIN THE
METRO VANCOUVER REGIONAL DISTRICT

THE FIELD SURVEY REPRESENTED BY THIS PLAN WAS
COMPLETED ON THE XXTH DAY OF XXXX, 2024
DAN ROBERT MACHON, BCLS (751)

LEGEND

- ▲ DENOTES GNSS TRAVERSE POINT SET
- DENOTES STANDARD IRON POST FOUND
- DENOTES STANDARD IRON POST PLACED
- NF DENOTES NOTHING FOUND
- W DENOTES WITNESS

NOTE:
THIS PLAN SHOWS ONE OR MORE WITNESS POSTS
WHICH ARE NOT SET ON THE TRUE CORNER(S).

BOOK OF REFERENCE	
DESCRIPTION	AREA
ROAD TO BE CLOSED AREA 'A'	222.2 m ²
ROAD TO BE CLOSED AREA 'B'	636.5 m ²
ROAD TO BE CLOSED AREA 'C'	216.5 m ²
TOTAL AREA ROAD TO BE CLOSED	1075.2 m ² (0.108ha)

AREAS AND DIMENSIONS SUBJECT TO CHANGE UPON LEGAL FIELD SURVEY

UTM COORDINATES			
DATUM: NAD83(CSR)S 4.0.0 BC.1.MVRD, UTM ZONE 10			
MARKER	NORTHING	EASTING	ABSOLUTE ACCURACY (ESTIMATED)
SPIKE(88)	XXX.XX	XXX.XX	0.05 METRES
NAIL(260)	XXX.XX	XXX.XX	0.05 METRES

**HOBBS, WINTER & MacDONALD
B.C. LAND SURVEYORS**
113-828 HARBORSIDE DRIVE,
NORTH VANCOUVER, B.C., V7P 3R9
TEL 604-988-1371 FAX 604-988-5204
EMAIL: admin@hwsurveys.com

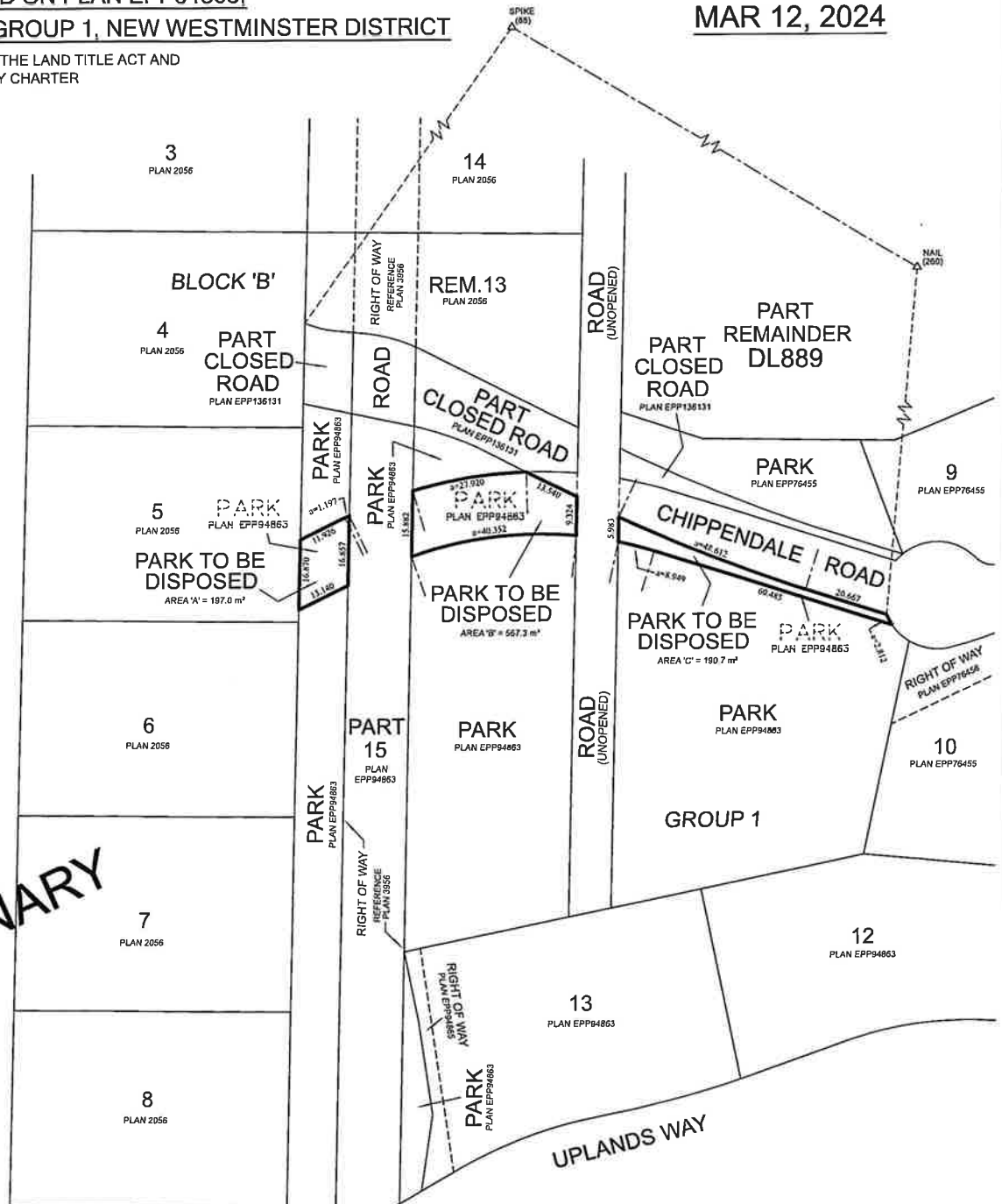
031-205-640 LOT 15
CHIPPENDALE ROAD
FB XXXX p.XX-XX M3473-38 WV

**REFERENCE PLAN TO ACCOMPANY PARK EXCHANGE
BYLAW NO.5302, 2024 (DISTRICT OF WEST VANCOUVER)
OF PARK DEDICATED ON PLAN EPP94863,
DISTRICT LOT 888, GROUP 1, NEW WESTMINSTER DISTRICT**

MAR 12, 2024

PURSUANT TO SECTION 120 OF THE LAND TITLE ACT AND
SECTION 27 OF THE COMMUNITY CHARTER
BCGS 92G035

0 5 10 20 30 40 50m
THE INTENDED PLOT SIZE OF THIS PLAN IS
560 mm IN HEIGHT BY 432 mm IN WIDTH (C SIZE)
WHEN PLOTTED AT A SCALE OF 1:750



PRELIMINARY

GRID BEARINGS ARE DERIVED FROM DUAL FREQUENCY
GNSS RTK OBSERVATIONS AND ARE REFERRED TO THE
CENTRAL MERIDIAN OF UTM ZONE 10 (123° WEST LONGITUDE).

THIS PLAN SHOWS HORIZONTAL GROUND-LEVEL DISTANCES
UNLESS OTHERWISE SPECIFIED, TO COMPUTE GRID DISTANCES,
MULTIPLY GROUND-LEVEL DISTANCES BY THE AVERAGE COMBINED
FACTOR OF 0.XXXXXX. THE AVERAGE COMBINED FACTOR HAS BEEN
DETERMINED BASED ON A MEAN ELLIPSOIDAL ELEVATION OF XXX METRES

THE UTM COORDINATES AND ESTIMATED ABSOLUTE
ACCURACY ACHIEVED ARE DERIVED FROM
DUAL FREQUENCY GNSS RTK OBSERVATIONS TO
VANCOUVER ACP-1 (GCM875864)

THIS PLAN LIES WITHIN THE
METRO VANCOUVER REGIONAL DISTRICT

THE FIELD SURVEY REPRESENTED BY THIS PLAN WAS
COMPLETED ON THE XXTH DAY OF XXXX, 2024
DAN ROBERT MACHON, BCLS (751)

- LEGEND**
- ▲ DENOTES GNSS TRAVERSE POINT SET
 - DENOTES STANDARD IRON POST FOUND
 - DENOTES STANDARD IRON POST PLACED
 - NF DENOTES NOTHING FOUND
 - Wt DENOTES WITNESS

NOTE:
THIS PLAN SHOWS ONE OR MORE WITNESS POSTS
WHICH ARE NOT SET ON THE TRUE CORNER(S)

BOOK OF REFERENCE	
DESCRIPTION	AREA
PARK TO BE DISPOSED AREA 'A'	197.0 m ²
PARK TO BE DISPOSED AREA 'B'	567.3 m ²
PARK TO BE DISPOSED AREA 'C'	190.7 m ²
TOTAL AREA PARK TO BE DISPOSED	955.0 m ²

AREAS AND DIMENSIONS SUBJECT TO CHANGE UPON LEGAL FIELD SURVEY

UTM COORDINATES			
DATUM: NAD83(CSRS) 4.0.0 BC.1.MVRD, UTM ZONE 10			
MARKER	NORTHING	EASTING	ABSOLUTE ACCURACY (ESTIMATED)
SPIKE(88)	XXX.XX	XXX.XX	0.05 METRES
NAIL(260)	XXX.XX	XXX.XX	0.05 METRES

HOBBS, WINTER & MacDONALD
B.C. LAND SURVEYORS
113-828 HARBOURSIDE DRIVE,
NORTH VANCOUVER, B.C., V7P 3R9
TEL 604-986-1371 FAX 604-986-5204
EMAIL: admin@hwm-surveys.com

031-205-640 LOT 15
CHIPPENDALE ROAD
FB XXXX p.XX - XX M3473-39 WV

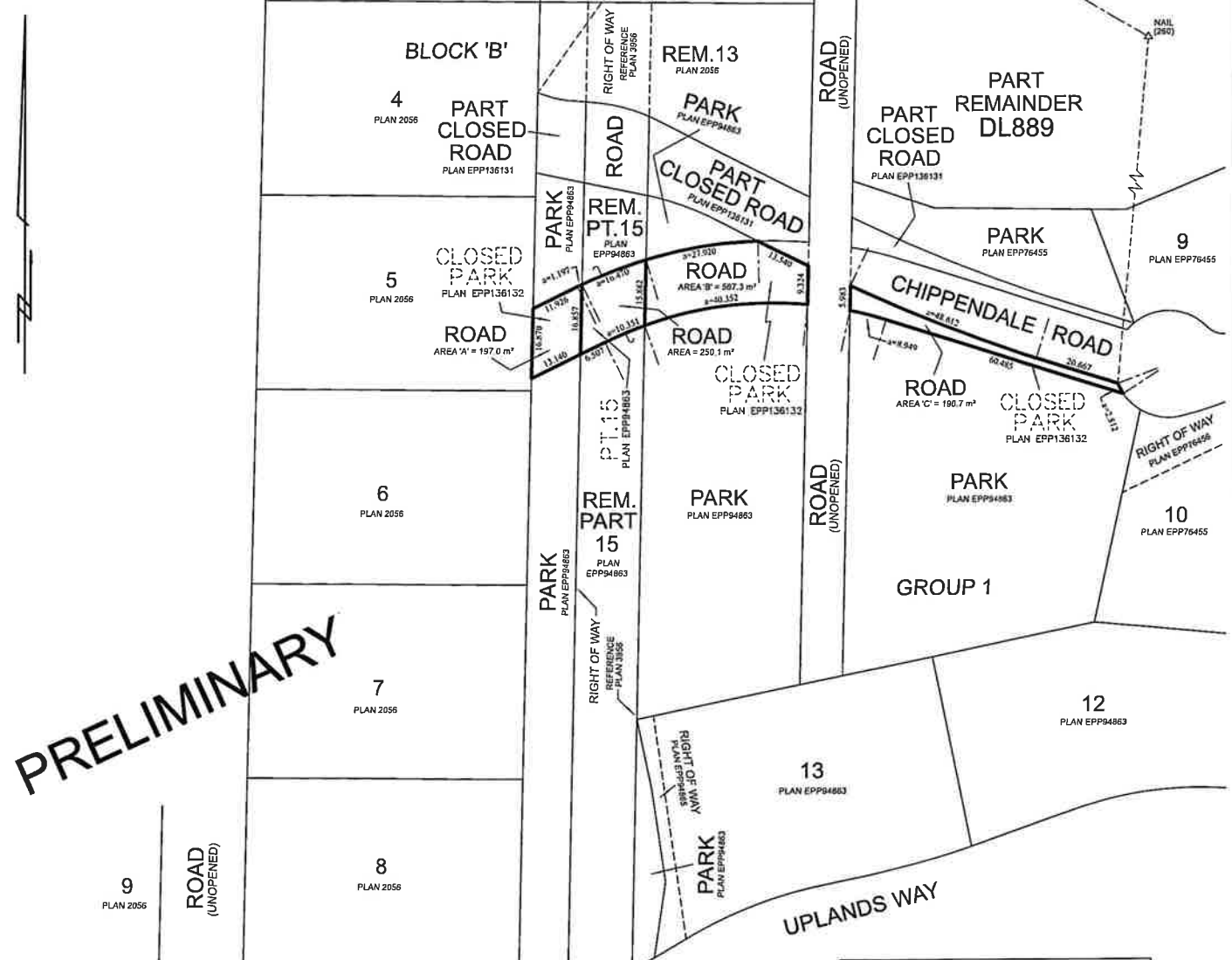
REFERENCE PLAN OF:

- 1) THAT PART OF DISTRICT LOT 888, HAVING A TOTAL AREA OF 955.0 SQUARE METRES AS SHOWN ON PLAN EPP136132
- 2) PART OF LOT 15, BLOCKS 'B' AND 'C', PLAN EPP94863 BOTH OF DISTRICT LOT 888, GROUP 1, NEW WESTMINSTER DISTRICT

MAR 12, 2024

PURSUANT TO SECTION 107 OF THE LAND TITLE ACT
BCGS 92G035

THE INTENDED PLOT SIZE OF THIS PLAN IS 560 mm IN HEIGHT BY 432 mm IN WIDTH (C SIZE) WHEN PLOTTED AT A SCALE OF 1:750



GRID BEARINGS ARE DERIVED FROM DUAL FREQUENCY GNSS RTK OBSERVATIONS AND ARE REFERRED TO THE CENTRAL MERIDIAN OF UTM ZONE 10 (123° WEST LONGITUDE).

THIS PLAN SHOWS HORIZONTAL GROUND-LEVEL DISTANCES UNLESS OTHERWISE SPECIFIED. TO COMPUTE GRID DISTANCES, MULTIPLY GROUND-LEVEL DISTANCES BY THE AVERAGE COMBINED FACTOR OF 0.999999. THE AVERAGE COMBINED FACTOR HAS BEEN DETERMINED BASED ON A MEAN ELLIPSOIDAL ELEVATION OF XXX METRES.

THE UTM COORDINATES AND ESTIMATED ABSOLUTE ACCURACY ACHIEVED ARE DERIVED FROM DUAL FREQUENCY GNSS RTK OBSERVATIONS TO VANCOUVER ACP-1 (GCM875864)

THIS PLAN LIES WITHIN THE METRO VANCOUVER REGIONAL DISTRICT

THE FIELD SURVEY REPRESENTED BY THIS PLAN WAS COMPLETED ON THE XXTH DAY OF XXXX, 2024 DAN ROBERT MACHON, BCLS (751)

THIS PLAN LIES WITHIN THE JURISDICTION OF THE APPROVING OFFICER FOR THE DISTRICT OF WEST VANCOUVER.

LEGEND

- ▲ DENOTES GNSS TRAVERSE POINT SET
- DENOTES STANDARD IRON POST FOUND
- DENOTES STANDARD IRON POST PLACED
- NF DENOTES NOTHING FOUND
- WI DENOTES WITNESS

NOTE: THIS PLAN SHOWS ONE OR MORE WITNESS POSTS WHICH ARE NOT SET ON THE TRUE CORNER(S)

BOOK OF REFERENCE	
DESCRIPTION	AREA
ROAD TO BE DEDICATED AREA 'A'	197.0 m²
ROAD TO BE DEDICATED AREA 'B'	567.3 m²
ROAD TO BE DEDICATED AREA 'C'	190.7 m²
ROAD TO BE DEDICATED PART LOT 15	250.1 m²
TOTAL AREA ROAD TO BE DEDICATED	1205.1 m² (0.121ha)

AREAS AND DIMENSIONS SUBJECT TO CHANGE UPON LEGAL FIELD SURVEY

UTM COORDINATES			
DATUM: NAD83(CSRS) 4.0.0.BC.1.MVRD, UTM ZONE 10			
MARKER	NORTHING	EASTING	ABSOLUTE ACCURACY (ESTIMATED)
SPIKE(88)	XXX.XX	XXX.XX	0.05 METRES
NAIL(260)	XXX.XX	XXX.XX	0.05 METRES

HOBBES, WINTER & MacDONALD
B.C. LAND SURVEYORS
113-828 HARBORSIDE DRIVE,
NORTH VANCOUVER, B.C., V7P 3R9
TEL 604-986-1371 FAX 604-986-5204
EMAIL: admin@hwmssurveyors.com

031-205-640 LOT 15
CHIPPENDALE ROAD
FB XXXX p.XX-XX M3475-2 WV