



January 18, 2021

Mr. Brendan Yee
Bosa-Kingswood Properties (Squamish) Inc.
1100 – 838 West Hastings Street
Vancouver, BC V6C 0A6

Dear Mr. Yee:

**Re: Performance Verification Plan for Certificate of Compliance
1500 Highway 99, Squamish, BC
Project No. 12022**

1. BACKGROUND

Keystone Environmental Ltd. (Keystone Environmental) has prepared this Performance Verification Plan (PVP) in support of an application for a risk-based Certificate of Compliance (CofC) for the parcel listed as 1500 Highway 99, Squamish, BC ("the Site") and described in metes and bounds below and shown in the attached figure:

STARTING AT THE EAST CORNER OF LOT 7 OF SUBDIVISION PLAN OF PARCEL 1, DISTRICT LOTS 486 AND 4266, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN EPP74733 :

- THENCE 338° 03' 52" FOR 62.672 METRES;
- TO THE POINT OF COMMENCEMENT.
- THENCE 252° 39' 18" FOR 112.591 METRES;
- THENCE 292° 55' 06" FOR 164.853 METRES;
- THENCE ALONG NATURAL BOUNDARY AS SHOWN ON PLAN BCP26353
- THENCE 195° 06' 40" FOR 7.181 METRES;
- THENCE 185° 23' 38" FOR 17.966 METRES;
- THENCE 150° 38' 34" FOR 21.804 METRES;
- THENCE 170° 54' 10" FOR 7.845 METRES;
- THENCE 220° 03' 16" FOR 10.451 METRES;
- THENCE 231° 19' 59" FOR 12.878 METRES;

- THENCE 209° 12' 07" FOR 29.417 METRES;
- THENCE 215° 25' 26" FOR 72.113 METRES;
- THENCE 104° 04' 31" FOR 56.665 METRES;
- THENCE 208° 37' 05" FOR 30.526 METRES;
- THENCE 118° 37' 04" FOR 17.993 METRES;
- THENCE 28° 37' 03" FOR 35.193 METRES;
- THENCE 106° 31' 11" FOR 50.884 METRES;
- THENCE 91° 07' 29" FOR 43.890 METRES;
- THENCE 155° 35' 33" FOR 99.237 METRES;

RETURNING TO THE POINT OF COMMENCEMENT.

The PVP presents additional information to the principal risk management measures (i.e., the Schedule B key risk management controls) that apply and must remain in place at the Site to ensure that the CofC remains valid. The PVP was prepared in accordance with BC Ministry of Environment (MOE) Administrative Guidance 14: Performance Verification Plans, Contingency Plans, and Operations and Maintenance Plans (BC MOE, 2015). The PVP was based on the findings of the following report:

- Keystone Environmental (2021). *Report of Findings – Human Health and Ecological Risk Assessment, 1500 Highway 99, Squamish, BC*. Dated January 2021.

2. PERFORMANCE VERIFICATION PLAN

2.1 Determination of Remediation Type

Based on the risk management measures recommended for the Site the Remediation Type applicable at the Site is considered to be Type 2. Remediation Type 2 sites may require the use of engineering and institutional controls to mitigate/eliminate risks at the Site, but in the event that controls were either not implemented or were implemented but were rendered ineffective, there is a lack of imminent risks.

Under a Remediation Type 2 (Case 2) scenario, BC MOE (2015) indicates that a PVP is required and that an operations and maintenance plan may be required. A contingency plan is not required.

2.2 Required Risk Controls

The principal risk controls which must be maintained at the Site include the following items:

- Groundwater must not be used as a drinking water source.
- Contaminated soils must remain at least 1 m below grade or capped by hard surfaces. The area to which this applies is defined by metes and bounds (see attachment).
- Contaminated soils must not be redistributed as surface soils (0 to 1 m) at development grade or used for growing vegetation suitable for consumption.

2.3 Required Actions to Implement the Required Risk Controls

The following actions are required to implement the risk controls:

- Mandatory notification provided to the owner/operator of the Site that Site groundwater must not be used as a drinking water source.
- Mandatory notification provided to the owner/operator of the Site that contaminated soils within the area defined by metes and bounds must remain at least 1 m below grade or capped by hard surfaces. Mandatory notification provided to the owner/operator that annual inspection of the cap by a qualified professional is required to confirm that the cap is intact until future development grade has been established.
- Mandatory notification provided to the owner/operator of the Site that contaminated soils must not be redistributed as surface soils at development grade or used for growing vegetation suitable for consumption.

Records of these actions should be maintained by the owner of the Site and submitted to the BC Ministry of Environment and Climate Change Strategy (ENV) if requested. Other reporting requirements for all performance verification records include the following:

- The Director must be notified promptly by the person(s) responsible for the Site parcel if performance verification actions indicate that any of the required risk controls are not being met. The following information must be submitted to the Director with the notification, or as soon as practicable thereafter:
 - The time period over which risk controls were not in place or implemented
 - The nature of the excursion(s)
 - The temporary or permanent corrective measures implemented or to be implemented
 - An implementation schedule
 - Supporting documentation
- If requested by the Director, a report signed by an Approved Professional must be submitted for review to the Director and must include the following (as applicable):
 - An evaluation of the performance of the institutional controls
 - Supporting documentation

2.4 Summary Rationale

Groundwater must not be used as a drinking water source

Contaminated groundwater at the Site exceeds drinking water standards of the BC Contaminated Site Regulation (CSR). The risk assessment determined that future groundwater drinking water exposures are unlikely as future buildings would be connected to the municipal drinking water supply. An administrative control of informing the Site users and operators that Site groundwater must not be used as drinking water and that groundwater drinking water wells are not to be installed at the Site is considered a sufficient risk control. Communication records between relevant parties would be suitable documentation should the information be requested by BC ENV.

Contaminated soils must remain at least 1m below grade or capped by hard surfaces.

The Site presently has a 1m layer of complaint material over top of an area of soil contamination greater than residential land use standards of the BC CSR. The extent of this management area is presented in the metes and bounds figure of **Appendix A**. The risk assessment was conducted with the assumption that contaminated soils in this area would remain at least 1m deep with the understanding that the Site grade would be further raised in the future with compliant material to meet flood level requirements. Until the future Site development grade is established, annual inspection of the management area by a qualified professional to confirm that the compliant material is intact is considered a sufficient risk control. Photographs, survey information, or other relevant inspection records deemed appropriate by the qualified professional confirming that this condition is maintained would be suitable documentation should the information be requested by BC ENV.

Contaminated soils must not be redistributed as surface soils at development grade or used for growing vegetation suitable for consumption.

The risk assessment was conducted with the understanding that the Site grade would be raised in the future with compliant material to meet flood level requirements and that contaminated soils must not be redistributed as surface soils at development grade or used for growing vegetation suitable for consumption. Dermal or incidental exposures to contaminated soils greater than residential land use standards of the BC CSR may pose unacceptable risks to future persons at the Site and ecological biota. Similarly, constituents greater than residential land use standards of the BC CSR may accumulate in plants growing contaminated soils and result in unacceptable risks to people or ecological receptors from plant consumption. Communication records between parties and records by qualified professionals confirming that this condition is maintained would be suitable documentation should the information be requested by BC ENV.

2.5 Conclusion

It is our opinion that the actions identified above are sufficient to ensure performance verification of the risk controls required for the Site.

3. GENERAL LIMITATIONS AND CONFIDENTIALITY

The findings presented in this report are based upon the field work conducted by Keystone Environmental for Bosa-Kingswood Properties (Squamish) Inc. Keystone Environmental has prepared this document in good faith and has relied upon information provided by others. Keystone Environmental has assumed that the information provided by third parties is both complete and accurate.

This report was completed in a manner consistent with that level of care and skill normally exercised by other environmental professionals, practicing under similar circumstances in the same locale at the time of the performance of the work.

This report has been prepared solely for the internal use of Bosa-Kingswood Properties (Squamish) Inc. and the review by the BC ENV, pursuant to the agreement between Keystone Environmental Ltd. and Bosa-Kingswood Properties (Squamish) Inc. By using this report, Bosa-

Kingswood Properties (Squamish) Inc. and the BC ENV agree(s) to review this report in its entirety. Keystone Environmental accepts no responsibility, and denies any liability whatsoever, to parties other than Bosa-Kingswood Properties (Squamish) Inc. and the BC ENV, who may obtain access to this report for any injury, loss or damage suffered by such parties arising out of, reliance upon, or decisions or actions based on this report, except to the extent those parties have obtained a prior written consent of Keystone Environmental to use and rely upon this report and the information contained herein. Any use, reliance or decisions made based on this report by other parties without prior written approval by Keystone Environmental are the responsibility of such parties and Keystone Environmental accepts no responsibility for damages, if any, suffered by other parties as a result of decisions made or actions based on this report. The findings presented herein should be considered within the context of the scope of work and project terms of reference. The findings are time sensitive and are considered valid at the time this report was produced. The conclusions and recommendations contained in this report are based upon applicable guidelines, regulations, and legislation existing at the time this report was produced; consequently, any changes in the regulatory regime may alter the conclusions and/or recommendations.

4. CLOSURE

The opinions, advice and recommendations expressed in this performance verification plan are made in accordance with generally accepted principles and practices as recognized by members of the applicable profession or discipline practising at the same time and in the same or similar locations.

If you have any questions, please do not hesitate to contact the signatory below.

Sincerely,

Keystone Environmental Ltd.

Adam J. Radlowski, M.Sc., R.P.Bio.
Senior Environmental Risk Assessor

I:\12000-12099\12022 Bosa Squamish\Phase 00105 - HHERA\2020\PVP\12022 210118 PVP Site.docx

ATTACHMENT:

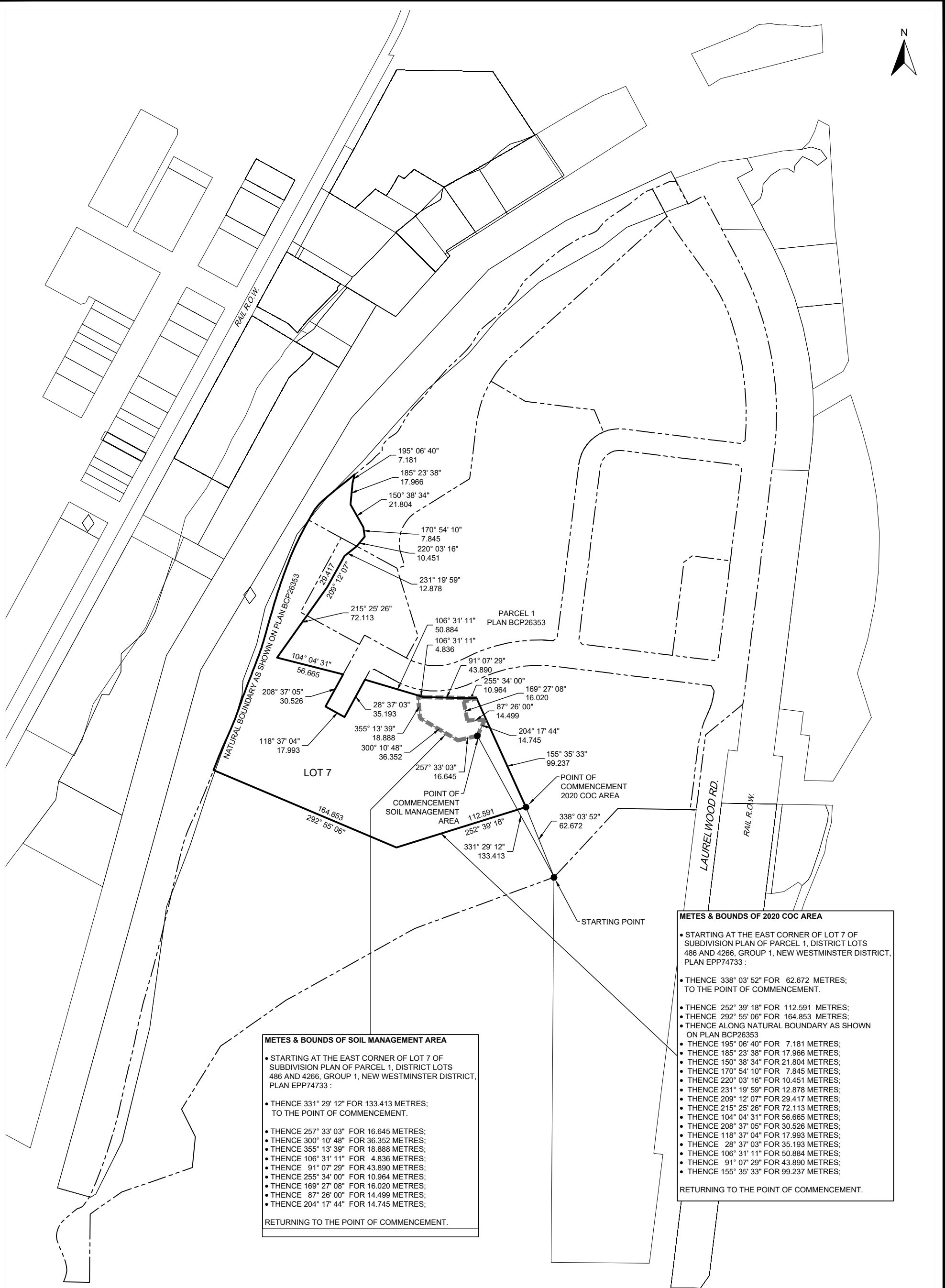
- Metes and Bounds Figure

REFERENCES

BC MOE (2015) British Columbia Ministry of Environment. Environmental Protection Division. *Administrative Guidance 14 on Contaminated Sites: Performance Verification Plans, Contingency Plans, and Operations and Maintenance Plans*. (Version 3.0). December 2015.

Keystone Environmental (2021). *Report of Findings – Human Health and Ecological Risk Assessment, 1500 Highway 99, Squamish, BC*. Keystone Environmental Ltd. Dated January 2021.

METES AND BOUNDS FIGURE



METES & BOUNDS OF SOIL MANAGEMENT AREA

- STARTING AT THE EAST CORNER OF LOT 7 OF SUBDIVISION PLAN OF PARCEL 1, DISTRICT LOTS 486 AND 4266, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN EPP74733 :
- THENCE 331° 29' 12" FOR 133.413 METRES; TO THE POINT OF COMMENCEMENT.
- THENCE 257° 33' 03" FOR 16.645 METRES;
- THENCE 300° 10' 48" FOR 36.352 METRES;
- THENCE 355° 13' 39" FOR 18.888 METRES;
- THENCE 106° 31' 11" FOR 4.836 METRES;
- THENCE 91° 07' 29" FOR 43.890 METRES;
- THENCE 255° 34' 00" FOR 10.964 METRES;
- THENCE 169° 27' 08" FOR 16.020 METRES;
- THENCE 87° 26' 00" FOR 14.499 METRES;
- THENCE 204° 17' 44" FOR 14.745 METRES;

RETURNING TO THE POINT OF COMMENCEMENT.

METES & BOUNDS OF 2020 COC AREA

- STARTING AT THE EAST CORNER OF LOT 7 OF SUBDIVISION PLAN OF PARCEL 1, DISTRICT LOTS 486 AND 4266, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN EPP74733 :
- THENCE 338° 03' 52" FOR 62.672 METRES; TO THE POINT OF COMMENCEMENT.
- THENCE 252° 39' 18" FOR 112.591 METRES;
- THENCE 292° 55' 06" FOR 164.853 METRES;
- THENCE ALONG NATURAL BOUNDARY AS SHOWN ON PLAN BCP26353
- THENCE 195° 06' 40" FOR 7.181 METRES;
- THENCE 185° 23' 38" FOR 17.966 METRES;
- THENCE 150° 38' 34" FOR 21.804 METRES;
- THENCE 170° 54' 10" FOR 7.845 METRES;
- THENCE 220° 03' 16" FOR 10.451 METRES;
- THENCE 231° 19' 59" FOR 12.878 METRES;
- THENCE 209° 12' 07" FOR 29.417 METRES;
- THENCE 215° 25' 26" FOR 72.113 METRES;
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- THENCE 208° 37' 05" FOR 30.526 METRES;
- THENCE 118° 37' 04" FOR 17.993 METRES;
- THENCE 28° 37' 03" FOR 35.193 METRES;
- THENCE 106° 31' 11" FOR 50.884 METRES;
- THENCE 91° 07' 29" FOR 43.890 METRES;
- THENCE 155° 35' 33" FOR 99.237 METRES;

RETURNING TO THE POINT OF COMMENCEMENT.

LEGEND

	PROPERTY LINE
	LOT LINES
	METES AND BOUNDS OF 2020 COC AREA
	METES AND BOUNDS OF SOIL MANAGEMENT AREA

NOTES:
1. THIS DRAWING IS FOR GENERAL INFORMATION ONLY.
LOT BOUNDARIES AND FEATURES ARE APPROXIMATE.

No.	DATE	DESCRIPTION	BY	APPROVED
00	12-15-20			
REVISIONS				

Keystone Environmental

Keystone Environmental Ltd.
Ste. 320 4400 Dominion Street
Burnaby, British Columbia

1500 Highway 99
Squamish, B C

DESIGN	APPROVED
DRAWN	CHECKED
A.B.	
SCALE	
SCALE: 1:3000(approx.)	

CLIENT
Bosa-Kingswood Properties (Squamish) Inc.

**Metes and Bounds of
2020 COC Area and
Soil Management Area**

SHEET No.	2 of 2
PROJECT No.	12022-04A
REVISION No.	00
DRAWING No.	20-12022-02