| Contract # | Description | Company | Product | Area Km² | Price/Km² | Total Price |
|------------|---|----------------------|---|----------|-----------|----------------|
| OP19BMC040 | Purchasing of LiDAR data for emeregony managemement and resource mapping of the Province (Floodplain mapping, BC3D, environmental monitoring) | Terra Remote Sensing | LiDAR point cloud data (unclassified) | s.17 | | \$130,130.00 |
| OP19BMC041 | Purchasing of LiDAR data for emeregony managemement and resource mapping of the Province (Floodplain mapping, BC3D, environmental monitoring) | McEIhanney | LiDAR point cloud data (unclassified/classified) | - | | \$238,972.50 |
| OP19BMC042 | Purchasing of LiDAR data for emeregony managemement and resource mapping of the Province (Floodplain mapping, BC3D, environmental monitoring) | Canfor | LiDAR point cloud data (unclassified/classified) | | | \$1,130,897.50 |
| | | | Total | • | | \$1,500,000.00 |



Natural Resource Ministries

CONTRACT APPROVAL REQUEST

| | | MINISTRY IDENTIFICA | ATION | | | |
|--|------------|---|----------------------|--|---|--|
| Ministry: | | Indigenous Relations & Reconciliation Agriculture Energy, Mines and Petroleum Resources | Fore | rironment and Climate ests, Lands, Natural R d Rural Development | 750 O 750 | |
| Branch / Division: | GeoE | BC / Integrated Resource Operations | | | | |
| Region / City: | Victo | ria | | | | |
| | | | | | Primary Contact for This Request (select one) | |
| Expense Authority: | Matt A | ustin | Phon | e: 778-698-4895 | | |
| Qualified Receiver: | Harald | Steiner | Phon | e: 778-974-3631 | | |
| Other contact - if applicable: | | | Phon | e: | | |
| | | REQUEST DETAIL | .s | | | |
| Contract Number (if kn | own): | OP19BMC041 | | 7-1 | | |
| Project Title: | | Purchasing of LiDAR data for emergence Province (Floodplain mapping, BC3D, Er | y manage nvironme | ement and resource m | napping of the | |
| Ministry Cost Estimate | ə : | \$1,150,917.50 (no tax) | 297. | 10 possible chan | e) | |
| Cost Recoverable: | | No ☐ Yes - Recovery Sou program or initiation Amount of Recovery Percovery | ve name): | | , private organization, etc. / | |
| Funding Source | | Base \$1,150,917.50 Other \$ Specify: | | | | |
| Describe the Location, Services/Work, Purpos | | 11,509 km² of lidar point cloud data with a discretion to release as free and open) | a full licer | nse for use (provincial | government | |
| Why Can't Existing Stathe Need? | aff Fill | No equivalent in-house service available. Significant infrastructure that is required for the project (i.e. aircraft, digital cameras, LiDAR systems etc), not available in government. | | | | |
| Describe the Impact on Program Delivery if Not Approved: | | No current base data available for supporting natural resource ministry land analysis mapping | | | | |
| If Direct Award: | | Contractor Name: McElhanney. Cantal Justification –circumstances, and rational This company has flown this area, data de | e for sele | | 5 | |
| Include Option to Rene | ew: | ☐ Yes | | ⊠ No | | |
| Anticipated Term of Agreement: | | From: March 28, 2019 | | March 31, 2019 | | |

| | | (| Core F | Policy Complian | nce Checklist | | | | Υ | N | n/a |
|--|--|---|---|--|--|--|--|--|--|--|--------------------------------|
| ey Core policy Procedures Mar | and best property | ractices items. e Financial Se | Hower rvices F | ver, this is not a c Procurement Webs | nplexity / risks ass complete list. Ref site: <u>Planning</u> . | erences a | are available | at: Chapter 6 of t | he <u>Cc</u> | g are ore Po | some licy & |
| The Good for the req | s and Servi | ices Catalogue ces / works (<u>CF</u> | has be PPM 6.3 | een searched and 3.2.c.2). | a Corporate Supp | ly Arrang | ement (CSA) | is not available | | | |
| If request is for a service contract over \$100,000, has a Cost Benefit Justification (CBJ) been prepared and placed of the contract file in the event review of the CBJ is needed (CPPM 6.3.1.5)? | | | | | | d and placed on | | \boxtimes | | | |
| (3 months | from previo | ous expiry date | e), the n s. If th | new contract must | is been used for si be approved by an es to the requeste 4)? | expense | authority wit | h authority for | | | \boxtimes |
| | and the control of th | | | | nship (CPPM 6.3. | 1.7). | | | | \boxtimes | |
| Best Practice | es Checkl | ist | 7.77 | | | | J61 | | | | |
| Has a Ris | sk Assessn ents Matrix | nent been don (NRS 1289). | ne to de | etermine appropria | ate insurance requ | uirements | ? Refer to | the <u>Insurance</u> | \boxtimes | | |
| | | ☐ Operat | tional F | General Services Field Services Works / Services S782 – simple / low r | | □ N | lajor Works wer values) | (less than \$100K) (\$100K or more, or ct/custom agree | | | |
| | | CSNR.Contra Custom agre vetted through | ements th CSN | port@gov.bc.ca. | of agreement, to any terms / co olicy and Advice (| nditions o | of an approve | ed contract temp t@gov.bc.ca) for | late, i r lega | must I | be or |
| | 1 | d alean | | | OCUREMENT | CODI | NG | | | | 160 |
| Account Codi | ng (STOBS | S: See Master S | ACC | | OCUREMENT | CODI | NG | | | | |
| Account Codi | Respon | se Centre # | AC(| COUNT & PRO | OCUREMENT ense Tab if needed) STOB # | | Project # | / 6.7003 | OUN | т | |
| A SALL POR SALVEY | Respon | | ACC | COUNT & PRO | OCUREMENT | | | \$1,150,917. | | Т | |
| Client # | Respon | se Centre # | ACC | COUNT & PRO | ocurement ense Tab if needed) STOB # 6001 | | Project # | / 6.7003 | | т | |
| Client # 128 See Code De | Respon 7 | se Centre # 1440 s at end of fo | ACC | COUNT & PRO t & Description / Expo ervice Line # | OCUREMENT ense Tab if needed) STOB # 6001 | | Project # 7143073 | \$1,150,917. \$ | 50 | Т | |
| Client # 128 See Code De | Respon 7 escription | se Centre # 1440 s at end of fo | ACC | ervice Line # fright description / Experience Experience # fright description / Expe | ense Tab if needed) STOB # 6001 Ins. WARD – SECURITY is how there would be | etails in the | Project # 7143073 | \$1,150,917. \$ | orm) - SER | VICES | ,000 |
| Client # 128 See Code De Procurement 100 OPEN 200 DIRECT | Respon 7 Process C | se Centre # 1440 s at end of fo | ACC TOB Lis So 3026 orm fo | ervice Line # 55 or full description vard applies, included 203 DIRECT A Etc. Define interference 204 DIRECT A Define hor | ense Tab if needed) STOB # 6001 Ins. WARD – SECURITY is how there would be | etails in the company of the company | Project # 7143073 the justification 207 | \$1,150,917. \$ In section of this for the section of this for the section of the section of the section of this for the section of the section o | orm) SER' UNDE COST ef | VICESER \$25 ffective SS AMO | o,000 e to ONG CES |
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Page 2 of 3

| Car | iaua Fi | ee Trade Agreement (CFTA) Exclusi | on Codes | | | | | | |
|-----------------------|-------------------|--|-------------------------------|----------|---------|--------------|-------------------------------------|-------------------------------------|--|
| \boxtimes | 100 | Purchase Subject to Canada Free Trade Agreement (CFTA) | | | 500 | Excluded – S | Securi | ty, Order, Etc. | |
| | 200 | Purchase Below Applicable CFTA threshold | | | 600 | Excluded – F | Produ | ct Compatibility / Exclusive Rights | |
| | 300 | Purchase of an Exempted Commodity / Service | | | 700 | Excluded - F | Excluded – Procurement of Prototype | | |
| | 400 | Excluded - Emergency | | | 800 | Excluded – F | Region | nal / Economic Development | |
| | | | | | | | | | |
| Con | tract C | ategory (re: STOBS 60, 61, and 63) | A Service | | | | | | |
| | GMA | | PRA | | | | | BSA | |
| | HR/L | R 🗆 | PM | | | | \boxtimes | OP | |
| | IT | | COM | | | | | OTH | |
| | and a consequence | | | | | | | | |
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| Sign | nature | CONTRACT MANAGER / QUALIF Harald Steiner PROGRAM MANAGER / EXPENS Nancy Liesch | Date E AUTHORIT Date | FY - req | uired | 2019 | he co | mpleted version of this form is | |
| Sigr Print Sign | nature | CONTRACT MANAGER / QUALIF Harald Steiner PROGRAM MANAGER / EXPENS Nancy Liesch | Date E AUTHORIT Date Uired | FY - req | uired | 2019 | he co | mpleted version of this form is | |

CODE DESCRIPTIONS CONTRACT APPROVAL REQUEST - NATURAL RESOURCE MINISTRY

| | Procurement Process Codes |
|------|---|
| Code | Description |
| 100 | Open competitive process: An open competitive solicitation process (e.g., Invitation to Quote, Request for Proposal, Joint Solution Procurement, Invitation to Tender, or other) has been used normally by advertising the opportunity on BC Bid. |
| 200 | Direct Award - Public sector organization : Contracts may be negotiated and directly awarded without competitive process where the contract is with another government organization. |
| 201 | Direct Award - Sole source: Contracts may be negotiated and directly awarded without competitive process where the ministry can strictly prove that only one contractor is qualified to provide the goods, services or construction or is capable of engaging in a disposal opportunity. |
| 202 | Direct Award – Emergency: Contracts may be negotiated and directly awarded without competitive process where an unforeseeable emergency exists and the goods, service or construction could not be obtained in time by means of a competitive process. |
| 203 | Direct Award - Security, order, etc.: Contracts may be negotiated and directly awarded without competitive process where a competitive process would interfere with a ministry's ability to maintain security or order or to protect human, animal or plant life or health. |
| 204 | Direct Award – Confidentiality: Contracts may be negotiated and directly awarded without competitive process where the acquisition is of a confidential or privileged nature and disclosure through an open bidding process could reasonably be expected to compromise government confidentiality, cause economic disruption or be contrary to the public interest |
| 205 | Direct Award - Notice of Intent: When a contract for services or construction valued at \$50,000 or more, is intended to be directly awarded on the basis that there is only one vendor that can provide the services or goods required, but this cannot be strictly proven, a Notice of Intent must be posted on BC Bid. |
| 206 | Direct Award: Use this code where the Direct Award was permitted under another corporate policy or legislation. Do not use this code if another direct award code applies. |
| 207 | Direct Award – Services and Construction Under \$25,000: Any service or construction opportunity, or supply arrangement for the supply of services or construction, with an estimated value of less than \$25,000, should be competed to the extent reasonable and cost effective. Do not use this code if one of the exceptions in Core Policy and Procedures Manual: Chapter 6.3.3(a) applies. In that case use one of codes 200 to 204 whichever applies. |
| 300 | Competitive Process Among Selected Vendors (Construction and Services under \$75,000): A competitive solicitation process among a limited list of vendors and not advertised on BCBid (i.e. solicitation of three or more vendors) If vendors are on a pre-qualification list, then use 401. |
| 400 | Selected Vendor from Pre-qualification List: Select this code for a contract that is issued to a vendor on a pre- qualification list without undertaking a competitive process. The process followed must be consistent with the rules set out in the original request for qualifications. |
| 401 | Competition Among Vendors on a Pre-qualification List: A competitive solicitation process among a limited list of vendors selected from a pre-qualification list. Select this code if a competitive solicitation process is conducted among a limited list of vendors selected from a pre-qualification list. The process followed to select vendors must be consistent with the rules set out in the original request for qualifications. |
| 500 | Purchase from a Corporate Supply Arrangement (CSA): A purchase from a pre-established corporate supply arrangement such as a Master Standing Offer, Standing Offer or the Queens Printer. |

Codes continued . . .

Canada Free Trade Agreement (CFTA) Exclusion Codes – These codes reflect Canada Free Trade Agreement (CFTA) reporting requirements and thresholds only. Do not use these codes to track compliance with policy or with the New West Partnership Trade Agreement (NWPTA) or other applicable trade agreements.

Code

Description

Purchase subject to Canada Free Trade Agreement (CFTA): The purchase is over the trade agreement (CFTA) threshold for national advertising (\$25K for goods / \$100K. for services / \$100K. for construction) and is not excluded or exempted under any other category below.

Purchase below applicable CFTA threshold: The purchase is under the trade agreement thresholds (dollar values as noted

above).

300 Purchase of an exempted commodity/service: The purchase is for goods, services or construction that is exempted from coverage of CFTA or to which CFTA does not apply by virtue of its specific reference in CFTA (for example grants, entitlements or ministerial appointments).

400 Excluded – Emergency: A purchase where an unforeseeable situation of urgency exists and the goods, services or construction cannot be obtained in time by means of an open procurement.

Excluded - Security, order, etc.: A purchase where compliance with the open tendering provisions set out in CFTA would interfere with the Province's ability to maintain security or order or to protect human, animal or plant life or health.

Excluded - Product compatibility/exclusive rights: A purchase which must: ensure compatibility with existing products; recognize exclusive rights, such as exclusive licenses, copyright and patent rights; or maintain specialized products that must be maintained by the manufacturer or its representative.

Excluded - Procurement of prototype: The procurement of a prototype or a first good or service to be developed in the course of and for a particular contract for research, experiment, study or original development, but not for any subsequent purchases.

800 Excluded - Regional/Economic development: A purchase which, under exceptional circumstances, may be excluded by the Province from the application of applicable chapters of the agreements for regional and economic development.

Contract Category for STOB 60, 61, and 63: The following definitions are to be used to classify contracts in STOBS 60, 61, and 63 which fall into the categories listed. If the contract does not fit into one of these broad categories, it should be excluded from the analysis. If the contract falls into more than 1 category, choose the predominant category. Recoverable contracts should be identified as such and will be excluded from the information submitted to central agencies if submission is required.

| Code | Description | | | | | |
|-------|---|--|--|--|--|--|
| GMA | General Management Advice: Contract providing information for, or advice on, the planning and/or management of programs. | | | | | |
| HR/LR | Human Resources & Labour Relations: Contracts providing Human Resources services or human resource related services such as coaching/facilitation and organizational design. | | | | | |
| IT | Information Technology: Consulting services related to information technology. This would include contracts consulting on systems development or management of systems. It would not include the work done to develop the system, writing code, data entry etc | | | | | |
| PRA | Policy, Research and Analysis: Contracts providing planning services that contribute to or recommend policy, or consultation on policy issues; contracts that provide research and analysis to advise in program management | | | | | |
| PM | Project Management: Contracts where an external project manager is hired to run a project or facilitate activities. | | | | | |
| СОМ | Communications: Contracts proving professional services related to the planning writing, preparation or distribution of communications. | | | | | |
| BSA | Business Support & Administrative: Contracts where administrative support is supplied such as administrative service, filing, cataloguing, records administration, etc. Also includes Secretariat support services. | | | | | |
| OP | Operational: Contracts where non-consulting type work is being performed that is performing a service that does not fit into one of the categories above. Examples include data entry, building fences, maintenance activities, writing and delivery of training program. | | | | | |
| ОТН | Other: Contracts which do not fall into any of the above categories. | | | | | |

600

700



Consulting and General Services Contract

CONTRACT./FILE NO: OP19BMC042

THIS AGREEMENT DATED FOR REFERENCE THE 29TH DAY OF MARCH, 2019

PROJECT DESCRIPTION:

2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring), AREA3

BETWEEN:

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA, as represented by the MINISTER OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS

3400 DAVIDSON AVENUE VICTORIA BC V8Z 3P8
PO Box station 9375 Prov Gov't Victoria BC V8W 9M5
Phone Number: (250) 952 6520
Ministry Representative: Brad Hlasny
E-mail Address: Brad.Hlasny@gov.bc.ca
(the "Province", "we", "us", or "our" as applicable)

AND:

Canadian Forest Products Ltd.
5162 Northwood Pulpmill Rd
Prince George, BC, V2L 4W2
Dir: 250-962-3295
Contact: Vincent Day, vincent.day@canfor.com
Corporate Business Number:
WorkSafe BC Number:
(the "Contractor", "you", or "your" as applicable)

The Province wishes to retain the Contractor to provide the Services specified in Schedule A and, in consideration for the remuneration set out in Schedule B, the Contractor has agreed to provide those Services, on the terms and conditions set out in this Agreement.

The Province and the Contractor agree as follows:

(a) DEFINITIONS

- 1.01 In this Agreement, unless the context otherwise requires:
 - "Business Day" means a day, other than a Saturday or Sunday, on which Provincial government offices are open for normal business in British Columbia;
 - "Incorporated Material" means any material in existence prior to the start of the Term or developed independently of this Agreement, and that is incorporated or embedded in the Produced Material by the Contractor or a Subcontractor;
 - c) "Material" means the Produced Material and the Received Material;

- "Produced Material" means records, software and other material, whether complete or not, that, as a result of this Agreement, are produced by the Contractor or a Subcontractor and includes the Incorporated Material;
- e) "Received Material" means records, software and other material, whether complete or not, that, as a result
 of this Agreement, are received by the Contractor or a Subcontractor from the Province or any other person;
- f) "Record" is the definition of "record" in the Interpretation Act and as incorporated into this Agreement and "records" will bear a corresponding meaning;
- g) "Services" means the services described in Schedule A;
- h) "Subcontractor" means a person described in Section 16.05;
- "Term" means the term of the Agreement described in Section 3.01 of this Agreement subject to that term ending earlier in accordance with this Agreement; and
- "Unit of Measure" has the meaning described in Schedule B.

(b) CONTRACT DOCUMENTS AND MODIFICATIONS

1.01 The attached schedules are applicable to and form part of this Agreement:

| Schedule | Title |
|--------------|------------------|
| Schedule 'A' | Services |
| Schedule 'B' | Contract Payment |
| | i i |
| | |
| | |
| | |
| | |
| | |

1.02 No modification of this Agreement is effective unless it is in writing and signed by, or on behalf of, the parties.

Article 3 TERM OF CONTRACT

- 2.01 The Term of this Agreement is from and including March 29, 2019 to and including March 29, 2019 inclusive.
- 2.02 Regardless of the date of execution or delivery of this Agreement, the Contractor must provide the Services during the Term.
- 2.03 Time is of the essence in this Agreement and, without limitation, will remain of the essence after any modification or extension of this Agreement, whether or not expressly restated in the document effecting the modification or extension.

Article 4 CONTRACTOR'SOBLIGATIONS

- 4.01 You must provide the Services described in Schedule A (the "Services") in accordance with this Agreement.
- 4.02 Unless the parties otherwise agree in writing, you must supply and pay for all labour, materials, equipment, tools, facilities, and approvals and licences necessary or advisable to perform your obligations under this Agreement, including the license under Section 8.04.
- 4.03 Unless otherwise specified in this Agreement, you must perform the Services to a standard of care, skill, and diligence maintained by persons providing, on a commercial basis, services similar to the Services.
- 4.04 You must provide, instruct, and supervise a sufficient number of qualified personnel to enable timely and proper performance and completion of the Services. All such personnel shall be competent, English literate, efficient and qualified by education, training and experience to carry out the tasks to which each is assigned.
- 4.05 We may from time to time give you reasonable instructions (in writing or otherwise) as to the performance of the Services. You must comply with those instructions but, unless otherwise specified in this Agreement, you may determine the manner in which the instructions are carried out.
- 4.06 If we provide an instruction under Section 4.05 other than in writing, you may request that the instruction be confirmed by us in writing, which request we must comply with as soon as it is reasonably practicable to do so.

- 4.07 Requesting written confirmation of an instruction under Section 4.06 does not relieve you from complying with the instruction at the time the instruction was given.
- 4.08 In the performance of your obligations under this Agreement, you must comply with all applicable laws.

Article 5 PAYMENT

- (a) If you comply with this Agreement, we must pay you at the rates and times described in Schedule B:
 - (a) the fees described in that Schedule;
 - (b) the expenses, if any, in accordance with that Schedule if they are supported, where applicable, by proper receipts and, in our opinion, are necessarily incurred by you in providing the Services; and
 - (c) any applicable taxes payable by us under law or agreement with the relevant taxation authorities on the fees and expenses described in paragraphs (i) and (ii).

We are not obliged to pay you more than the maximum amount or dollar limit specified in Schedule B on account of fees and expenses.

- (b) In order to obtain payment of any fees or expenses, if any, under this Agreement, you must submit written statements of account to us in a form satisfactory to us, but no sooner than the dates referred to in Schedule B.
- (c) Without limiting Section 11.01 we may withhold from any payment due to you an amount sufficient to indemnify, in whole or in part, the Province and its employees and agents against any liens or other third-party claims that have arisen or could arise in connection with the provision of the Services. An amount withheld under this section must be promptly paid by the Province to you upon the basis for withholding the amount having been fully resolved to the satisfaction of the Province.
- (d) Our obligation to pay money to you is subject to the Financial Administration Act, which makes that obligation subject to an appropriation being available in the fiscal year of the Province during which payment becomes due.
- (e) Unless otherwise specified in this Agreement, all references to money are to Canadian dollars.
- (f) If you are not a resident in Canada, you acknowledge that we may be required by law to withhold income tax from the fees described in Schedule B and then to remit that tax to the Receiver General of Canada on your behalf.
- (g) Without limiting Section 16.11(a), you must not, in relation to performing your obligations under this Agreement, commit or purport to commit us to pay any money except as may be expressly provided for in this Agreement.
- (h) You must:
 - 18.01 apply for, and use reasonable efforts to obtain, any available refund, credit, rebate or remission of federal, provincial or other tax or duty imposed on you as a result of this Agreement that the Province has paid or reimbursed to you or agreed to pay or reimburse to you under this Agreement; and
 - 18.02 immediately on receiving, or being credited with, any amount applied for under paragraph (a) remit that amount to us.

ARTICLE 6 REPRESENTATIONS AND WARRANTIES

- 3.01 As at the date this Agreement is executed and delivered by, or on behalf of, the parties, you represent and warrant to us as follows:
 - (a) except to the extent you have previously disclosed otherwise in writing to us:
 - all information, statements, documents and reports furnished or submitted by you to us in connection
 with this Agreement (including as part of any competitive process resulting in this Agreement being
 entered into) are in all material respects true and correct,
 - (ii) you have sufficient trained staff, facilities, materials, appropriate equipment and approved subcontractual agreements in place and available to enable you to fully perform the Services, and
 - (iii) you hold all permits, licenses, approvals and statutory authorities issued by any government or government agency that are necessary for the performance of your obligations under this Agreement; and
 - (b) if the Contractor is not an individual:

- (i) you have the power and capacity to enter into this Agreement and to observe, perform and comply with the terms of this Agreement and all necessary corporate or other proceedings have been taken and done to authorize the execution and delivery of this Agreement by, or on behalf of, you, and
- (ii) this Agreement has been legally and properly executed by, or on behalf of, you and is legally binding upon and enforceable against you in accordance with its terms except as enforcement may be limited by bankruptcy, insolvency or other laws affecting the rights of creditors generally and except that equitable remedies may be granted only in the discretion of a court of competent jurisdiction.

ARTICLE 7 PRIVACY, SECURITY AND CONFIDENTIALITY

- 6.01 You must comply with the Privacy Protection Schedule if attached to this Agreement.
- 6.02 You must make reasonable security arrangements to protect the Material from unauthorized access, collection, use, disclosure, alteration, or disposal and comply with the Security Schedule, if attached.
- 6.03 You must treat as confidential all information in the Material and all other information accessed or obtained by you or a Subcontractor (whether verbally, electronically or otherwise) as a result of this Agreement, and not permit its disclosure or use without our prior written consent except:
 - (a) as required to perform your obligations under this Agreement or to comply with applicable laws;
 - (b) if it is information that is generally known to the public other than as a result of a breach of this Agreement;
 - (c) if it is information in any Incorporated Material.
- 6.04 Any public announcement relating to this Agreement will be arranged by us and, if such consultation is reasonably practicable, after consultation with you.
- 6.05 You must not, without our prior written approval, refer for promotional purposes to the Province being your customer or the Province having entered into this Agreement.

ARTICLE 7 MATERIAL AND INTELLECTUAL PROPERTY

- 7.01 If you receive a request for access to any of the Material from a person other than us, and this Agreement does not require or authorize you to provide that access, you must promptly advise the person to make the request to us.
- 7.02 We exclusively own all property rights in the Material that are not intellectual property rights. Any equipment property we may provide to you or a subcontractor is our exclusive property. You must deliver any Material or equipment property to us immediately following expiration of this Agreement, or sooner upon our request, in the same condition it was supplied to you, excepting always loss or damage attributable to reasonable wear or tear.
- 7.03 We exclusively own all intellectual property rights, including copyright:
 - (a) in Received Material that you receive from us, and
 - (b) in Produced Material, other than any Incorporated Material.

Upon our request, you must deliver to us documents satisfactory to us that irrevocably waive in our favour any moral rights that you (or your employees) or a Subcontractor (or its employees) may have in the Produced Material and confirm the vesting in the Province of the copyright in the Produced Material, other than any Incorporated Material.

- 7.04 Upon any Incorporated Material being embedded or incorporated in the Produced Material and to the extent that it remains so embedded or incorporated, you grant us:
 - (a) a non-exclusive, perpetual, irrevocable, royalty-free, worldwide license to use, reproduce, modify, and distribute that Incorporated Material; and
 - (b) the right to sublicense to third-parties the right to use, reproduce, modify and distribute that Incorporated Material.

ARTICLE 8 RECORDS AND REPORTS

8.01 You must, upon our request, fully inform us of all work done by you or a Subcontractor in connection with providing the Services.

4

8.02 If Schedule B provides for you to be paid fees at a Unit of Measure rate or for you to be paid or reimbursed for expenses, you must maintain time records and books of account, invoices, receipts and vouchers of expenses in support of those payments, in form and content satisfactory to us. Unless otherwise specified in this Agreement, the Contractor must retain such documents for a period of not less than seven years after this Agreement ends.

ARTICLE 9 AUDIT

9.01 In addition to any other rights of inspection the Province may have under statute or otherwise, we may at any reasonable time and on reasonable notice to you, enter on your premises to inspect and, at our discretion, copy any of the Material and you must permit, and provide reasonable assistance to, the exercise by us of our rights under this section.

ARTICLE 10 INDEMNITY AND INSURANCE

- 10.01 You must indemnify and save harmless the Province and its employees and agents from any losses, claims, damages, actions, causes of action, costs and expenses that the Province or any of its employees or agents may sustain, incur, suffer or be put to at any time either before or after this Agreement ends, including any claim of infringement of third-party intellectual property rights, where the same or any of them are based upon, arise out of or occur, directly or indirectly, by reason of any act or omission by you or your agents, employees, officers, directors or Subcontractors in connection with this Agreement (each a "Loss"), excepting always liability arising out of the independent acts or omissions of the Province and its employees and agents.
- 10.02 You must comply with the insurance requirements in Schedule D, if attached, as those terms may be modified from time to time in accordance with our directions.
- 10.03 Without limiting the generality of Section 4.08, you must comply with, and must ensure that any Subcontractors comply with, all applicable occupational health and safety laws in relation to the performance of your obligations under this Agreement, including the Workers Compensation Act in British Columbia or similar laws in other jurisdictions.
- 10.04 At your own expense, and where required under Workers Compensation Act in British Columbia, you must obtain WorkSafe BC coverage for yourself, all workers and any shareholders, directors, partners or other individuals employed or engaged in the performance of the Services and you shall ensure all approved Subcontractors obtain WorkSafe BC Coverage.
- 10.05 If you are an individual or a partnership of individuals and do not have the benefit of mandatory workers compensation coverage under the Workers Compensation Act in British Columbia, you must apply for and maintain Personal Optional Protection under the Workers Compensation Act.
- 10.06 You are responsible for all fines, levies, penalties and assessments made or imposed under the *Workers Compensation Act* and regulations relating in any way to the Services.
- 10.07 Upon our request you must provide us with evidence of your compliance with Sections 11.02, 11.04 and 11.05.

ARTICLE 11 FORCE MAJEURE

- 11.01 An "Event of Force Majeure" means a natural disaster, fire, flood, storm, epidemic or power failure, war (declared and undeclared), insurrection or act of terrorism or piracy, strike (including illegal work stoppage or slowdown) or lockout, or a freight embargo if such event prevents a party from performing its obligations in accordance with this Agreement and is beyond the reasonable control of that party.
- 11.02 An "Affected Party" means a party prevented from performing its obligations in accordance with this Agreement by an Event of Force Majeure.
- 11.03 An Affected Party is not liable to the other party for any failure or delay in the performance of the Affected Party's obligations under this Agreement resulting from an Event of Force Majeure and any time periods for the performance of such obligations are automatically extended for the duration of the Event of Force Majeure provided that the Affected Party complies with the requirements of Section 12.04.
- 11.04 An Affected Party must promptly notify the other party in writing upon the occurrence of the Event of Force Majeure and make all reasonable efforts to prevent, control or limit the effect of the Event of Force Majeure so as to resume compliance with the Affected Party's obligations under this Agreement as soon as possible.

ARTICLE 12 NON-COMPLIANCE WITH AGREEMENT CONDITIONS

- 12.01 An "Event of Default" means any of the following:
 - (a) your failure to perform any of your obligations under this Agreement, or
 - (b) any representation or warranty made by you in this Agreement is untrue or incorrect, or
 - (c) an Insolvency Event, which means any of the following;
 - (i) an order is made, a resolution is passed or a petition is filed, for your liquidation or winding up,
 - you commit an act of bankruptcy, make an assignment for the benefit of your creditors or otherwise acknowledge your insolvency,
 - (iii) a bankruptcy petition is filed or presented against you or a proposal under the *Bankruptcy and Insolvency Act* (Canada) is made by you,
 - (iv) a compromise or arrangement is proposed in respect of you under the *Companies' Creditors Arrangement Act* (Canada),
 - (v) a receiver or receiver-manager is appointed for any of your property, or
 - (vi) you cease, in our reasonable opinion, to carry on business as a going concern.
- 12.02 On the happening of an Event of Default, or at any time thereafter, we may, at our option, elect to do any one or more of the following:
 - (a) by written notice to you, require that the Event of Default be remedied within a time period specified in the notice;
 - (b) pursue any remedy or take any other action available to us at law or in equity; or
 - (c) by written notice to you, terminate this Agreement with immediate effect or on a future date specified in the notice, subject to the expiration of any time period specified under Section 13.02(a).
- 12.03 No failure or delay on our part to exercise our rights in relation to an Event of Default will constitute a waiver by us of such rights.
- 12.04 If you become aware that an Event of Default has occurred or anticipates that an Event of Default is likely to occur, you must promptly notify us of the particulars of the Event of Default or anticipated Event of Default. A notice under this section as to the occurrence of an Event of Default must also specify the steps you propose to take to address, or prevent recurrence of, the Event of Default. A notice under this section as to an anticipated Event of Default must specify the steps you propose to take to prevent the occurrence of the anticipated Event of Default.

ARTICLE 13 TERMINATION

- 13.01 In addition to our right to terminate this Agreement under Section 13.02(c) on the happening of an Event of Default, we may terminate this Agreement for any reason by giving at least 5 days' written notice of termination to you.
- 13.02 Unless Schedule B otherwise provides, if we terminate this Agreement under Section 14.01:
 - (a) we must, within 30 days of such termination, pay you any unpaid portion of the fees and expenses described in Schedule B which corresponds with the portion of the Services that was completed to our satisfaction before termination of this Agreement; and
 - (b) you must, within 30 days of such termination, repay to us any paid portion of the fees and expenses described in Schedule B which corresponds with the portion of the Services that we have notified you in writing was not completed to our satisfaction before termination of this Agreement.
- 13.03 The payment by us of the amount described in Section 14.02(a) discharges us from all liability to make payments to the Contractor under this Agreement.

ARTICLE 14 DISPUTE RESOLUTION

- 14.01 In the event of any dispute between the parties arising out of or in connection with this Agreement, the following dispute resolution process will apply unless the parties otherwise agree in writing:
 - (a) the parties must initially attempt to resolve the dispute through collaborative negotiation;

- (b) if the dispute is not resolved through collaborative negotiation within 15 Business Days of the dispute arising, the parties must then attempt to resolve the dispute through mediation under the rules of the British Columbia Mediator Roster Society; and
- (c) if the dispute is not resolved through mediation within 30 Business Days of the commencement of mediation, the dispute must be referred to and finally resolved by arbitration under the Commercial Arbitration Act.
- 14.02 Unless the parties otherwise agree in writing, an arbitration or mediation under Section 15.01 will be held in Victoria, British Columbia.
- 14.03 Unless the parties otherwise agree in writing or, in the case of an arbitration, the arbitrator otherwise orders, the parties must share equally the costs of a mediation or arbitration under Section 15.01 other than those costs relating to the production of expert evidence or representation by counsel.

ARTICLE 15 GENERAL

- 15.01 Any notice or document contemplated by this Agreement, to be effective, must be in writing and delivered as follows:
 - (a) hand delivered to the party or the specified party representative, in which case it will be deemed to be received on the day of its delivery; or
 - (b) by prepaid post to the party's address specified on the first page of this Agreement, in which case if mailed during any period when normal postal services prevail, it will be deemed to be received on the fifth Business Day after its mailing; or
 - (c) delivered by courier service to the party's address specified on the first page of this Agreement, in which case it will be deemed received on the fifth Business Day after collection by the courier service; or
 - (d) by facsimile or electronic transmission to the specified facsimile number or Email address on the first page of this Agreement, in which case it will be deemed to be received on the day of transmittal unless transmitted after the normal business hours of the addressee or on a day that is not a Business Day, in which cases it will be deemed to be received on the next following Business Day.
- 15.02 Either party may from time to time give notice to the other party of a substitute address, Email address, or fax number, which from the date such notice is given will supersede for purposes of Section 16.01 any previous address, Email address, or fax number specified for the party giving the notice.
- 15.03 You must not assign your rights under this Agreement without our prior written consent.
- 15.04 You must not subcontract any of your obligations under this Agreement without our prior written consent, excepting persons listed in Schedule A.
- 15.05 No subcontract, whether consented to or not, relieves you from any obligations under this Agreement. You must comply with the Subcontracting Schedule if attached to this Agreement. You must ensure that any person retained by you or any person retained by a person retained by you fully complies with this Agreement in performing the subcontracted obligations.
- 15.06 We may, for reasonable cause, object to the use of a proposed Subcontractor and require you to retain another qualified subcontractor.
- 15.07 A waiver of any term or breach of this Agreement is effective only if it is in writing and signed by, or on behalf of, the waiving party and is not a waiver of any other term or breach.
- 15.08 This Agreement and any modification of it constitute the entire Agreement between the parties as to performance of the Services.
- 15.09 Sections 4.08, 5.01 to 5.04, 5.07, 5.08, 7.01 to 7.05, 8.01 to 8.04, 9.01, 9.02, 10.01, 11.01, 11.02, 11.07, 12.01 to 12.04, 13.02, 13.03, 14.02, 14.03, 15.01 to 15.03, 16.01, 16.02, 16.09, and 16.11, any accrued but unpaid payment obligations, and any other sections of this Agreement (including schedules) which, by their terms or nature, are intended to survive the completion of the Services or termination of this Agreement, will continue in force indefinitely, even after this Agreement ends.
- 15.10 The schedules to this Agreement (including any appendices or other documents attached to, or incorporated by reference into, those schedules) are part of this Agreement.
- 15.11 In relation to the performance of your obligations under this Agreement, you are an independent contractor and not our:

- (a) employee or partner; or
- (b) agent except as may be expressly provided for in this Agreement.

You must not act or purport to act contrary to this section.

- 15.12 You must not do anything that would result in personnel hired or used by you or a Subcontractor in relation to providing the Services being considered our employees.
- 15.13 If one or more individuals are identified in the schedules as "Key Personnel", you must cause those individuals to perform the Services on your behalf and not remove or replace them, without our prior written approval. Any approved replacement is at your expense.
- 15.14 We must make available to you all information in our possession which we consider pertinent to the performance of the Services.
- 15.15 You must not provide any services to any person in circumstances which, in our reasonable opinion, could give rise to a conflict of interest between your duties to that person and your duties to us under this Agreement.
- 15.16 If there is a conflict among provisions of this Agreement, a provision in the body of this Agreement will prevail over any conflicting provision in, attached to, or incorporated by reference into a schedule, unless that conflicting provision expressly states otherwise and a provision in a schedule will prevail over any conflicting provision in a document attached to or incorporated by reference into a schedule, unless the schedule expressly states otherwise.
- 15.17 This Agreement does not operate as a permit, license, approval or other statutory authority which you may be required to obtain from the Province or any of its agencies in order to provide the Services. Nothing in this Agreement is to be construed as interfering with, or fettering in any manner, the exercise by the Province or its agencies of any statutory, prerogative, executive or legislative power or duty.
- 15.18 If any provision of this Agreement or the application of it to any person or circumstance is invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provision to any other person or circumstance will not be affected or impaired and will be valid and enforceable to the extent permitted by law.
- 15.19 Each party must perform the acts, execute and deliver the writings, and give the assurances as may be reasonably necessary to give full effect to this Agreement.
- 15.20 This Agreement is governed by, and is to be interpreted and construed in accordance with, the laws applicable in British Columbia.

ARTICLE 16 INTERPRETATION

- 16.01 In this Agreement:
 - (a) "we", "us", and "our" refer to the Province alone and never refer to the combination of the Contractor and the Province;
 - (b) the Contractor and the Province are referred to as "the parties" and each of them as a "party";
 - (c) "includes" and "including" are not intended to be limiting;
 - (d) unless the context otherwise requires, references to sections by number are to sections of this Agreement;
 - (e) "attached" means attached to this Agreement when used in relation to a schedule;
 - (f) unless otherwise specified, a reference to a statute by name means the statute of British Columbia by that name, as amended or replaced from time to time;
 - (g) the headings have been inserted for convenience of reference only and are not intended to describe, enlarge or restrict the scope or meaning of this Agreement or any provision of it;
 - (h) "person" includes an individual, partnership, corporation or legal entity of any nature; and
 - (i) unless the context otherwise requires, words expressed in the singular include the plural and vice versa.

ARTICLE 17 EXECUTION AND DELIVERY

17.01 This Agreement may be entered into by a separate copy of this Agreement being executed by, or on behalf of, each party and that executed copy being delivered to the other party by a method provided for in Section 16.01 or any other method agreed to by the parties.

The Parties have executed this Agreement as follows:

| SIGNED AND DELIVERED on behalf of the Province by an authorized representative of the Province | SIGNED AND DELIVERED by or on behalf of the Contractor (or by an authorized signatory of the Contractor if a corporation) |
|--|---|
| (Authorized Ministry Expense Authority) | (Contractor of Authorized Signatory) |
| Matt Austin | KEUN HORSNELL |
| (PRINTED NAME of Ministry Expense Authority) | (PRINTED NAME of Contractor) |
| Dated this 29 day of March, 2019 | Dated this 29 day of MARCH, 2019 |

SCHEDULE "A"

Attachment to the Agreement for 2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring) AREA3

1. Foreword

The Province of BC intends to directly purchase light detection and range data (LiDAR) for an area of 2002 km² (Figure 1). The objective of this project is to provide a high resolution/high accuracy base data set, suitable to support modeling of overland flows and other resource mapping projects for the Province as well as providing open data for public use. In addition, GeoBC requires full licensing right for the Province with respect to unlimited data use, rights to derive and sell products and make the data available for public use under an open data license agreement.



Figure I 2018 Acquisition Areas (red) for AREA 1

2. DATA requirements

a. Data license

- The Province obtains a license including :
 - Full licensing rights
 - Unlimited data use
 - All rights to derive and sell products

 Rights to make the data available for public use under an open data license agreement

b. Data format and other technical requirements

- Calibrated LiDAR point cloud data in LAS format, preferably V1.2 or higher
- An InSitu Camera Calibration report is desirable if available
- A minimum point density of 1pt/m² or higher
- Intensity and multi return (echoes) are desirable
- Ground classification if LiDAR data is not mandatory but preferred
- Horizontal/Vertical Datum in NAD83/CGVD2013 or NAD83/CGVD28 in UTM are acceptable (ESRI .asc format or USGS .dem)
- Tiling scheme for LAS/ LAZ point cloud data: Geographic BC tiling scheme in UTM projection is desirable but not mandatory; please see additional info for LAZ data in Section 6.4 of the "Specifications for LiDAR" V3.1 April 2018, GeoBC.
- Submission of LiDAR point cloud data on Digital Hard drive, USB 3.0 compatible (single copy)

3. Liaison

 All project liaison and submissions must be handled through GeoBC, Ministry of Forests, Lands and Natural Resource Operations. Contact information is below:



Harald Steiner, P.Eng
Team Lead | Digital Image Services
GeoBC
3rd Floor, 3400 Davidson Ave
Victoria BC V8Z 3P8
Phone (778)-974-3631
Mobile (778)-677-6976

Forests, Lands and Natural Resource Operations

Harald.Steiner@gov.bc.ca www.geobc.gov.bc.ca

4. Data and Materials Supplied

• Electronic Submission of a shape file outlining the areas provided



SCHEDULE "B" - FEES

CONTRACT NO: OP19BMC042

Attachment to the Agreement for 2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring) AREA3

FEES

The total flat rate fee (excluding taxes) payable to the Contractor under this Agreement, for all Services, including those described in Schedule A, will not exceed \$1,130,897.50 (no tax) without the prior written approval of the Ministry Representative.

Any work other than the Services that is requested by the Province will not be undertaken except in accordance with a written amendment to this Agreement.

EXPENSES

The Province will not pay any expenses incurred by the contractor in relation to the performance of the Services.

SUBMISSION OF STATEMENT OF ACCOUNT

In order to obtain payment for any fees (and any applicable taxes under the Agreement, you must submit to us a written Statement of Account/invoice in a form satisfactory to us.

The Statement of Account(s) / invoice(s) must show the following:

- **ARTICLE 5** your legal name, address, the date and the period of time which the invoice applies ("Billing Period"), the contract number, and a statement number for identification;
- ARTICLE 6 the calculation of all fees claimed under this Agreement for the Billing Period, with hours, dates, rates, and name(s) of persons providing the Services, a description of specific services/works completed during the Billing Period, including a declaration that the Services have been completed;
- **ARTICLE** 7the calculation of any applicable GST tax payable by the Province in relation to the Services provided under this Agreement and for the Billing Period as a separate line item;
- ARTICLE 8 your GST registration number, and
- ARTICLE 9 Payment units are based on the amount of "Line Km" flown and "Line Km" produced.
- **ARTICLE 10** any other billing information reasonably requested by us.

Subject to any holdback provided for in this Agreement, within thirty days (30) of our receipt of your invoice, or the date we authorize payment, whichever is the later, we must pay you fees for those Services we determined were satisfactorily performed during the Billing Period.

PAYMENT SCHEDULE

(a) One complete invoice to be submitted by no later than 29th March 2019 for the amount identified.

Invoices should be submitted to:



Harald Steiner, P.Eng
Team Lead | Digital Image Services
GeoBC
3rd Floor, 3400 Davidson Ave
Victoria BC V8Z 3P8
Phone (778)-974-3631
Mobile (778)-677-6976
Forests, Lands and Natural Resource Operations
Harald.Steiner@gov.bc.ca
www.geobc.gov.bc.ca

Invoices are paid within thirty (30) days of receipt of goods.

Hlasny, Brad FLNR:EX

From: Christian, Angus FLNR:EX Sent: April 8, 2019 9:06 AM

To: 'Kirk, Jordan'

Subject: RE: [External] Submission of LiDAR data, Purchase OP19BMC042

Hi Jordan

Yes, we would want the tile to be projected into UTM 11 and the tiles would have to be buffered so that they tile seamlessly. A 1:2500 grid should accommodate uncompressed tiles with a file size of \sim 2GB or less at a point density of \sim 8 points/m².

From: Kirk, Jordan [mailto:Jordan.Kirk@canfor.com]

Sent: Monday, April 8, 2019 7:39 AM

To: Christian, Angus FLNR:EX

Subject: FW: [External] Submission of LiDAR data, Purchase OP19BMC042

Hi Angus,

We are working on retiling the data and the consultant we use has so questions/concerns. Hopefully you can answer them for him (see below).

The image below has our tiles in black (1km2) and the BCGS 1:2500 tile in red.

Thanks, Jordie

From: Jay Mills [mailto:jay.mills@jeodesy.com]

Sent: Saturday, April 06, 2019 9:49 AM

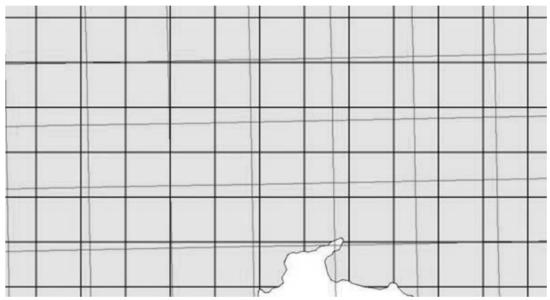
To: Kirk, Jordan

Subject: RE: [External] Submission of LiDAR data, Purchase OP19BMC042

HI Jordy,

I assume they want the data in UTM Zone 11. There is some skew with their tile layout, so I need to know if they want it buffered so tiles converted to rasters will merge seamlessly. Looks like the tiles are quite a bit larger, so they will need to be able to handle files up to \sim 4gb. You might check this with them.

Jay



----Original Message-----

From: Kirk, Jordan [mailto:Jordan.Kirk@canfor.com]

Sent: Friday, April 05, 2019 9:02 AM To: Jay Mills <jay.mills@jeodesy.com>

Subject: RE: [External] Submission of LiDAR data, Purchase OP19BMC042

Hi Jay,

Attached are the following files:

- 1) Canfor_lidar.zip is the area of interest the province would like to purchase off us.
- 2) Lidar_grid_gov.zip is the tile structure they would like it delivered in.

As mentioned before if we can convert the files to .laz version 1.4 that would be ideal.

Thanks, Jordie

Canfor Legal Disclaimer: This e-mail and any attachment(s) are confidential. If you are not the intended recipient, please notify the sender immediately by return e-mail, delete this e-mail and do not copy, use or disclose it to any other person.

Hlasny, Brad FLNR:EX

From: Kirk, Jordan < Jordan.Kirk@canfor.com>

Sent: April 8, 2019 7:39 AM **To:** Christian, Angus FLNR:EX

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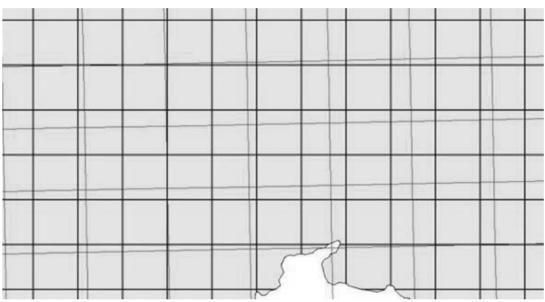
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Hlasny, Brad FLNR:EX

From: Christian, Angus FLNR:EX Sent: April 2, 2019 2:32 PM

To: 'Kirk, Jordan'

Cc: Steiner, Harald FLNR:EX; vincent.day@canfor.com

Subject: RE: [External] Submission of LiDAR data, Purchase OP19BMC042

Thanks Jordan

The projection, horizontal and vertical data, and classification schemes are acceptable.

We would prefer to have the files delivered in .laz (version 1.4) file format and, as you have noted, we would also prefer our tiling system to be used, if possible. There is no need to separate out the data by year.

Cheers,



Angus Christian

Senior Imagery Specialist | Digital Image Services

GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca

www.geobc.gov.bc.ca

The good ended happily and the bad unhappily. That is what fiction means.

From: Kirk, Jordan [mailto:Jordan.Kirk@canfor.com]

Sent: Tuesday, April 2, 2019 2:19 PM **To:** Christian, Angus FLNR:EX; Day, Vincent

Subject: RE: [External] Submission of LiDAR data, Purchase OP19BMC042

Hi Angus,

Here are some answers to the questions you had today. There is more detail in the attached specifications document.

Projection:

- Horizontal Datum: North American Datum 83 Canadian Spatial Reference System NAD83 (CSRS);
- Vertical Datum: Canadian Geodetic Vertical Datum CGVD2013; and
- Map Projection: UTM Zone 11

Classification:

Class 2 & 1 provided in LAS 1.2. Bridges removed from bare earth but culverts remain

Class 2 = ground

Las version: 1.2

Tiling Structure: 1km2 tiles to keep file size down.

I will be discussing with our LiDAR contractor the ability to retile the data.

Thanks, Jordie

JORDAN KIRK

Coordinator - Woodlands Information Management Canadian Forest Products Ltd.

T 250-347-6654 **C** 250-341-1095 <u>Jordan.Kirk@canfor.com</u> <u>www.canfor.com</u> 4685 Forsters Landing Road, Radium Hot Springs, BC, V0A 1M0

-----Original Appointment-----

From: Christian, Angus FLNR:EX [mailto:Angus.Christian@gov.bc.ca]

Sent: Monday, April 01, 2019 3:16 PM

To: Christian, Angus FLNR:EX; Day, Vincent; Kirk, Jordan

Subject: [External] Submission of LiDAR data, Purchase OP19BMC042

When: Tuesday, April 02, 2019 10:00 AM-10:30 AM (UTC-08:00) Pacific Time (US & Canada).

Where: FLNR R Victoria 3400 Davidson 3rd Fl RM 301 (seats 6) FLNR:EX

Hi Vincent

I've taken the liberty of setting up a phone-in conference for tomorrow at 10:AM - if this is inconvenient we can move the time.

Dial in 18773539184

Conf ID: s.15

The delayed delivery for the Mackenzie portion of the acquisition is fine.

You are correct, the final area is:

OP19BMC042 Purchasing of LiDAR data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, environmental monitoring ...) Canfor LiDAR point cloud data (unclassified/classified) \$.17 \$1,130,897.50

I am sure this was just a cut-and-paste error from another contract, as there were several acquisitions being conducted simultaneously.

I'm assuming there will be two deliveries – one reasonably soon for the southern area and the northern area late April/early May.

When ready, you can ship the data directly to me at:

Angus Christian

GeoBC
Ministry of Forests, Lands, Natural Resource Operations and Rural Development 3rd Floor 3400 Davidson
Victoria, BC
V8Z 3P8

Canfor Legal Disclaimer: This e-mail and any attachment(s) are confidential. If you are not the intended recipient, please notify the sender immediately by return e-mail, delete this e-mail and do not copy, use or disclose it to any other person.

Hlasny, Brad FLNR:EX

From: Kirk, Jordan < Jordan.Kirk@canfor.com>

Sent: April 2, 2019 2:19 PM

To: Christian, Angus FLNR:EX; Day, Vincent

Subject: RE: [External] Submission of LiDAR data, Purchase OP19BMC042

Attachments: airborne_contract_schedule_A_2015_12_31.docx

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Where: FLNR R Victoria 3400 Davidson 3rd Fl RM 301 (seats 6) FLNR:EX

Hi Vincent

I've taken the liberty of setting up a phone-in conference for tomorrow at 10:AM – if this is inconvenient we can move the time.

Dial in 18773539184

Conf ID:s.15

The delayed delivery for the Mackenzie portion of the acquisition is fine.

You are correct, the final area is:

OP19BMC042 Purchasing of LiDAR data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, environmental monitoring ...) Canfor LiDAR point cloud data (unclassified/classified) s.17 \$1,130,897.50

I am sure this was just a cut-and-paste error from another contract, as there were several acquisitions being conducted simultaneously.

I'm assuming there will be two deliveries – one reasonably soon for the southern area and the northern area late April/early May.

When ready, you can ship the data directly to me at:

Angus Christian

GeoBC

Ministry of Forests, Lands, Natural Resource Operations and Rural Development 3[™] Floor 3400 Davidson Victoria, BC V8Z 3P8

Canfor Legal Disclaimer: This e-mail and any attachment(s) are confidential. If you are not the intended recipient, please notify the sender immediately by return e-mail, delete this e-mail and do not copy, use or disclose it to any other person.



Contract LiDAR-EK-01-2015

Airborne Laser Scanning Data & Imagery Acquisition

Schedule A – Technical Specifications

Table of Contents

| ACQUISTION SPECIFICATIONS | |
|---|----|
| Overview | |
| Data Collection Standards | |
| Equipment Requirements | |
| Canfor Requirements | |
| Operational Requirements | |
| Quality Assurance – Data Review | 4 |
| PROJECT SCHEDULE | 4 |
| DESCRIPTION OF DELIVERABLES | |
| Deliverable Specifications | 6 |
| Data Processing Deliverable Requirements | 10 |
| Tables | |
| Tables | • |
| Table 1: Acquisition Parameters | |
| Table 2: Project Schedule | |
| Table 3: Mandatory Deliverable Specifications | 6 |
| Table 4: Deliverables | |
| Table 5: Data Processing Deliverable Requirements | 10 |



ACQUISTION SPECIFICATIONS

Overview

Airborne Imaging shall provide all equipment, software, hardware, and personnel to conduct high-resolution aerial imagery and LiDAR data acquisition for the area identified in the shape file (to be provided by Canfor).

Data Collection Standards

LiDAR data collection will consider the guidelines established in the GeoBC document "Specifications of LiDAR", Ministry of Forest, Lands, and Natural Resources, 2013 in the development and implementation of this contract. Requested deviations from this standard are required to be justified and documented within this Schedule A.

GeoBC LiDAR Specifications V2.0 March 27, 2014

One point requested by Canfor that is a slight revision to the GeoBC Standard:

 Airborne Imaging will need to report and complete meta-data as per GeoBC Section 3 EXCEPT for Swath Overlap, Pulse Density, Point Spacing & Ground Point Density. These four items will be independently QC.

Equipment Requirements

Airborne Imaging will be using fixed-wing platform as it best meets the requirements of the contract specifications and the project objectives.

Imagery and LiDAR survey equipment are to be mounted on the different platforms as defined within Airborne Imaging's tender. Imagery will be flown on a separate platform, but will be acquired within the LiDAR data acquisition period and provide as deliverables as per the Project Schedule listed below.

Canfor Requirements

Canfor will:

- clarify the final project boundary
- advise Airborne snow free & fire concerns
- work with Airborne on access after project "go"
- advise Airborne to start in the south of the project & work north.



Operational Requirements

All work must be completed in compliance with the instructions and schedule issued by the Canfor Project Coordinator¹.

Tasks to be completed by the Airborne Imaging are:

- Conduct flights only during pre-approved dates and times as negotiated in the Final Project Schedule. Canfor to provide guidance to Airborne Imaging on optimal start dates. Required collection periods:
 - Atmospheric conditions shall be clear and free of mist, fog, low cloud cover, and smoke.
 - Ground shall be free of snow, unless otherwise specified.
 - Leaf-on data collection
- Prior to data collection, Airborne Imaging shall submit for approval (by Canfor), a
 map showing the project boundary, proposed flight lines, acquisition parameters, flight
 date and time, flight staff, GPS base station locations, and ground staff names,
 proposed tiling schema.
 - Canfor understands and appreciates that the items listed above may change
 during the course of the project due to unforeseen reasons. However, Canfor
 requests prior-approval to occur for any proposed changes, and that Airborne
 will specifically identify and provide a rationale for those items. Changes are
 considered to be anything that may impact the project and/or the ability to QC/QA.
 - QC/QA is completed against the "approved" information from above, and any changes that occurred during the project, as per Airborne's "changes & rationale".
- 3. Obtain both aerial imagery and LiDAR data (different missions) to best optimize both acquisitions.
- 4. Conduct aerial imagery collection and LiDAR data acquisition meeting or exceeding the following acquisition parameters:

Table 1: Acquisition Parameters

| Parameters | Specifications | Contract Clarification / QC/QA Details |
|--|------------------------|---|
| Digital Colour Aerial Imagery RGB or NIR (see details in Mandatory Requirements document) | 0.2 m pixel resolution | 4 Band supplied UtraCAM X (UCX) – 30% lateral overlap (+/- 8954 frames) QC/QA Review Reports Random checks of Sun Angle |
| Along track point spacing per flight track | maximum 0.7 m | QC/QA to confirm pulse density and spacing randomly select tiles and inspect the actual |
| Cross track point spacing per flight track | maximum 0.7 m | along track and across track spacing produce a grid of pulse density (2.5 m spatial resolution) identify grid cell values < 25 |



Airborne Laser Scanning Data & Imagery Acquisition Contract

| Parameters | Specifications | Contract Clarification / QC/QA Details |
|---|---------------------------------|---|
| Swath (flight line) overlap | • minimum 100% | Extra Overlap on outside edges to minimize shadowing. QC/QA to confirm sidelap of 50% Produce 2.5 m spatial resolution grid. Grid values to indicate data from one flightline only, or multiple flightlines. Scan angle <= 20 deg. |
| Swath (scan) angle for acquisition | Not to exceed 20 degrees | QC/QA to confirm Processing report to include max scan angle delivered in each tile. Pulse density and flightline grid will be based on a data from scan angles <= 20 deg |
| Flying Height | • 1100m – 2400m | QC/QA SBET analysis to confirm |
| Flightline Spacing | • 400m | QC/QA SBET analysis to confirm |
| Vertical Accuracy in flat open terrain | 15 cm (95% confidence interval) | QC/QA to confirm Review of delivered vertical accuracy report Review of PPK data Review of geodetic control accuracy Review of inflight error budget as per delivered ascii subset of SBET trajectory files. |
| GPS Base Stations (must be operating during the acquisition) | minimum two GPS base | QC/QA to confirm baseline distances (1) Review of baseline length as per delivered ascii subset of SBET trajectory files |
| Base Stations baseline | maximum 50 km or less | Review of network adjustment report and base station locations. SBET header supplied by Canfor/consultant |

| Initials – Table 1: Acquisition Parameters | | | | | |
|--|----------------------------------|---|----------------------------------|--|--|
| Canfo | or | Airbo | orne | | |
| Project Coordinator (Brenda Hopkin) | Project Lead (Darren Tamelin) | Corp Sales Manager (Martin Maric) | Project Manager (Mike Perdue) | | |
| | | | | | |

5. Submit Pre-Acquisition Quality Assurance and Quality Control (QA\QC)

- Submit for approval, (by Canfor) proposed base station locations, proposed
 monument control locations, proposed locations for RTK ground data collection,
 proposed location for calibration flights (to be in or near to project area). Both
 parties agree final base station location or control may change once field
 operations commence, but that Canfor will be notified as to the change and brief
 rationale, as logically possible.
- Same requirement as for Item #2 above.

June 1, 2015 LiDAR-EK-01-2015 – Schedule A Page 3 of 10

¹ Canfor Project Coordinator – Brenda Hopkin



Airborne Laser Scanning Data & Imagery Acquisition Contract

- 6. Deliver processed data within 60 days of flight completion.
 - To be clear, this requirement is a goal of 60 days. It is understood that there may
 be need to adjust due to unforeseen circumstances. However, Canfor expects that
 at the time of Project Start a schedule with anticipated draft deliverable dates will
 be used as a working document between Airborne's Project Manger and Canfor's
 Project Coordinator.
 - Draft Deliverables Schedule is to be based on blocks of tiles once they have been collected and calibrated. Airborne will supply Canfor with the outlines, in shapefile, as soon as an area has been office calibrated and is ready for edits. It is assumed the draft deliverables for that area would then be delivered approximately 60 days from that date.
 - For efficiencies for all parties, it is recommended that a staggered submission for draft deliverables.
 - Draft deliverables should include the extract of SBET file, as soon as it is available. (Extract SBET as per sample header provided to Airborne May 6^{th)}
 - The recommended staggered submission also allows for staggered QC/QA.
 - Ensure that early detection of non-conformance or "perceived" non-conformance.

Quality Assurance – Data Review

The Canfor Technical Expert shall review all draft deliverables against the negotiated contract within 15 days from delivery date. For this reason, it is important to have a staggered delivery schedule for draft deliverables, otherwise this timeline may not be met.

QC/QA timelines will be included in the Deliverables Schedule document.

PROJECT SCHEDULE

The Project Schedule been developed for the successful implementation and completion of this project. It is understood that there may be need to change tasks and/or scheduling due to unforeseen situations during the life of the project. However, it is expected that significant changes be discussed prior to, or immediately once realized, in order for both Canfor and Airborne Imaging to adjust future tasks and schedules, accordingly. The intent is to ensure an efficient and effective project for all parties.

Table 2: Project Schedule

Pre-Acquisition

| ACTIVITY | TARGET DATE |
|---|-------------------------------------|
| Start-Up Meeting | April 14, 2015 |
| Health And Safety Plan | 14 days after contract negotiation |
| Review And Approval Of Health & Safety Plan | 3 days after submission is received |
| Review of Pre-Acquisition Reports | Prior to Start up |



Airborne Laser Scanning Data & Imagery Acquisition Contract

Acquisition

| Task | Estimated Start Date | Estimated Completion Date |
|---|---|--|
| Project Kick-off meeting (if req'd) | May 7 | 1 day |
| Project Planning and Risk Assessment | Late May (within 14 days of kick-off meeting) | 2 days |
| Control, LiDAR and Imagery Acquisition and Field Calibrations | July 1 (weather/snow dependent) | Maximize 60 days (weather dependent) Estimate late Aug/early Sept. |
| Kinematic Hard surface Ground Truthing (GPS) | During field operation in July- August | 10 days |
| Office Calibration and QC | Early July | Duration of flight operations |
| Editing and Classification | Mid-July | Late-October |
| Deliverables Generation | Late August | Late October |
| Final Delivery of LiDAR data | September* | November 2** |
| Final Delivery of Ortho photos | October | November 2** |
| Final Delivery of reports | November 2** | November 2** |

^{*}Deliverables would likely be staged beginning in September.

Post-Acquisition

| ACTIVITY | TARGET DATE |
|---------------------------|--|
| Draft Data Deliverable | Within 60 days of Airborne Imaging last flying day, or as defined in the <i>Draft Deliverables Schedule</i> . Applicable LAS tiled files and extracted SBET file should accompany the draft data deliverable. |
| Draft Data Review | 15 days following receipt of the data, the Canfor Technical Expert will review and provide any comments back to Airborne Imaging. |
| Final Report | 30 days following end of the final receipt of the Canfor Technical Expert review comments Final report will delivered once at the end of the entire project and not with the staged draft deliverables. |

| Initials -Table 2: Project Schedule | | | | | |
|--|----------------------------------|---|----------------------------------|--|--|
| Canfor | | Airborne | | | |
| Project Coordinator (Brenda Hopkin) | Project Lead (Darren Tamelin) | Corp Sales Manager (Martin Maric) | Project Manager (Mike Perdue) | | |
| | | | | | |

^{**} All timing is dependent on when field operations start. Our primary target is to deliver everything within 60 days of completion of flights. Both parties agree this is best effort.



DESCRIPTION OF DELIVERABLES

Deliverable Specifications

All deliverables are to be submitted as scheduled in Finalized Project Schedule. The deliverables for this project include in the scope and cost of this contract:

Table 3: Mandatory Deliverable Specifications

| Deliverables Specifications | | Contract Clarification / QC/QA Details | | |
|-----------------------------|--|--|--|--|
| 1. | Georeferenced LiDAR mass point cloud data classified to Ground only LAS file format version 1.2 or later | • | Class 2 & 1 provided in LAS 1.2. Bridges removed from bare earth but culverts remain. Class 7 provided in a separate LAS file (required for QC) LAS format to follow LAS Standard Independent QC/QA to be completed by Canfor | |
| 2. | Full waveform data | • | Airborne Imaging to archive on their server as specified in the tender. Airborne will supply small areas to Canfor as needed. Airborne agrees to deliver, at no charge, a single copy to Canfor in the future, when asked. | |
| 3. | Raw and processed GPS data | • | Archived – Aircraft GPS Delivered – Processed PPK data Delivered – Processed PPK basedata (accuracy) | |
| | Aircraft trajectories (SBET files): Including Calibration Flights es extracted from SBET at 5 sec intervals, to lude: (Including calibration flights) Time (GPS), Distance (baseline), Easting, Northing, HAE (Height above ellipsoid) or MSL (Orthometric height), Latitude, Longitude, Roll, Pitch, Heading, East Velocity, North Velocity, Up Velocity, Easting SD, Northing SD, Height SD, Roll SD, Pitch SD, Heading SD. Delivered in ASCII format. | • | Archived 5 sec intervals required for QC – acquisition error budget. extracted ascii SBET file. The ascii SBET will provide the GPS and IMU accuracy needed to QC the acquisition error budget. SBET header supplied by Canfor | |
| 5. | Index map | • | Canfor to provide Tile layout to Airborne Imaging Canfor to provide Project Boundary complete with required buffer ArcGIS Shapefile format | |
| 6. | Digital Camera Calibration Report (shall include at minimum): | • | QC/QA – review report to confirm | |
| • | principle point offsets | | | |



Airborne Laser Scanning Data & Imagery Acquisition Contract

| Deliverables Specifications | Contract Clarification / QC/QA Details |
|---|---|
| focal length radial lens distortion parameters distortion model in use lever arms and angular boresight offsets Bundle block adjustment results if indirect GeoReferencing is used (Aerial Triangualtion report) 7. LiDAR System Calibration Report (shall include at | QC/QA – review report to confirm |
| minimum): Calibration Procedure (or methodology); Map/diagram; Date flown; Software used; Lever arms; Offset angles; Onboard antennae offsets Accuracy of the LiDAR coordinates in horizontal and vertical (RMS); and Methodology for deriving horizontal and vertical accuracy. Flight report (shall include at minimum): | QC/QA – review report to confirm |
| Flight date and time; Weather conditions; Flight altitude(s); Airspeed; LiDAR system scan angle, scan rates and pulse rates; Times for activating/deactivating the LiDAR system; Height of base station instruments (before and after flight). These measurements shall be conducted pre- and post-flight to confirm that the equipment did not move and that the antenna is the same distance from the ground; and Flight staff. | |
| 9. Ground control report (shall include at minimum): Control monument names (survey control ID card) and stability; Methodology used; Geodetic ties (network adjustment report); Accuracy of ground control (RMS); Geoid model used for deriving orthometric (msl) heights; Any site obstructions at GPS base station(s); Airborne and ground site GPS receiver types and serial numbers; and GPS base station names, location, and stability. 10. LiDAR system report (shall include at minimum): | QC/QA – review report to confirm QC/QA – review report to confirm |
| Spatial sampling;Repetition rate; | compare against the Pre- Acquisition Report for those applicable parameters |



Airborne Laser Scanning Data & Imagery Acquisition Contract

| Deliverables Specifications | Contract Clarification / QC/QA Details |
|--|--|
| Field of view; Scan rate; Number of returns recorded; Intensity; Swath overlap; Data methods used including treatment of artifacts; Capability for multiple returns from single pulses. 11. Data processing report (shall include the following information for each flight): | QC/QA – review report to confirm |
| All file labeling and cross-indexing; Analyst name responsible for processing and product generation; Data methods used including artifacts. List of auxiliary information used during processing of LiDAR to generate products delivered; List of software used for GPS and IMU data; Combined separation plot of kinematic GPS aircraft positioning used for blending GPS/IMU data including standard deviation, minimum & maximum separation of the forward/reverse Kinematic GPS solution or submission of min/max standard deviation plot if PPP positioning is employed; Post-processed Kinematic GPS solution plot showing fixed integer/float solution; and, Post-processed PDOP plot during data acquisition time. | |
| DEM shall represent the bare-earth surface. Airborne Imaging shall remove elevation points on bridges, buildings, and other structures and on vegetation from the ALS data to create the bare-earth DEM. Airborne Imaging shall produce 1m gridded bare-earth DEM. Method of ground classification shall be reported. Method for interpolating the DEMs shall be reported but not be based on nearest neighbor techniques. Model/software used shall be reported, as well as any modifications to work flow required to account for specific vegetation or terrain conditions. | Classified to Ground and Error points ONLY Arc Ascii format Provided same time as draft deliverables QC/QA – review report to confirm |
| QA/QC report QA/QC Spreadsheets as specified in GeoBC Lidar Specs 2014 (content requirement NOT format requirement) QA/QC includes reviews of flight assignments and completeness of supporting data. Airborne Imaging shall provide a report on the QA/QC procedure as well as any kinematic GPS | QC/QA – review report to confirm |



Airborne Laser Scanning Data & Imagery Acquisition Contract

| Deliverables Specifications | Contract Clarification / QC/QA Details |
|---|--|
| data collected for the purpose of calibration/quality control. This data shall include co-ordinate information, date and time information, and PDOP. In addition, the quality assurance and control procedure shall include a results section that describes how the specifications were met for the delivery area. This section must contain a statistical analysis of the point densities, as well as the ASCM RMSE analysis, anomalies report, and neighboring ALS coverage evaluation, which are further described in "Quality Control Products". These must be summarized and referenced to the "General Specifications for Acquisition of ALS Data". | |

| Initials - Table 3: Mandatory Deliverable Specifications | | | | |
|---|----|---|----------------------------------|--|
| Canfo | or | Airborne | | |
| Project Coordinator (Brenda Hopkin) Project Lead (Darren Tamelin) | | Corp Sales Manager (Martin Maric) | Project Manager (Mike Perdue) | |
| | | | | |

NOTE: An independent party will be hired to perform QA/QC on all deliverables provided by Airborne Imaging to ensure specifications set out in this contract are met.

Additional deliverables included in the scope and cost of this contract.

Table 4: Deliverables

| De | liverables Specifications | Format | Timing |
|----|--|------------------------|------------------------|
| 1. | Digital Surface Model (DSM) or full feature DEM | Arc Ascii | Same as draft delivery |
| 2. | Normalized intensity image (grid grey scale 0-65535) | Arc Binary–16 bit | Same as draft delivery |
| 3. | Shaded Relief / Hillshades | Tiff – 8 bit | Same as draft delivery |
| 4. | Contours (1 meter) | ArcGIS shapefile | Same as draft delivery |
| 5. | Canopy Height Model | Arc Binary – 32 bit | Same as draft delivery |

| Initials – Table 4: Deliverables | | | | |
|----------------------------------|----|---|----------------------------------|--|
| Canfo | or | Airborne | | |
| | | Corp Sales Manager (Martin Maric) | Project Manager (Mike Perdue) | |
| | | | | |



Data Processing Deliverable Requirements

Table 5: Data Processing Deliverable Requirements

| Deliverable Specifications – Contract Clarification / Details Timeframe ² | | | | | |
|---|--|---|--|--|--|
| 1. All data deliverables shall be | All data deliverables shall be: | | | | |
| Tiled using approved tiling schema; File size for individual tiles: < | Canfor will provide the tiling schema Negotiations btw Canfor & Airborne Imaging to finalize tiling schema Airborne agreed Agreed | Late May, 2014 After date above & contract initiation Contract completion Contract | | | |
| 2 GB;Tiles to include all acquisition | | completion • Draft & final | | | |
| points • Separate file including errors | to be delivered in | deliverables | | | |
| Provided on an external hard drive; and | Agreed | Contract completion | | | |
| Labeled with Airborne Imaging name, hard drive name, and a list of files on the drive. | Agreed | Contract completion | | | |
| 2. All data shall be in the followi | ng spatial reference format: | | | | |
| Horizontal Datum: North American Datum 83 Canadian Spatial Reference System – NAD83 (CSRS); Vertical Datum: Canadian Geodetic Vertical Datum – CGVD2013; and Map Projection: UTM Zone | • Agreed | Contract completion | | | |
| 11 3. Imagery data deliverables sh | all include: | | | | |
| Imagery data deliverables sh Ortho-mosaic colour digital imagery – 0.2 m pixel resolution – GeoTIFF format; | Agreed | Contract completion | | | |
| Tiled to LiDAR tiling schema | • | Draft & Final Deliverables | | | |

| Initials – Table 5: Data Processing Deliverable Requirements | | | | |
|--|----|----------------------------------|----------------------------------|--|
| Canf | or | Airborne | | |
| , , , , , , , , , , , , , , , , , , , | | Corp Sales Mgr (Martin Maric) | Project Manager (Mike Perdue) | |
| | | | | |

² Draft deliverables – for QC/QA, if required

Hlasny, Brad FLNR:EX

From: Steiner, Harald FLNR:EX

Sent: April 1, 2019 9:57 AM

To: 'Abhar, Kimia FLNR:EX'

Cc: Hlasny, Brad FLNR:EX; Christian, Angus FLNR:EX

Subject: LiDAR additions

Attachments: canfor_lidar.zap; maps McElhanney.7z; maps Terra Remote.7z

Hi Kimia,

can u add the attached shape files to our LiDAR inventory, please. The data is fully licensed and we provide the data on an open license to the public. There are various attributes such as density etc and we will give them to you once we have the data in-house. Angus will oversee the data completeness and get in touch .

Tx

Harry



Harald Steiner, P.Eng Team Lead | Digital Image Services

GeoBC

3rd Floor, 3400 Davidson Ave

Victoria BC V8Z 3P8

Phone (778)-974-3631

Mobile (778)-677-6976

Forests, Lands and Natural Resource Operations and Rural Development

Harald.Steiner@gov.bc.ca

www.geobc.gov.bc.ca

"Man must rise above the Earth —to the top of the atmosphere and beyond—for only thus will he fully understand the world in which he lives." Plato



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Hlasny, Brad FLNR:EX

From: Day, Vincent < Vincent.Day@canfor.com>

Sent:March 29, 2019 5:34 PMTo:Steiner, Harald FLNR:EXCc:Christian, Angus FLNR:EX

Subject: Re: [External] lidar - areas we have

Glad we could all bring this together.

Have a great weekend guys.

Vince

Get Outlook for iOS

From: Steiner, Harald FLNR:EX

Sent: Friday, March 29, 2019 5:02 PM

To: Day, Vincent

Cc: Christian, Angus FLNR:EX

Subject: RE: [External] lidar - areas we have

Vincent,

thanks for your quick response. Payment has been submitted to finances

Have a good weekend

Harry



Harald Steiner, P.Eng Team Lead | Digital Image Services

GeoBC

3rd Floor, 3400 Davidson Ave

Victoria BC V8Z 3P8

Phone (778)-974-3631

Mobile (778)-677-6976

Forests, Lands and Natural Resource Operations and Rural Development

Harald.Steiner@gov.bc.ca

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From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Friday, March 29, 2019 4:04 PM

To: Steiner, Harald FLNR:EX Cc: Christian, Angus FLNR:EX

Subject: RE: [External] lidar - areas we have

Attached is the Canfor signed version.

I have also attached an invoice as requested.

VINCENT DAY, RPF

Digital Technology Superintendent

Woodlands Canada

Canadian Forest Products Ltd.

T 250-962-3295 **C** 778-349-3314 **F** 250-962-3217

vincent.day@canfor.com www.canfor.com

5162 Northwood Pulpmill Rd, Prince George, BC, V2L

4W2

From: Steiner, Harald FLNR:EX

Sent: Friday, March 29, 2019 2:35 PM

To: Day, Vincent

Cc: Christian, Angus FLNR:EX

Subject: RE: [External] lidar - areas we have

Vincent,

please find our offer and shape file attached. I need a signed and scanned pdf in return.

Tx

Harry



Harald Steiner, P.Eng Team Lead | Digital Image Services

3rd Floor, 3400 Davidson Ave

Victoria BC V8Z 3P8

Phone (778)-974-3631

Mobile (778)-677-6976

Forests, Lands and Natural Resource Operations and Rural Development

Harald.Steiner@gov.bc.ca www.geobc.gov.bc.ca

"Man must rise above the Earth —to the top of the atmosphere and beyond—for only thus will he fully understand the world in which he lives."



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This message contains confidential information and is intended for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this email.

From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Friday, March 29, 2019 1:52 PM

To: Christian, Angus FLNR:EX Cc: Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Have not received contract or shapefiles....

Is this coming soon? I think I only have an hour to get my signature on the contract.

From: Christian, Angus FLNR:EX < Angus. Christian@gov.bc.ca>

Sent: Thursday, March 28, 2019 3:32 PM To: Day, Vincent < Vincent.Day@canfor.com >

Cc: Steiner, Harald FLNR:EX < Harald.Steiner@gov.bc.ca>

Subject: RE: [External] lidar - areas we have

Hi Vincent

We have gone over the submitted files and selected suitable areas for purchase.

The total area in which we are interested is s.17 Total value of the contract will be \$1,150,917.50 s.17

The contract number will be OP19BMC042.

We will send you the contract and shapefiles outlining these areas tomorrow morning. We will need to receive both an invoice and a copy of the contract signed by someone with appropriate signing authority by 3:00 PM tomorrow afternoon so that we can forward it to our finance department before the fiscal year-end deadline.

Cheers,



Angus Christian
Senior Imagery Specialist | Digital Image Services

GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca www.geobc.gov.bc.ca

The good ended happily and the bad unhappily. That is what fiction means.

From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Thursday, March 28, 2019 11:15 AM

To: Christian, Angus FLNR:EX **Cc:** Steiner, Harald FLNR:EX

Subject: FW: [External] lidar - areas we have

Hi Angus. This is closer.... There is more lidar available than this... especially from the 2018 collection which we are still receiving in the central interior and is more wall-to-wall than shown in this file.

Should give good enough estimate for this morning.

VINCENT DAY, RPF
Digital Technology Superintendent
Woodlands Canada
Canadian Forest Products Ltd.

T 250-962-3295 **C** 778-349-3314 **F** 250-962-3217

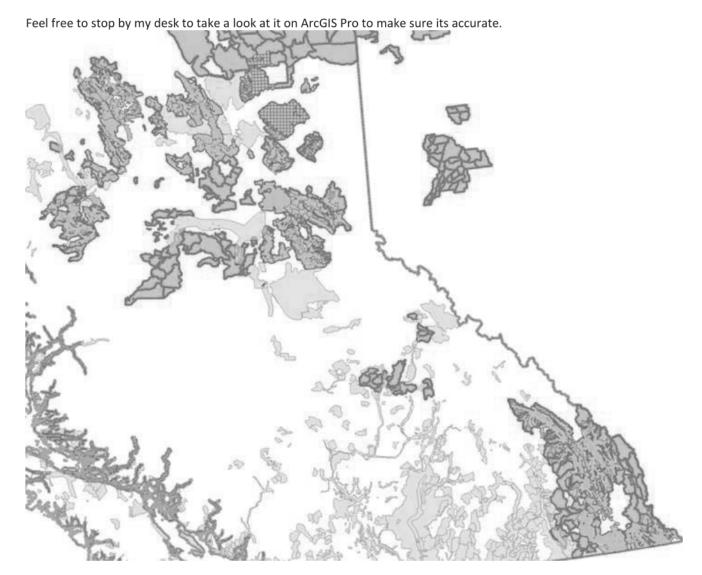
vincent.day@canfor.com www.canfor.com
5162 Northwood Pulpmill Rd, Prince George, BC, V2L
4W2

From: Turnbull, Shawn

Sent: Thursday, March 28, 2019 11:02 AM
To: Day, Vincent < Vincent.Day@canfor.com >
Subject: RE: [External] lidar - areas we have

Hey Vince,

Here is the updated shapefile of Canfor's LiDAR coverage areas for GeoBC. I've included a screenshot too (LiDAR areas are turquoise, Operating Areas are green, GeoBC LiDAR areas pink).



Thanks, Shawn

From: Christian, Angus FLNR:EX < Angus. Christian@gov.bc.ca>

Sent: Thursday, March 28, 2019 9:40 AM
To: Day, Vincent < Vincent. Day@canfor.com >

Cc: Steiner, Harald FLNR:EX < Harald.Steiner@gov.bc.ca >

Subject: RE: [External] lidar - areas we have

Thanks Vincent

We are very interested in these areas – could you provide a shapefile or .kml of the outlined areas so that we can do area calculations? We are trying to get procurement details to our executive by noon today.

Cheers,



Angus Christian Senior Imagery Specialist | Digital Image Services GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca

www.geobc.gov.bc.ca

The good ended happily and the bad unhappily. That is what fiction means.

From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Thursday, March 28, 2019 8:29 AM

To: Christian, Angus FLNR:EX **Cc:** Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Good morning Angus.

Attached is a rough map of where we have collected lidar. Sorry, with the short notice had to go old school. Certainly not much overlap with what you have.

We are okay with terms of 1. below.

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<u>vincent.day@canfor.com</u> <u>www.canfor.com</u> 5162 Northwood Pulpmill Rd, Prince George, BC, V2L

4W2

4002

From: Christian, Angus FLNR:EX < Angus. Christian@gov.bc.ca >

Sent: Wednesday, March 27, 2019 3:34 PM
To: Day, Vincent < Vincent. Day@canfor.com >

Cc: Steiner, Harald FLNR:EX < Harald.Steiner@gov.bc.ca >

Subject: [External] lidar - areas we have

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To: 'Day, Vincent'

Cc: Christian, Angus FLNR:EX

Subject: RE: [External] lidar - areas we have

Vincent,

thanks for your quick response. Payment has been submitted to finances

Have a good weekend

Harry



Harald Steiner, P.Eng Team Lead | Digital Image Services

GeoBC

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Phone (778)-974-3631 Mobile (778)-677-6976

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INVOICE



CANADIAN FOREST PRODUCTS LTD

| Bill To | Submitted to |
|---|--|
| MINISTRY OF FORESTS, LANDS & NATURAL RESOURCE | Harald Steiner, P.Eng |
| OPERATIONS PO BOX 9375 STN PROV GOVT | Team Lead Digital Image Services |
| VICTORIA, BC CANADA V8W 9M5 | GeoBC |
| | 3rd Floor, 3400 Davidson Ave Victoria BC V8Z 3P8 |
| | Phone (778)-974-3631 |
| | Mobile (778)-677-6976 |
| | Forests, Lands and Natural Resource Operations |

Customer PO : Contract OP19BMC042

Funds : CAD Mill/ Division Name : N/A

Payment Terms Remit To

NET 30 AFTER DATE OF INVOICE CANADIAN FOREST PRODUCTS LTD. c/o BANK OF MONTREAL

595 BURRARD ST, VANCOUVER, BC

ACCOUNT #s.21

| Description | | Quantity | U/M | Unit Price | Fed % | Prov % | Amount |
|------------------|--------------------|----------|-----|------------|--------------------|--------|--------------|
| CONTRACT OP19BM0 | C042 | | | | 5.00 % | | 1,130,897.50 |
| | | | | | | | 1,130,897.50 |
| | | | | | GST | | 56,544.88 |
| GST/HST Reg No | 89740 5643 RT 0001 | | | | Grand Total | | 1,187,442.38 |



Consulting and General Services Contract

CONTRACT./FILE NO: OP19BMC042

THIS AGREEMENT DATED FOR REFERENCE THE 29TH DAY OF MARCH, 2019

PROJECT DESCRIPTION:

2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring), AREA3

BETWEEN:

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA, as represented by the MINISTER OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS

3400 DAVIDSON AVENUE VICTORIA BC V8Z 3P8
PO Box station 9375 Prov Gov't Victoria BC V8W 9M5
Phone Number: (250) 952 6520
Ministry Representative: Brad Hlasny
E-mail Address: Brad.Hlasny@gov.bc.ca
(the "Province", "we", "us", or "our" as applicable)

AND:

Canadian Forest Products Ltd.
5162 Northwood Pulpmill Rd
Prince George, BC, V2L 4W2
Dir: 250-962-3295
Contact: Vincent Day, vincent.day@canfor.com
Corporate Business Number:
WorkSafe BC Number:
(the "Contractor", "you", or "your" as applicable)

The Province wishes to retain the Contractor to provide the Services specified in Schedule A and, in consideration for the remuneration set out in Schedule B, the Contractor has agreed to provide those Services, on the terms and conditions set out in this Agreement.

The Province and the Contractor agree as follows:

(a) DEFINITIONS

- 1.01 In this Agreement, unless the context otherwise requires:
 - "Business Day" means a day, other than a Saturday or Sunday, on which Provincial government offices are open for normal business in British Columbia;
 - "Incorporated Material" means any material in existence prior to the start of the Term or developed independently of this Agreement, and that is incorporated or embedded in the Produced Material by the Contractor or a Subcontractor;
 - c) "Material" means the Produced Material and the Received Material;

- "Produced Material" means records, software and other material, whether complete or not, that, as a result
 of this Agreement, are produced by the Contractor or a Subcontractor and includes the Incorporated Material;
- e) "Received Material" means records, software and other material, whether complete or not, that, as a result of this Agreement, are received by the Contractor or a Subcontractor from the Province or any other person;
- f) "Record" is the definition of "record" in the *Interpretation Act* and as incorporated into this Agreement and "records" will bear a corresponding meaning;
- g) "Services" means the services described in Schedule A;
- h) "Subcontractor" means a person described in Section 16.05;
- "Term" means the term of the Agreement described in Section 3.01 of this Agreement subject to that term ending earlier in accordance with this Agreement; and
- j) "Unit of Measure" has the meaning described in Schedule B.

(b) CONTRACT DOCUMENTS AND MODIFICATIONS

1.01 The attached schedules are applicable to and form part of this Agreement:

| Schedule | Title |
|--------------|------------------|
| Schedule 'A' | Services |
| Schedule 'B' | Contract Payment |
| | |
| | |
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| | |

1.02 No modification of this Agreement is effective unless it is in writing and signed by, or on behalf of, the parties.

Article 3 TERM OF CONTRACT

- 2.01 The Term of this Agreement is from and including March 29, 2019 to and including March 29, 2019 inclusive.
- 2.02 Regardless of the date of execution or delivery of this Agreement, the Contractor must provide the Services during the Term.
- 2.03 Time is of the essence in this Agreement and, without limitation, will remain of the essence after any modification or extension of this Agreement, whether or not expressly restated in the document effecting the modification or extension.

Article 4 CONTRACTOR'SOBLIGATIONS

- 4.01 You must provide the Services described in Schedule A (the "Services") in accordance with this Agreement.
- 4.02 Unless the parties otherwise agree in writing, you must supply and pay for all labour, materials, equipment, tools, facilities, and approvals and licences necessary or advisable to perform your obligations under this Agreement, including the license under Section 8.04.
- 4.03 Unless otherwise specified in this Agreement, you must perform the Services to a standard of care, skill, and diligence maintained by persons providing, on a commercial basis, services similar to the Services.
- 4.04 You must provide, instruct, and supervise a sufficient number of qualified personnel to enable timely and proper performance and completion of the Services. All such personnel shall be competent, English literate, efficient and qualified by education, training and experience to carry out the tasks to which each is assigned.
- 4.05 We may from time to time give you reasonable instructions (in writing or otherwise) as to the performance of the Services. You must comply with those instructions but, unless otherwise specified in this Agreement, you may determine the manner in which the instructions are carried out.
- 4.06 If we provide an instruction under Section 4.05 other than in writing, you may request that the instruction be confirmed by us in writing, which request we must comply with as soon as it is reasonably practicable to do so.

- 4.07 Requesting written confirmation of an instruction under Section 4.06 does not relieve you from complying with the instruction at the time the instruction was given.
- 4.08 In the performance of your obligations under this Agreement, you must comply with all applicable laws.

Article 5 PAYMENT

- (a) If you comply with this Agreement, we must pay you at the rates and times described in Schedule B:
 - (a) the fees described in that Schedule;
 - (b) the expenses, if any, in accordance with that Schedule if they are supported, where applicable, by proper receipts and, in our opinion, are necessarily incurred by you in providing the Services; and
 - (c) any applicable taxes payable by us under law or agreement with the relevant taxation authorities on the fees and expenses described in paragraphs (i) and (ii).

We are not obliged to pay you more than the maximum amount or dollar limit specified in Schedule B on account of fees and expenses.

- (b) In order to obtain payment of any fees or expenses, if any, under this Agreement, you must submit written statements of account to us in a form satisfactory to us, but no sooner than the dates referred to in Schedule B.
- (c) Without limiting Section 11.01 we may withhold from any payment due to you an amount sufficient to indemnify, in whole or in part, the Province and its employees and agents against any liens or other third-party claims that have arisen or could arise in connection with the provision of the Services. An amount withheld under this section must be promptly paid by the Province to you upon the basis for withholding the amount having been fully resolved to the satisfaction of the Province.
- (d) Our obligation to pay money to you is subject to the Financial Administration Act, which makes that obligation subject to an appropriation being available in the fiscal year of the Province during which payment becomes due.
- (e) Unless otherwise specified in this Agreement, all references to money are to Canadian dollars.
- (f) If you are not a resident in Canada, you acknowledge that we may be required by law to withhold income tax from the fees described in Schedule B and then to remit that tax to the Receiver General of Canada on your behalf.
- (g) Without limiting Section 16.11(a), you must not, in relation to performing your obligations under this Agreement, commit or purport to commit us to pay any money except as may be expressly provided for in this Agreement.
- (h) You must:
 - 18.01 apply for, and use reasonable efforts to obtain, any available refund, credit, rebate or remission of federal, provincial or other tax or duty imposed on you as a result of this Agreement that the Province has paid or reimbursed to you or agreed to pay or reimburse to you under this Agreement; and
 - 18.02 immediately on receiving, or being credited with, any amount applied for under paragraph (a) remit that amount to us.

ARTICLE 6 REPRESENTATIONS AND WARRANTIES

- 3.01 As at the date this Agreement is executed and delivered by, or on behalf of, the parties, you represent and warrant to us as follows:
 - (a) except to the extent you have previously disclosed otherwise in writing to us:
 - (i) all information, statements, documents and reports furnished or submitted by you to us in connection with this Agreement (including as part of any competitive process resulting in this Agreement being entered into) are in all material respects true and correct,
 - (ii) you have sufficient trained staff, facilities, materials, appropriate equipment and approved subcontractual agreements in place and available to enable you to fully perform the Services, and
 - (iii) you hold all permits, licenses, approvals and statutory authorities issued by any government or government agency that are necessary for the performance of your obligations under this Agreement; and
 - (b) if the Contractor is not an individual:

- (i) you have the power and capacity to enter into this Agreement and to observe, perform and comply with the terms of this Agreement and all necessary corporate or other proceedings have been taken and done to authorize the execution and delivery of this Agreement by, or on behalf of, you, and
- (ii) this Agreement has been legally and properly executed by, or on behalf of, you and is legally binding upon and enforceable against you in accordance with its terms except as enforcement may be limited by bankruptcy, insolvency or other laws affecting the rights of creditors generally and except that equitable remedies may be granted only in the discretion of a court of competent jurisdiction.

ARTICLE 7 PRIVACY, SECURITY AND CONFIDENTIALITY

- 6.01 You must comply with the Privacy Protection Schedule if attached to this Agreement.
- 6.02 You must make reasonable security arrangements to protect the Material from unauthorized access, collection, use, disclosure, alteration, or disposal and comply with the Security Schedule, if attached.
- 6.03 You must treat as confidential all information in the Material and all other information accessed or obtained by you or a Subcontractor (whether verbally, electronically or otherwise) as a result of this Agreement, and not permit its disclosure or use without our prior written consent except:
 - (a) as required to perform your obligations under this Agreement or to comply with applicable laws;
 - (b) if it is information that is generally known to the public other than as a result of a breach of this Agreement;
 - (c) if it is information in any Incorporated Material.
- 6.04 Any public announcement relating to this Agreement will be arranged by us and, if such consultation is reasonably practicable, after consultation with you.
- 6.05 You must not, without our prior written approval, refer for promotional purposes to the Province being your customer or the Province having entered into this Agreement.

ARTICLE 7 MATERIAL AND INTELLECTUAL PROPERTY

- 7.01 If you receive a request for access to any of the Material from a person other than us, and this Agreement does not require or authorize you to provide that access, you must promptly advise the person to make the request to us.
- 7.02 We exclusively own all property rights in the Material that are not intellectual property rights. Any equipment property we may provide to you or a subcontractor is our exclusive property. You must deliver any Material or equipment property to us immediately following expiration of this Agreement, or sooner upon our request, in the same condition it was supplied to you, excepting always loss or damage attributable to reasonable wear or tear.
- 7.03 We exclusively own all intellectual property rights, including copyright:
 - (a) in Received Material that you receive from us, and
 - (b) in Produced Material, other than any Incorporated Material.

Upon our request, you must deliver to us documents satisfactory to us that irrevocably waive in our favour any moral rights that you (or your employees) or a Subcontractor (or its employees) may have in the Produced Material and confirm the vesting in the Province of the copyright in the Produced Material, other than any Incorporated Material.

- 7.04 Upon any Incorporated Material being embedded or incorporated in the Produced Material and to the extent that it remains so embedded or incorporated, you grant us:
 - (a) a non-exclusive, perpetual, irrevocable, royalty-free, worldwide license to use, reproduce, modify, and distribute that Incorporated Material; and
 - (b) the right to sublicense to third-parties the right to use, reproduce, modify and distribute that Incorporated Material.

ARTICLE 8 RECORDS AND REPORTS

8.01 You must, upon our request, fully inform us of all work done by you or a Subcontractor in connection with providing the Services.

8.02 If Schedule B provides for you to be paid fees at a Unit of Measure rate or for you to be paid or reimbursed for expenses, you must maintain time records and books of account, invoices, receipts and vouchers of expenses in support of those payments, in form and content satisfactory to us. Unless otherwise specified in this Agreement, the Contractor must retain such documents for a period of not less than seven years after this Agreement ends.

ARTICLE 9 AUDIT

9.01 In addition to any other rights of inspection the Province may have under statute or otherwise, we may at any reasonable time and on reasonable notice to you, enter on your premises to inspect and, at our discretion, copy any of the Material and you must permit, and provide reasonable assistance to, the exercise by us of our rights under this section.

ARTICLE 10 INDEMNITY AND INSURANCE

- 10.01 You must indemnify and save harmless the Province and its employees and agents from any losses, claims, damages, actions, causes of action, costs and expenses that the Province or any of its employees or agents may sustain, incur, suffer or be put to at any time either before or after this Agreement ends, including any claim of infringement of third-party intellectual property rights, where the same or any of them are based upon, arise out of or occur, directly or indirectly, by reason of any act or omission by you or your agents, employees, officers, directors or Subcontractors in connection with this Agreement (each a "Loss"), excepting always liability arising out of the independent acts or omissions of the Province and its employees and agents.
- 10.02 You must comply with the insurance requirements in Schedule D, if attached, as those terms may be modified from time to time in accordance with our directions.
- 10.03 Without limiting the generality of Section 4.08, you must comply with, and must ensure that any Subcontractors comply with, all applicable occupational health and safety laws in relation to the performance of your obligations under this Agreement, including the *Workers Compensation Act* in British Columbia or similar laws in other jurisdictions.
- 10.04 At your own expense, and where required under *Workers Compensation Act* in British Columbia, you must obtain WorkSafe BC coverage for yourself, all workers and any shareholders, directors, partners or other individuals employed or engaged in the performance of the Services and you shall ensure all approved Subcontractors obtain WorkSafe BC Coverage.
- 10.05 If you are an individual or a partnership of individuals and do not have the benefit of mandatory workers compensation coverage under the *Workers Compensation Act* in British Columbia, you must apply for and maintain Personal Optional Protection under the *Workers Compensation Act*.
- 10.06 You are responsible for all fines, levies, penalties and assessments made or imposed under the *Workers Compensation Act* and regulations relating in any way to the Services.
- 10.07 Upon our request you must provide us with evidence of your compliance with Sections 11.02, 11.04 and 11.05.

ARTICLE 11 FORCE MAJEURE

- 11.01 An "Event of Force Majeure" means a natural disaster, fire, flood, storm, epidemic or power failure, war (declared and undeclared), insurrection or act of terrorism or piracy, strike (including illegal work stoppage or slowdown) or lockout, or a freight embargo if such event prevents a party from performing its obligations in accordance with this Agreement and is beyond the reasonable control of that party.
- 11.02 An "Affected Party" means a party prevented from performing its obligations in accordance with this Agreement by an Event of Force Majeure.
- 11.03 An Affected Party is not liable to the other party for any failure or delay in the performance of the Affected Party's obligations under this Agreement resulting from an Event of Force Majeure and any time periods for the performance of such obligations are automatically extended for the duration of the Event of Force Majeure provided that the Affected Party complies with the requirements of Section 12.04.
- 11.04 An Affected Party must promptly notify the other party in writing upon the occurrence of the Event of Force Majeure and make all reasonable efforts to prevent, control or limit the effect of the Event of Force Majeure so as to resume compliance with the Affected Party's obligations under this Agreement as soon as possible.

ARTICLE 12 NON-COMPLIANCE WITH AGREEMENT CONDITIONS

- 12.01 An "Event of Default" means any of the following:
 - (a) your failure to perform any of your obligations under this Agreement, or
 - (b) any representation or warranty made by you in this Agreement is untrue or incorrect, or
 - (c) an Insolvency Event, which means any of the following;
 - (i) an order is made, a resolution is passed or a petition is filed, for your liquidation or winding up,
 - (ii) you commit an act of bankruptcy, make an assignment for the benefit of your creditors or otherwise acknowledge your insolvency,
 - (iii) a bankruptcy petition is filed or presented against you or a proposal under the *Bankruptcy and Insolvency Act* (Canada) is made by you,
 - (iv) a compromise or arrangement is proposed in respect of you under the *Companies' Creditors Arrangement Act* (Canada),
 - (v) a receiver or receiver-manager is appointed for any of your property, or
 - (vi) you cease, in our reasonable opinion, to carry on business as a going concern.
- 12.02 On the happening of an Event of Default, or at any time thereafter, we may, at our option, elect to do any one or more of the following:
 - (a) by written notice to you, require that the Event of Default be remedied within a time period specified in the notice:
 - (b) pursue any remedy or take any other action available to us at law or in equity; or
 - (c) by written notice to you, terminate this Agreement with immediate effect or on a future date specified in the notice, subject to the expiration of any time period specified under Section 13.02(a).
- 12.03 No failure or delay on our part to exercise our rights in relation to an Event of Default will constitute a waiver by us of such rights.
- 12.04 If you become aware that an Event of Default has occurred or anticipates that an Event of Default is likely to occur, you must promptly notify us of the particulars of the Event of Default or anticipated Event of Default. A notice under this section as to the occurrence of an Event of Default must also specify the steps you propose to take to address, or prevent recurrence of, the Event of Default. A notice under this section as to an anticipated Event of Default must specify the steps you propose to take to prevent the occurrence of the anticipated Event of Default.

ARTICLE 13 TERMINATION

- 13.01 In addition to our right to terminate this Agreement under Section 13.02(c) on the happening of an Event of Default, we may terminate this Agreement for any reason by giving at least 5 days' written notice of termination to you.
- 13.02 Unless Schedule B otherwise provides, if we terminate this Agreement under Section 14.01:
 - (a) we must, within 30 days of such termination, pay you any unpaid portion of the fees and expenses described in Schedule B which corresponds with the portion of the Services that was completed to our satisfaction before termination of this Agreement; and
 - (b) you must, within 30 days of such termination, repay to us any paid portion of the fees and expenses described in Schedule B which corresponds with the portion of the Services that we have notified you in writing was not completed to our satisfaction before termination of this Agreement.
- 13.03 The payment by us of the amount described in Section 14.02(a) discharges us from all liability to make payments to the Contractor under this Agreement.

ARTICLE 14 DISPUTE RESOLUTION

- 14.01 In the event of any dispute between the parties arising out of or in connection with this Agreement, the following dispute resolution process will apply unless the parties otherwise agree in writing:
 - (a) the parties must initially attempt to resolve the dispute through collaborative negotiation;

- (b) if the dispute is not resolved through collaborative negotiation within 15 Business Days of the dispute arising, the parties must then attempt to resolve the dispute through mediation under the rules of the British Columbia Mediator Roster Society; and
- (c) if the dispute is not resolved through mediation within 30 Business Days of the commencement of mediation, the dispute must be referred to and finally resolved by arbitration under the Commercial Arbitration Act.
- 14.02 Unless the parties otherwise agree in writing, an arbitration or mediation under Section 15.01 will be held in Victoria, British Columbia.
- 14.03 Unless the parties otherwise agree in writing or, in the case of an arbitration, the arbitrator otherwise orders, the parties must share equally the costs of a mediation or arbitration under Section 15.01 other than those costs relating to the production of expert evidence or representation by counsel.

ARTICLE 15 GENERAL

- 15.01 Any notice or document contemplated by this Agreement, to be effective, must be in writing and delivered as follows:
 - (a) hand delivered to the party or the specified party representative, in which case it will be deemed to be received on the day of its delivery; or
 - (b) by prepaid post to the party's address specified on the first page of this Agreement, in which case if mailed during any period when normal postal services prevail, it will be deemed to be received on the fifth Business Day after its mailing; or
 - (c) delivered by courier service to the party's address specified on the first page of this Agreement, in which case it will be deemed received on the fifth Business Day after collection by the courier service; or
 - (d) by facsimile or electronic transmission to the specified facsimile number or Email address on the first page of this Agreement, in which case it will be deemed to be received on the day of transmittal unless transmitted after the normal business hours of the addressee or on a day that is not a Business Day, in which cases it will be deemed to be received on the next following Business Day.
- 15.02 Either party may from time to time give notice to the other party of a substitute address, Email address, or fax number, which from the date such notice is given will supersede for purposes of Section 16.01 any previous address, Email address, or fax number specified for the party giving the notice.
- 15.03 You must not assign your rights under this Agreement without our prior written consent.
- 15.04 You must not subcontract any of your obligations under this Agreement without our prior written consent, excepting persons listed in Schedule A.
- 15.05 No subcontract, whether consented to or not, relieves you from any obligations under this Agreement. You must comply with the Subcontracting Schedule if attached to this Agreement. You must ensure that any person retained by you or any person retained by a person retained by you fully complies with this Agreement in performing the subcontracted obligations.
- 15.06 We may, for reasonable cause, object to the use of a proposed Subcontractor and require you to retain another qualified subcontractor.
- 15.07 A waiver of any term or breach of this Agreement is effective only if it is in writing and signed by, or on behalf of, the waiving party and is not a waiver of any other term or breach.
- 15.08 This Agreement and any modification of it constitute the entire Agreement between the parties as to performance of the Services.
- 15.09 Sections 4.08, 5.01 to 5.04, 5.07, 5.08, 7.01 to 7.05, 8.01 to 8.04, 9.01, 9.02, 10.01, 11.01, 11.02, 11.07, 12.01 to 12.04, 13.02, 13.03, 14.02, 14.03, 15.01 to 15.03, 16.01, 16.02, 16.09, and 16.11, any accrued but unpaid payment obligations, and any other sections of this Agreement (including schedules) which, by their terms or nature, are intended to survive the completion of the Services or termination of this Agreement, will continue in force indefinitely, even after this Agreement ends.
- 15.10 The schedules to this Agreement (including any appendices or other documents attached to, or incorporated by reference into, those schedules) are part of this Agreement.
- 15.11 In relation to the performance of your obligations under this Agreement, you are an independent contractor and not our:

- (a) employee or partner; or
- (b) agent except as may be expressly provided for in this Agreement.
- You must not act or purport to act contrary to this section.
- 15.12 You must not do anything that would result in personnel hired or used by you or a Subcontractor in relation to providing the Services being considered our employees.
- 15.13 If one or more individuals are identified in the schedules as "Key Personnel", you must cause those individuals to perform the Services on your behalf and not remove or replace them, without our prior written approval. Any approved replacement is at your expense.
- 15.14 We must make available to you all information in our possession which we consider pertinent to the performance of the Services.
- 15.15 You must not provide any services to any person in circumstances which, in our reasonable opinion, could give rise to a conflict of interest between your duties to that person and your duties to us under this Agreement.
- 15.16 If there is a conflict among provisions of this Agreement, a provision in the body of this Agreement will prevail over any conflicting provision in, attached to, or incorporated by reference into a schedule, unless that conflicting provision expressly states otherwise and a provision in a schedule will prevail over any conflicting provision in a document attached to or incorporated by reference into a schedule, unless the schedule expressly states otherwise.
- 15.17 This Agreement does not operate as a permit, license, approval or other statutory authority which you may be required to obtain from the Province or any of its agencies in order to provide the Services. Nothing in this Agreement is to be construed as interfering with, or fettering in any manner, the exercise by the Province or its agencies of any statutory, prerogative, executive or legislative power or duty.
- 15.18 If any provision of this Agreement or the application of it to any person or circumstance is invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provision to any other person or circumstance will not be affected or impaired and will be valid and enforceable to the extent permitted by law.
- 15.19 Each party must perform the acts, execute and deliver the writings, and give the assurances as may be reasonably necessary to give full effect to this Agreement.
- 15.20 This Agreement is governed by, and is to be interpreted and construed in accordance with, the laws applicable in British Columbia.

ARTICLE 16 INTERPRETATION

- 16.01 In this Agreement:
 - (a) "we", "us", and "our" refer to the Province alone and never refer to the combination of the Contractor and the Province;
 - (b) the Contractor and the Province are referred to as "the parties" and each of them as a "party";
 - (c) "includes" and "including" are not intended to be limiting;
 - (d) unless the context otherwise requires, references to sections by number are to sections of this Agreement;
 - (e) "attached" means attached to this Agreement when used in relation to a schedule;
 - (f) unless otherwise specified, a reference to a statute by name means the statute of British Columbia by that name, as amended or replaced from time to time;
 - (g) the headings have been inserted for convenience of reference only and are not intended to describe, enlarge or restrict the scope or meaning of this Agreement or any provision of it;
 - (h) "person" includes an individual, partnership, corporation or legal entity of any nature; and
 - (i) unless the context otherwise requires, words expressed in the singular include the plural and vice versa.

ARTICLE 17 EXECUTION AND DELIVERY

17.01 This Agreement may be entered into by a separate copy of this Agreement being executed by, or on behalf of, each party and that executed copy being delivered to the other party by a method provided for in Section 16.01 or any other method agreed to by the parties.

The Parties have executed this Agreement as follows:

| SIGNED AND DELIVERED on behalf of the Province by an authorized representative of the Province | SIGNED AND DELIVERED by or on behalf of the Contractor (or by an authorized signatory of the Contractor if a corporation) |
|--|---|
| (Authorized Ministry Expense Authority) | (Contractor of Authorized Signatory) Keur M Hoes Neu C |
| (PRINTED NAME of Ministry Expense Authority) | (PRINTED NAME of Contractor) |
| Dated this day of, 2019 | Dated this 29 day of MARCH, 2019 |

SCHEDULE "A"

Attachment to the Agreement for 2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring) AREA3

1. Foreword

The Province of BC intends to directly purchase light detection and range data (LiDAR) for an area of 2002 km² (Figure 1). The objective of this project is to provide a high resolution/high accuracy base data set, suitable to support modeling of overland flows and other resource mapping projects for the Province as well as providing open data for public use. In addition, GeoBC requires full licensing right for the Province with respect to unlimited data use, rights to derive and sell products and make the data available for public use under an open data license agreement.



Figure 1 2018 Acquisition Areas (red) for AREA 1

2. DATA requirements

a. Data license

- The Province obtains a license including:
 - Full licensing rights
 - Unlimited data use
 - All rights to derive and sell products

 Rights to make the data available for public use under an open data license agreement

b. Data format and other technical requirements

- Calibrated LiDAR point cloud data in LAS format, preferably V1.2 or higher
- An InSitu Camera Calibration report is desirable if available
- A minimum point density of 1pt/m² or higher
- Intensity and multi return (echoes) are desirable
- Ground classification if LiDAR data is not mandatory but preferred
- Horizontal/Vertical Datum in NAD83/CGVD2013 or NAD83/CGVD28 in UTM are acceptable (ESRI .asc format or USGS .dem)
- Tiling scheme for LAS/ LAZ point cloud data: Geographic BC tiling scheme in UTM projection is desirable but not mandatory; please see additional info for LAZ data in Section 6.4 of the "Specifications for LiDAR" V3.1 April 2018, GeoBC.
- Submission of LiDAR point cloud data on Digital Hard drive, USB 3.0 compatible (single copy)

3. Liaison

 All project liaison and submissions must be handled through GeoBC, Ministry of Forests, Lands and Natural Resource Operations. Contact information is below:



Harald Steiner, P.Eng
Team Lead | Digital Image Services
GeoBC
3rd Floor, 3400 Davidson Ave
Victoria BC V8Z 3P8
Phone (778)-974-3631
Mobile (778)-677-6976
Forests, Lands and Natural Resource Operations
Harald.Steiner@gov.bc.ca

www.geobc.gov.bc.ca

4. Data and Materials Supplied

• Electronic Submission of a shape file outlining the areas provided



SCHEDULE "B" - FEES

CONTRACT NO: OP19BMC042

Attachment to the Agreement for 2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring) AREA3

FEES

The total flat rate fee (excluding taxes) payable to the Contractor under this Agreement, for all Services, including those described in Schedule A, will not exceed \$1,130,897.50 (no tax) without the prior written approval of the Ministry Representative.

Any work other than the Services that is requested by the Province will not be undertaken except in accordance with a written amendment to this Agreement.

EXPENSES

The Province will not pay any expenses incurred by the contractor in relation to the performance of the Services.

SUBMISSION OF STATEMENT OF ACCOUNT

In order to obtain payment for any fees (and any applicable taxes under the Agreement, you must submit to us a written Statement of Account/invoice in a form satisfactory to us.

The Statement of Account(s) / invoice(s) must show the following:

- **ARTICLE 5** your legal name, address, the date and the period of time which the invoice applies ("Billing Period"), the contract number, and a statement number for identification;
- ARTICLE 6the calculation of all fees claimed under this Agreement for the Billing Period, with hours, dates, rates, and name(s) of persons providing the Services, a description of specific services/works completed during the Billing Period, including a declaration that the Services have been completed;
- **ARTICLE** 7the calculation of any applicable GST tax payable by the Province in relation to the Services provided under this Agreement and for the Billing Period as a separate line item;

ARTICLE 8 your GST registration number, and

ARTICLE 9 Payment units are based on the amount of "Line Km" flown and "Line Km" produced.

ARTICLE 10 any other billing information reasonably requested by us.

Subject to any holdback provided for in this Agreement, within thirty days (30) of our receipt of your invoice, or the date we authorize payment, whichever is the later, we must pay you fees for those Services we determined were satisfactorily performed during the Billing Period.

PAYMENT SCHEDULE

(a) One complete invoice to be submitted by no later than 29th March 2019 for the amount identified.

Invoices should be submitted to:



Harald Steiner, P.Eng
Team Lead | Digital Image Services
GeoBC
3rd Floor, 3400 Davidson Ave
Victoria BC V8Z 3P8
Phone (778)-974-3631
Mobile (778)-677-6976
Forests, Lands and Natural Resource Operations
Harald.Steiner@gov.bc.ca
www.geobc.gov.bc.ca

Invoices are paid within thirty (30) days of receipt of goods.

Hlasny, Brad FLNR:EX

From: Steiner, Harald FLNR:EX
Sent: March 29, 2019 3:26 PM

To: 'Day, Vincent'

Cc: Christian, Angus FLNR:EX
Subject: Contract offer op19bmc041

Importance: High

Hi Vincent,

I am sorry for the last minute approach. Hope it is not ruining your weekend. I am here until 4:30pm and if you decide to submit a signed scan, please add the invoice to it as well.

tx

Harry



Harald Steiner, P.Eng
Team Lead | Digital Image Services
GeoBC

3rd Floor, 3400 Davidson Ave Victoria BC V8Z 3P8 Phone (778)-974-3631 Mobile (778)-677-6976

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"Man must rise above the Earth —to the top of the atmosphere and beyond—for only thus will he fully understand the world in which he lives." Plato



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From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Friday, March 29, 2019 1:52 PM

To: Christian, Angus FLNR:EX

Cc: Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Have not received contract or shapefiles....

Is this coming soon? I think I only have an hour to get my signature on the contract.

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Sent: Thursday, March 28, 2019 3:32 PM

To: Day, Vincent

Cc: Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Hi Vincent

We have gone over the submitted files and selected suitable areas for purchase.

The total area in which we are interested is \$.17

Total value of the contract will be \$1,150,917.50

s.17

The contract number will be OP19BMC042.

We will send you the contract and shapefiles outlining these areas tomorrow morning. We will need to receive both an invoice and a copy of the contract signed by someone with appropriate signing authority by 3:00 PM tomorrow afternoon so that we can forward it to our finance department before the fiscal year-end deadline.

Cheers,



Angus Christian

Senior Imagery Specialist | Digital Image Services

GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca www.geobc.gov.bc.ca

The good ended happily and the bad unhappily. That is what fiction means.

From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Thursday, March 28, 2019 11:15 AM

To: Christian, Angus FLNR:EX **Cc:** Steiner, Harald FLNR:EX

Subject: FW: [External] lidar - areas we have

Hi Angus. This is closer.... There is more lidar available than this... especially from the 2018 collection which we are still receiving in the central interior and is more wall-to-wall than shown in this file.

Should give good enough estimate for this morning.

VINCENT DAY, RPF

Digital Technology Superintendent Woodlands Canada Canadian Forest Products Ltd.

T 250-962-3295 C 778-349-3314 F 250-962-3217 vincent.day@canfor.com www.canfor.com 5162 Northwood Pulpmill Rd, Prince George, BC, V2L 4W2

From: Turnbull, Shawn

Sent: Thursday, March 28, 2019 11:02 AM
To: Day, Vincent < Vincent.Day@canfor.com >
Subject: RE: [External] lidar - areas we have

Hey Vince,

Here is the updated shapefile of Canfor's LiDAR coverage areas for GeoBC. I've included a screenshot too (LiDAR areas are turquoise, Operating Areas are green, GeoBC LiDAR areas pink).

Feel free to stop by my desk to take a look at it on ArcGIS Pro to make sure its accurate.



Thanks, Shawn

From: Christian, Angus FLNR:EX < Angus. Christian@gov.bc.ca >

Sent: Thursday, March 28, 2019 9:40 AM **To:** Day, Vincent < <u>Vincent.Day@canfor.com</u>>

Cc: Steiner, Harald FLNR:EX < Harald.Steiner@gov.bc.ca >

Subject: RE: [External] lidar - areas we have

Thanks Vincent

We are very interested in these areas – could you provide a shapefile or .kml of the outlined areas so that we can do area calculations? We are trying to get procurement details to our executive by noon today.

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To: Christian, Angus FLNR:EX **Cc:** Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Good morning Angus.

Attached is a rough map of where we have collected lidar. Sorry, with the short notice had to go old school. Certainly not much overlap with what you have.

We are okay with terms of 1. below.

All the lidar was collected at 8pt/m2. There are some areas that came in lower and some higher and most of the area is higher than 8pt.

There is a mixture of costs and contracts in the different areas. In discussion with a few of my contacts we were thinking simples.13; s.17

We can talk further on the other products if you like. I would need to dig a bit further into exactly what we have available right now in different areas.

We have done "wall-to-wall" in our TFL's and in 2018 we started wall-to-wall everywhere inside our collection areas to obtain the Crown Forest Landbase (CFLB).

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Subject: [External] lidar - areas we have

Hi Vincent

Attached please find a shapefile of the areas we already have and are not interested in acquiring (please rename extension from '.zap' to '.zip' and extract).

To summarise our requirements:

- 1. full provincial ownership or unrestricted license permitting the Province to resell the raw data, derive and sell new products based on the data, and the right to show the data publicly via an open license.
 - 2. ground classified LiDAR at a minimum 1pt/ m² density.
 - 3. pricing information (e.g., \$/k m²)
 - 4. Optionally, any additional data products associated with the raw data; e.g., gridded DEM at 1m or better resolution, contours, etc.

Due to time constraints, we require a reply with a map showing any areas you have consistent with the above requirements by 9:00 AM tomorrow (Thursday, march 28) morning.

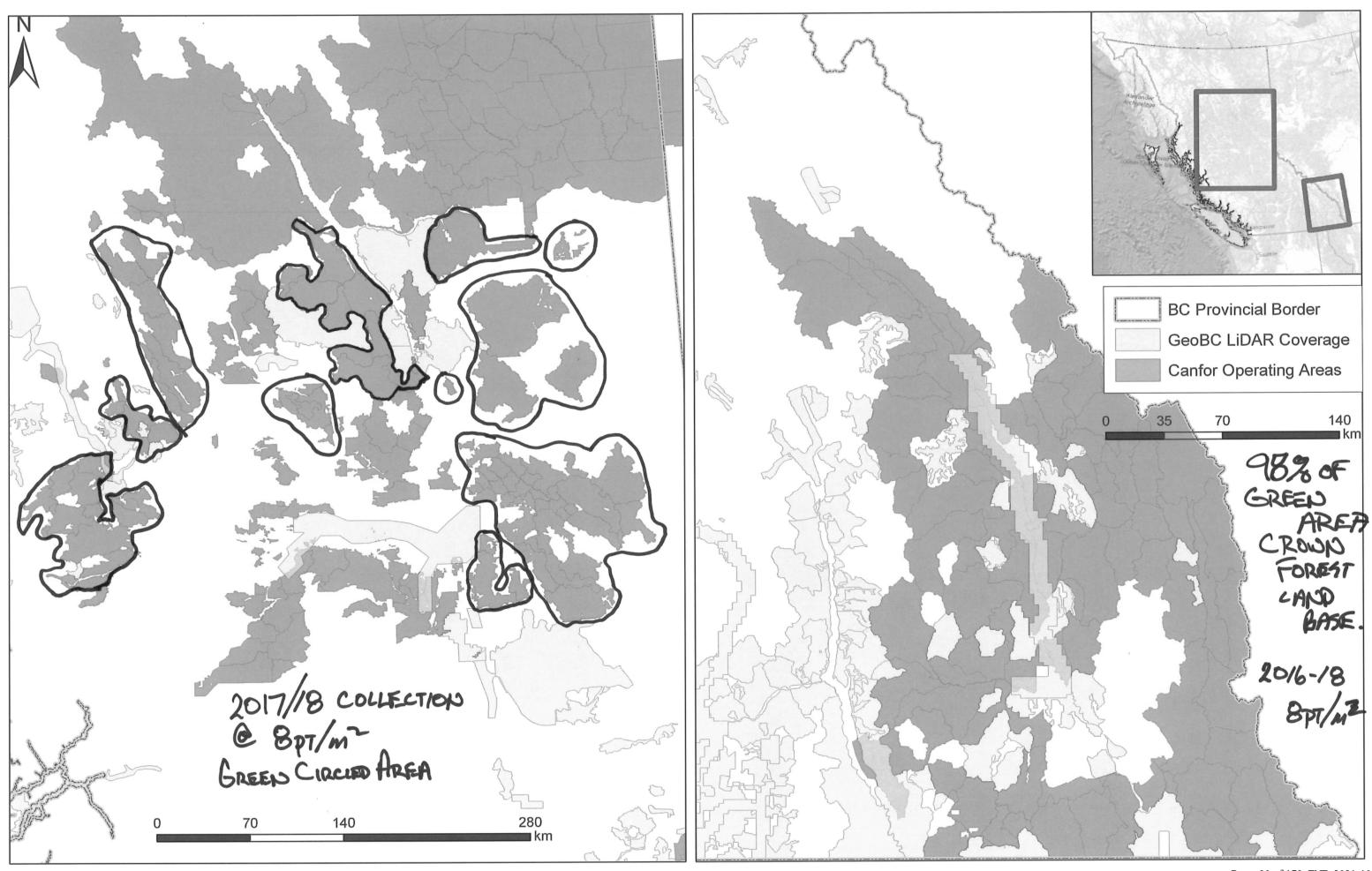
Cheers,



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Hlasny, Brad FLNR:EX

From: Christian, Angus FLNR:EX
Sent: March 29, 2019 2:56 PM
To: vincent.day@canfor.com
Cc: Steiner, Harald FLNR:EX
Subject: LiDAR purchase

Hi Vincent

We have final approval for this acquisition and I see Harald has sent you the contract and shapefiles. As we discussed on the phone, please note that there has been a slight adjustment to the area (and consequently price) based on the final determination of area required as outlined in the contract. Here is the additional invoicing info that I promised you.

Please make the invoice out to:

GeoBC, Ministry of Forests, Lands, Resource Operations and Rural Development

and submit to:

Harald Steiner Team Lead, Digital Imagery Services GeoBC

 3^{rd} Floor 3400 Davidson Ave., Victoria, BC V8Z 3P8

Ministry of Forests, Lands, Resource Operations and Rural Development

Harald.steiner@gov.bc.ca



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To: 'Day, Vincent'

Cc: Christian, Angus FLNR:EX

Subject: RE: [External] lidar - areas we have

Attachments: Contract_offer_2019_RESMAP LIDAR_CanFor_OP19BMC042.pdf; canfor_lidar_final2.shp;

canfor_lidar_final2.shp.rtree; canfor_lidar_final2.shx; canfor_lidar.zap; canfor_lidar_final2.dbf;

canfor_lidar_final2.prj; canfor_lidar_final2.qpj; canfor_lidar.PNG

Vincent,

please find our offer and shape file attached. I need a signed and scanned pdf in return. Tx

Harry



Harald Steiner, P.Eng Team Lead | Digital Image Services

GeoBC

3rd Floor, 3400 Davidson Ave

Victoria BC V8Z 3P8 Phone (778)-974-3631 Mobile (778)-677-6976

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Consulting and General Services Contract

CONTRACT./FILE NO: OP19BMC042

THIS AGREEMENT DATED FOR REFERENCE THE 29TH DAY OF MARCH, 2019

PROJECT DESCRIPTION:

2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring), AREA3

BETWEEN:

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA, as represented by the MINISTER OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS

3400 DAVIDSON AVENUE VICTORIA BC V8Z 3P8
PO Box station 9375 Prov Gov't Victoria BC V8W 9M5
Phone Number: (250) 952 6520
Ministry Representative: Brad Hlasny

E-mail Address: Brad.Hlasny@gov.bc.ca (the "Province", "we", "us", or "our" as applicable)

AND:

Canadian Forest Products Ltd. 5162 Northwood Pulpmill Rd Prince George, BC, V2L 4W2 Dir: 250-962-3295

Contact: Vincent Day, vincent.day@canfor.com

Corporate Business Number: WorkSafe BC Number:

(the "Contractor", "you", or "your" as applicable)

The Province wishes to retain the Contractor to provide the Services specified in Schedule A and, in consideration for the remuneration set out in Schedule B, the Contractor has agreed to provide those Services, on the terms and conditions set out in this Agreement.

The Province and the Contractor agree as follows:

(a) DEFINITIONS

- 1.01 In this Agreement, unless the context otherwise requires:
 - a) "Business Day" means a day, other than a Saturday or Sunday, on which Provincial government offices are open for normal business in British Columbia;
 - b) "Incorporated Material" means any material in existence prior to the start of the Term or developed independently of this Agreement, and that is incorporated or embedded in the Produced Material by the Contractor or a Subcontractor:
 - c) "Material" means the Produced Material and the Received Material;

- "Produced Material" means records, software and other material, whether complete or not, that, as a result
 of this Agreement, are produced by the Contractor or a Subcontractor and includes the Incorporated Material;
- e) "Received Material" means records, software and other material, whether complete or not, that, as a result of this Agreement, are received by the Contractor or a Subcontractor from the Province or any other person;
- f) "Record" is the definition of "record" in the *Interpretation Act* and as incorporated into this Agreement and "records" will bear a corresponding meaning;
- g) "Services" means the services described in Schedule A;
- h) "Subcontractor" means a person described in Section 16.05;
- i) "**Term**" means the term of the Agreement described in Section 3.01 of this Agreement subject to that term ending earlier in accordance with this Agreement; and
- j) "Unit of Measure" has the meaning described in Schedule B.

(b) CONTRACT DOCUMENTS AND MODIFICATIONS

1.01 The attached schedules are applicable to and form part of this Agreement:

| Schedule | Title |
|--------------|------------------|
| Schedule 'A' | Services |
| Schedule 'B' | Contract Payment |
| | |
| | |
| | |
| | |
| | |
| | |

1.02 No modification of this Agreement is effective unless it is in writing and signed by, or on behalf of, the parties.

Article 3 TERM OF CONTRACT

- 2.01 The Term of this Agreement is from and including March 29, 2019 to and including March 29, 2019 inclusive.
- 2.02 Regardless of the date of execution or delivery of this Agreement, the Contractor must provide the Services during the Term.
- 2.03 Time is of the essence in this Agreement and, without limitation, will remain of the essence after any modification or extension of this Agreement, whether or not expressly restated in the document effecting the modification or extension.

Article 4 CONTRACTOR'SOBLIGATIONS

- 4.01 You must provide the Services described in Schedule A (the "Services") in accordance with this Agreement.
- 4.02 Unless the parties otherwise agree in writing, you must supply and pay for all labour, materials, equipment, tools, facilities, and approvals and licences necessary or advisable to perform your obligations under this Agreement, including the license under Section 8.04.
- 4.03 Unless otherwise specified in this Agreement, you must perform the Services to a standard of care, skill, and diligence maintained by persons providing, on a commercial basis, services similar to the Services.
- 4.04 You must provide, instruct, and supervise a sufficient number of qualified personnel to enable timely and proper performance and completion of the Services. All such personnel shall be competent, English literate, efficient and qualified by education, training and experience to carry out the tasks to which each is assigned.
- 4.05 We may from time to time give you reasonable instructions (in writing or otherwise) as to the performance of the Services. You must comply with those instructions but, unless otherwise specified in this Agreement, you may determine the manner in which the instructions are carried out.
- 4.06 If we provide an instruction under Section 4.05 other than in writing, you may request that the instruction be confirmed by us in writing, which request we must comply with as soon as it is reasonably practicable to do so.

- 4.07 Requesting written confirmation of an instruction under Section 4.06 does not relieve you from complying with the instruction at the time the instruction was given.
- 4.08 In the performance of your obligations under this Agreement, you must comply with all applicable laws.

Article 5 PAYMENT

- (a) If you comply with this Agreement, we must pay you at the rates and times described in Schedule B:
 - (a) the fees described in that Schedule;
 - (b) the expenses, if any, in accordance with that Schedule if they are supported, where applicable, by proper receipts and, in our opinion, are necessarily incurred by you in providing the Services; and
 - (c) any applicable taxes payable by us under law or agreement with the relevant taxation authorities on the fees and expenses described in paragraphs (i) and (ii).

We are not obliged to pay you more than the maximum amount or dollar limit specified in Schedule B on account of fees and expenses.

- (b) In order to obtain payment of any fees or expenses, if any, under this Agreement, you must submit written statements of account to us in a form satisfactory to us, but no sooner than the dates referred to in Schedule B.
- (c) Without limiting Section 11.01 we may withhold from any payment due to you an amount sufficient to indemnify, in whole or in part, the Province and its employees and agents against any liens or other third-party claims that have arisen or could arise in connection with the provision of the Services. An amount withheld under this section must be promptly paid by the Province to you upon the basis for withholding the amount having been fully resolved to the satisfaction of the Province.
- (d) Our obligation to pay money to you is subject to the Financial Administration Act, which makes that obligation subject to an appropriation being available in the fiscal year of the Province during which payment becomes due.
- (e) Unless otherwise specified in this Agreement, all references to money are to Canadian dollars.
- (f) If you are not a resident in Canada, you acknowledge that we may be required by law to withhold income tax from the fees described in Schedule B and then to remit that tax to the Receiver General of Canada on your behalf.
- (g) Without limiting Section 16.11(a), you must not, in relation to performing your obligations under this Agreement, commit or purport to commit us to pay any money except as may be expressly provided for in this Agreement.
- (h) You must:
 - 18.01 apply for, and use reasonable efforts to obtain, any available refund, credit, rebate or remission of federal, provincial or other tax or duty imposed on you as a result of this Agreement that the Province has paid or reimbursed to you or agreed to pay or reimburse to you under this Agreement; and
 - 18.02 immediately on receiving, or being credited with, any amount applied for under paragraph (a) remit that amount to us.

ARTICLE 6 REPRESENTATIONS AND WARRANTIES

- 3.01 As at the date this Agreement is executed and delivered by, or on behalf of, the parties, you represent and warrant to us as follows:
 - (a) except to the extent you have previously disclosed otherwise in writing to us:
 - (i) all information, statements, documents and reports furnished or submitted by you to us in connection with this Agreement (including as part of any competitive process resulting in this Agreement being entered into) are in all material respects true and correct,
 - (ii) you have sufficient trained staff, facilities, materials, appropriate equipment and approved subcontractual agreements in place and available to enable you to fully perform the Services, and
 - (iii) you hold all permits, licenses, approvals and statutory authorities issued by any government or government agency that are necessary for the performance of your obligations under this Agreement; and
 - (b) if the Contractor is not an individual:

- (i) you have the power and capacity to enter into this Agreement and to observe, perform and comply with the terms of this Agreement and all necessary corporate or other proceedings have been taken and done to authorize the execution and delivery of this Agreement by, or on behalf of, you, and
- this Agreement has been legally and properly executed by, or on behalf of, you and is legally binding upon and enforceable against you in accordance with its terms except as enforcement may be limited by bankruptcy, insolvency or other laws affecting the rights of creditors generally and except that equitable remedies may be granted only in the discretion of a court of competent jurisdiction.

ARTICLE 7 PRIVACY, SECURITY AND CONFIDENTIALITY

- 6.01 You must comply with the Privacy Protection Schedule if attached to this Agreement.
- 6.02 You must make reasonable security arrangements to protect the Material from unauthorized access, collection, use, disclosure, alteration, or disposal and comply with the Security Schedule, if attached.
- 6.03 You must treat as confidential all information in the Material and all other information accessed or obtained by you or a Subcontractor (whether verbally, electronically or otherwise) as a result of this Agreement, and not permit its disclosure or use without our prior written consent except:
 - (a) as required to perform your obligations under this Agreement or to comply with applicable laws;
 - (b) if it is information that is generally known to the public other than as a result of a breach of this Agreement;
 - (c) if it is information in any Incorporated Material.
- 6.04 Any public announcement relating to this Agreement will be arranged by us and, if such consultation is reasonably practicable, after consultation with you.
- 6.05 You must not, without our prior written approval, refer for promotional purposes to the Province being your customer or the Province having entered into this Agreement.

ARTICLE 7 MATERIAL AND INTELLECTUAL PROPERTY

- 7.01 If you receive a request for access to any of the Material from a person other than us, and this Agreement does not require or authorize you to provide that access, you must promptly advise the person to make the request to us.
- 7.02 We exclusively own all property rights in the Material that are not intellectual property rights. Any equipment property we may provide to you or a subcontractor is our exclusive property. You must deliver any Material or equipment property to us immediately following expiration of this Agreement, or sooner upon our request, in the same condition it was supplied to you, excepting always loss or damage attributable to reasonable wear or tear.
- 7.03 We exclusively own all intellectual property rights, including copyright:
 - (a) in Received Material that you receive from us, and
 - (b) in Produced Material, other than any Incorporated Material.

Upon our request, you must deliver to us documents satisfactory to us that irrevocably waive in our favour any moral rights that you (or your employees) or a Subcontractor (or its employees) may have in the Produced Material and confirm the vesting in the Province of the copyright in the Produced Material, other than any Incorporated Material.

- 7.04 Upon any Incorporated Material being embedded or incorporated in the Produced Material and to the extent that it remains so embedded or incorporated, you grant us:
 - (a) a non-exclusive, perpetual, irrevocable, royalty-free, worldwide license to use, reproduce, modify, and distribute that Incorporated Material; and
 - (b) the right to sublicense to third-parties the right to use, reproduce, modify and distribute that Incorporated Material.

ARTICLE 8 RECORDS AND REPORTS

8.01 You must, upon our request, fully inform us of all work done by you or a Subcontractor in connection with providing the Services.

8.02 If Schedule B provides for you to be paid fees at a Unit of Measure rate or for you to be paid or reimbursed for expenses, you must maintain time records and books of account, invoices, receipts and vouchers of expenses in support of those payments, in form and content satisfactory to us. Unless otherwise specified in this Agreement, the Contractor must retain such documents for a period of not less than seven years after this Agreement ends.

ARTICLE 9 AUDIT

9.01 In addition to any other rights of inspection the Province may have under statute or otherwise, we may at any reasonable time and on reasonable notice to you, enter on your premises to inspect and, at our discretion, copy any of the Material and you must permit, and provide reasonable assistance to, the exercise by us of our rights under this section.

ARTICLE 10 INDEMNITY AND INSURANCE

- 10.01 You must indemnify and save harmless the Province and its employees and agents from any losses, claims, damages, actions, causes of action, costs and expenses that the Province or any of its employees or agents may sustain, incur, suffer or be put to at any time either before or after this Agreement ends, including any claim of infringement of third-party intellectual property rights, where the same or any of them are based upon, arise out of or occur, directly or indirectly, by reason of any act or omission by you or your agents, employees, officers, directors or Subcontractors in connection with this Agreement (each a "Loss"), excepting always liability arising out of the independent acts or omissions of the Province and its employees and agents.
- 10.02 You must comply with the insurance requirements in Schedule D, if attached, as those terms may be modified from time to time in accordance with our directions.
- 10.03 Without limiting the generality of Section 4.08, you must comply with, and must ensure that any Subcontractors comply with, all applicable occupational health and safety laws in relation to the performance of your obligations under this Agreement, including the *Workers Compensation Act* in British Columbia or similar laws in other jurisdictions.
- 10.04 At your own expense, and where required under *Workers Compensation Act* in British Columbia, you must obtain WorkSafe BC coverage for yourself, all workers and any shareholders, directors, partners or other individuals employed or engaged in the performance of the Services and you shall ensure all approved Subcontractors obtain WorkSafe BC Coverage.
- 10.05 If you are an individual or a partnership of individuals and do not have the benefit of mandatory workers compensation coverage under the Workers Compensation Act in British Columbia, you must apply for and maintain Personal Optional Protection under the Workers Compensation Act.
- 10.06 You are responsible for all fines, levies, penalties and assessments made or imposed under the *Workers Compensation Act* and regulations relating in any way to the Services.
- 10.07 Upon our request you must provide us with evidence of your compliance with Sections 11.02, 11.04 and 11.05.

ARTICLE 11 FORCE MAJEURE

- 11.01 An "Event of Force Majeure" means a natural disaster, fire, flood, storm, epidemic or power failure, war (declared and undeclared), insurrection or act of terrorism or piracy, strike (including illegal work stoppage or slowdown) or lockout, or a freight embargo if such event prevents a party from performing its obligations in accordance with this Agreement and is beyond the reasonable control of that party.
- 11.02 An "Affected Party" means a party prevented from performing its obligations in accordance with this Agreement by an Event of Force Majeure.
- 11.03 An Affected Party is not liable to the other party for any failure or delay in the performance of the Affected Party's obligations under this Agreement resulting from an Event of Force Majeure and any time periods for the performance of such obligations are automatically extended for the duration of the Event of Force Majeure provided that the Affected Party complies with the requirements of Section 12.04.
- 11.04 An Affected Party must promptly notify the other party in writing upon the occurrence of the Event of Force Majeure and make all reasonable efforts to prevent, control or limit the effect of the Event of Force Majeure so as to resume compliance with the Affected Party's obligations under this Agreement as soon as possible.

ARTICLE 12 NON-COMPLIANCE WITH AGREEMENT CONDITIONS

- 12.01 An "Event of Default" means any of the following:
 - (a) your failure to perform any of your obligations under this Agreement, or
 - (b) any representation or warranty made by you in this Agreement is untrue or incorrect, or
 - (c) an Insolvency Event, which means any of the following;
 - (i) an order is made, a resolution is passed or a petition is filed, for your liquidation or winding up,
 - (ii) you commit an act of bankruptcy, make an assignment for the benefit of your creditors or otherwise acknowledge your insolvency,
 - (iii) a bankruptcy petition is filed or presented against you or a proposal under the *Bankruptcy and Insolvency Act* (Canada) is made by you,
 - (iv) a compromise or arrangement is proposed in respect of you under the *Companies' Creditors Arrangement Act* (Canada),
 - (v) a receiver or receiver-manager is appointed for any of your property, or
 - (vi) you cease, in our reasonable opinion, to carry on business as a going concern.
- 12.02 On the happening of an Event of Default, or at any time thereafter, we may, at our option, elect to do any one or more of the following:
 - (a) by written notice to you, require that the Event of Default be remedied within a time period specified in the notice;
 - (b) pursue any remedy or take any other action available to us at law or in equity; or
 - (c) by written notice to you, terminate this Agreement with immediate effect or on a future date specified in the notice, subject to the expiration of any time period specified under Section 13.02(a).
- 12.03 No failure or delay on our part to exercise our rights in relation to an Event of Default will constitute a waiver by us of such rights.
- 12.04 If you become aware that an Event of Default has occurred or anticipates that an Event of Default is likely to occur, you must promptly notify us of the particulars of the Event of Default or anticipated Event of Default. A notice under this section as to the occurrence of an Event of Default must also specify the steps you propose to take to address, or prevent recurrence of, the Event of Default. A notice under this section as to an anticipated Event of Default must specify the steps you propose to take to prevent the occurrence of the anticipated Event of Default.

ARTICLE 13 TERMINATION

- 13.01 In addition to our right to terminate this Agreement under Section 13.02(c) on the happening of an Event of Default, we may terminate this Agreement for any reason by giving at least 5 days' written notice of termination to you.
- 13.02 Unless Schedule B otherwise provides, if we terminate this Agreement under Section 14.01:
 - (a) we must, within 30 days of such termination, pay you any unpaid portion of the fees and expenses described in Schedule B which corresponds with the portion of the Services that was completed to our satisfaction before termination of this Agreement; and
 - (b) you must, within 30 days of such termination, repay to us any paid portion of the fees and expenses described in Schedule B which corresponds with the portion of the Services that we have notified you in writing was not completed to our satisfaction before termination of this Agreement.
- 13.03 The payment by us of the amount described in Section 14.02(a) discharges us from all liability to make payments to the Contractor under this Agreement.

ARTICLE 14 DISPUTE RESOLUTION

- 14.01 In the event of any dispute between the parties arising out of or in connection with this Agreement, the following dispute resolution process will apply unless the parties otherwise agree in writing:
 - (a) the parties must initially attempt to resolve the dispute through collaborative negotiation;

- (b) if the dispute is not resolved through collaborative negotiation within 15 Business Days of the dispute arising, the parties must then attempt to resolve the dispute through mediation under the rules of the British Columbia Mediator Roster Society; and
- (c) if the dispute is not resolved through mediation within 30 Business Days of the commencement of mediation, the dispute must be referred to and finally resolved by arbitration under the *Commercial Arbitration Act*.
- 14.02 Unless the parties otherwise agree in writing, an arbitration or mediation under Section 15.01 will be held in Victoria, British Columbia.
- 14.03 Unless the parties otherwise agree in writing or, in the case of an arbitration, the arbitrator otherwise orders, the parties must share equally the costs of a mediation or arbitration under Section 15.01 other than those costs relating to the production of expert evidence or representation by counsel.

ARTICLE 15 GENERAL

- 15.01 Any notice or document contemplated by this Agreement, to be effective, must be in writing and delivered as follows:
 - (a) hand delivered to the party or the specified party representative, in which case it will be deemed to be received on the day of its delivery; or
 - (b) by prepaid post to the party's address specified on the first page of this Agreement, in which case if mailed during any period when normal postal services prevail, it will be deemed to be received on the fifth Business Day after its mailing; or
 - (c) delivered by courier service to the party's address specified on the first page of this Agreement, in which case it will be deemed received on the fifth Business Day after collection by the courier service; or
 - (d) by facsimile or electronic transmission to the specified facsimile number or Email address on the first page of this Agreement, in which case it will be deemed to be received on the day of transmittal unless transmitted after the normal business hours of the addressee or on a day that is not a Business Day, in which cases it will be deemed to be received on the next following Business Day.
- 15.02 Either party may from time to time give notice to the other party of a substitute address, Email address, or fax number, which from the date such notice is given will supersede for purposes of Section 16.01 any previous address, Email address, or fax number specified for the party giving the notice.
- 15.03 You must not assign your rights under this Agreement without our prior written consent.
- 15.04 You must not subcontract any of your obligations under this Agreement without our prior written consent, excepting persons listed in Schedule A.
- 15.05 No subcontract, whether consented to or not, relieves you from any obligations under this Agreement. You must comply with the Subcontracting Schedule if attached to this Agreement. You must ensure that any person retained by you or any person retained by a person retained by you fully complies with this Agreement in performing the subcontracted obligations.
- 15.06 We may, for reasonable cause, object to the use of a proposed Subcontractor and require you to retain another qualified subcontractor.
- 15.07 A waiver of any term or breach of this Agreement is effective only if it is in writing and signed by, or on behalf of, the waiving party and is not a waiver of any other term or breach.
- 15.08 This Agreement and any modification of it constitute the entire Agreement between the parties as to performance of the Services.
- 15.09 Sections 4.08, 5.01 to 5.04, 5.07, 5.08, 7.01 to 7.05, 8.01 to 8.04, 9.01, 9.02, 10.01, 11.01, 11.02, 11.07, 12.01 to 12.04, 13.02, 13.03, 14.02, 14.03, 15.01 to 15.03, 16.01, 16.02, 16.09, and 16.11, any accrued but unpaid payment obligations, and any other sections of this Agreement (including schedules) which, by their terms or nature, are intended to survive the completion of the Services or termination of this Agreement, will continue in force indefinitely, even after this Agreement ends.
- 15.10 The schedules to this Agreement (including any appendices or other documents attached to, or incorporated by reference into, those schedules) are part of this Agreement.
- 15.11 In relation to the performance of your obligations under this Agreement, you are an independent contractor and not our:

- (a) employee or partner; or
- (b) agent except as may be expressly provided for in this Agreement.
- You must not act or purport to act contrary to this section.
- 15.12 You must not do anything that would result in personnel hired or used by you or a Subcontractor in relation to providing the Services being considered our employees.
- 15.13 If one or more individuals are identified in the schedules as "Key Personnel", you must cause those individuals to perform the Services on your behalf and not remove or replace them, without our prior written approval.

 Any approved replacement is at your expense.
- 15.14 We must make available to you all information in our possession which we consider pertinent to the performance of the Services.
- 15.15 You must not provide any services to any person in circumstances which, in our reasonable opinion, could give rise to a conflict of interest between your duties to that person and your duties to us under this Agreement.
- 15.16 If there is a conflict among provisions of this Agreement, a provision in the body of this Agreement will prevail over any conflicting provision in, attached to, or incorporated by reference into a schedule, unless that conflicting provision expressly states otherwise and a provision in a schedule will prevail over any conflicting provision in a document attached to or incorporated by reference into a schedule, unless the schedule expressly states otherwise.
- 15.17 This Agreement does not operate as a permit, license, approval or other statutory authority which you may be required to obtain from the Province or any of its agencies in order to provide the Services. Nothing in this Agreement is to be construed as interfering with, or fettering in any manner, the exercise by the Province or its agencies of any statutory, prerogative, executive or legislative power or duty.
- 15.18 If any provision of this Agreement or the application of it to any person or circumstance is invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provision to any other person or circumstance will not be affected or impaired and will be valid and enforceable to the extent permitted by law.
- 15.19 Each party must perform the acts, execute and deliver the writings, and give the assurances as may be reasonably necessary to give full effect to this Agreement.
- 15.20 This Agreement is governed by, and is to be interpreted and construed in accordance with, the laws applicable in British Columbia.

ARTICLE 16 INTERPRETATION

- 16.01 In this Agreement:
 - (a) "we", "us", and "our" refer to the Province alone and never refer to the combination of the Contractor and the Province:
 - (b) the Contractor and the Province are referred to as "the parties" and each of them as a "party";
 - (c) "includes" and "including" are not intended to be limiting;
 - (d) unless the context otherwise requires, references to sections by number are to sections of this Agreement;
 - (e) "attached" means attached to this Agreement when used in relation to a schedule;
 - (f) unless otherwise specified, a reference to a statute by name means the statute of British Columbia by that name, as amended or replaced from time to time;
 - (g) the headings have been inserted for convenience of reference only and are not intended to describe, enlarge or restrict the scope or meaning of this Agreement or any provision of it;
 - (h) "person" includes an individual, partnership, corporation or legal entity of any nature; and
 - (i) unless the context otherwise requires, words expressed in the singular include the plural and vice versa.

ARTICLE 17 EXECUTION AND DELIVERY

17.01 This Agreement may be entered into by a separate copy of this Agreement being executed by, or on behalf of, each party and that executed copy being delivered to the other party by a method provided for in Section 16.01 or any other method agreed to by the parties.

The Parties have executed this Agreement as follows:

| SIGNED AND DELIVERED on behalf of the Province by an authorized representative of the Province | SIGNED AND DELIVERED by or on behalf of the Contractor (or by an authorized signatory of the Contractor if a corporation) |
|--|---|
| (Authorized Ministry Expense Authority) | (Contractor or Authorized Signatory) |
| (PRINTED NAME of Ministry Expense Authority) | (PRINTED NAME of Contractor) |
| Dated this day of, 2019 | Dated this day of, 2019 |

SCHEDULE "A"

Attachment to the Agreement for 2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring) AREA3

1. Foreword

The Province of BC intends to directly purchase light detection and range data (LiDAR) for an area of 2002 km² (Figure 1). The objective of this project is to provide a high resolution/high accuracy base data set, suitable to support modeling of overland flows and other resource mapping projects for the Province as well as providing open data for public use. In addition, GeoBC requires full licensing right for the Province with respect to unlimited data use, rights to derive and sell products and make the data available for public use under an open data license agreement.

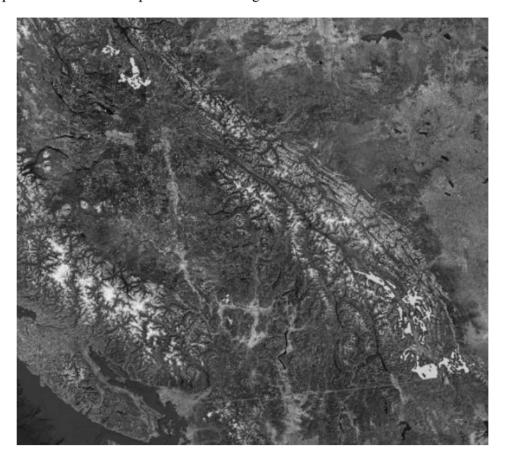


Figure 1 2018 Acquisition Areas (red) for AREA 1

2. DATA requirements

a. Data license

- The Province obtains a license including:
 - Full licensing rights
 - Unlimited data use
 - All rights to derive and sell products

 Rights to make the data available for public use under an open data license agreement

b. Data format and other technical requirements

- Calibrated LiDAR point cloud data in LAS format, preferably V1.2 or higher
- An InSitu Camera Calibration report is desirable if available
- A minimum point density of 1pt/m² or higher
- Intensity and multi return (echoes) are desirable
- Ground classification if LiDAR data is not mandatory but preferred
- Horizontal/Vertical Datum in NAD83/CGVD2013 or NAD83/CGVD28 in UTM are acceptable (ESRI .asc format or USGS .dem)
- Tiling scheme for LAS/ LAZ point cloud data: Geographic BC tiling scheme in UTM projection is desirable but not mandatory; please see additional info for LAZ data in Section 6.4 of the "Specifications for LiDAR" V3.1 April 2018, GeoBC.
- Submission of LiDAR point cloud data on Digital Hard drive, USB 3.0 compatible (single copy)

3. Liaison

 All project liaison and submissions must be handled through GeoBC, Ministry of Forests, Lands and Natural Resource Operations. Contact information is below:



Harald Steiner, P.Eng
Team Lead | Digital Image Services

GeoBC

3rd Floor, 3400 Davidson Ave

Victoria BC V8Z 3P8

Phone (778)-974-3631

Mobile (778)-677-6976

Forests, Lands and Natural Resource Operations

Harald.Steiner@gov.bc.ca

www.geobc.gov.bc.ca

4. Data and Materials Supplied

• Electronic Submission of a shape file outlining the areas provided



SCHEDULE "B" - FEES

Attachment to the Agreement for 2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring) AREA3

CONTRACT NO: OP19BMC042

FEES

The total flat rate fee (excluding taxes) payable to the Contractor under this Agreement, for all Services, including those described in Schedule A, will not exceed \$1,130,897.50 (no tax) without the prior written approval of the Ministry Representative.

Any work other than the Services that is requested by the Province will not be undertaken except in accordance with a written amendment to this Agreement.

EXPENSES

The Province will not pay any expenses incurred by the contractor in relation to the performance of the Services.

SUBMISSION OF STATEMENT OF ACCOUNT

In order to obtain payment for any fees (and any applicable taxes under the Agreement, you must submit to us a written Statement of Account/invoice in a form satisfactory to us.

The Statement of Account(s) / invoice(s) must show the following:

- **ARTICLE 5** your legal name, address, the date and the period of time which the invoice applies ("Billing Period"), the contract number, and a statement number for identification;
- **ARTICLE 6** the calculation of all fees claimed under this Agreement for the Billing Period, with hours, dates, rates, and name(s) of persons providing the Services, a description of specific services/works completed during the Billing Period, including a declaration that the Services have been completed;
- **ARTICLE 7** the calculation of any applicable GST tax payable by the Province in relation to the Services provided under this Agreement and for the Billing Period as a separate line item;

ARTICLE 8 your GST registration number, and

ARTICLE 9 Payment units are based on the amount of "Line Km" flown and "Line Km" produced.

ARTICLE 10 any other billing information reasonably requested by us.

Subject to any holdback provided for in this Agreement, within thirty days (30) of our receipt of your invoice, or the date we authorize payment, whichever is the later, we must pay you fees for those Services we determined were satisfactorily performed during the Billing Period.

PAYMENT SCHEDULE

(a) One complete invoice to be submitted by no later than 29th March 2019 for the amount identified.

Invoices should be submitted to:



Harald Steiner, P.Eng
Team Lead | Digital Image Services
GeoBC
3rd Floor, 3400 Davidson Ave
Victoria BC V8Z 3P8
Phone (778)-974-3631
Mobile (778)-677-6976
Forests, Lands and Natural Resource Operations
Harald.Steiner@gov.bc.ca
www.geobc.gov.bc.ca

Invoices are paid within thirty (30) days of receipt of goods.

Hlasny, Brad FLNR:EX

From: Christian, Angus FLNR:EX
Sent: March 29, 2019 2:07 PM
To: vincent.day@canfor.com

Subject: kmz

Attachments: Canfor_lidar.kmz



Angus Christian Senior Imagery Specialist | Digital Image Services

GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca www.geobc.gov.bc.ca

The good ended happily and the bad unhappily. That is what fiction means.

Hlasny, Brad FLNR:EX

From: Steiner, Harald FLNR:EX
Sent: March 29, 2019 2:06 PM

To: 'Day, Vincent'; Christian, Angus FLNR:EX Subject: RE: [External] lidar - areas we have

Vincent,

I am waiting for final approval any minute

Н



Harald Steiner, P.Eng
Team Lead | Digital Image Services
GeoBC

3rd Floor, 3400 Davidson Ave Victoria BC V8Z 3P8

Phone (778)-974-3631 Mobile (778)-677-6976

Forests, Lands and Natural Resource Operations and Rural Development

<u>Harald.Steiner@gov.bc.ca</u> <u>www.geobc.gov.bc.ca</u>

"Man must rise above the Earth—to the top of the atmosphere and beyond—for only thus will he fully understand the world in which he lives." Plato



Please consider the environment before printing this email.

This message contains confidential information and is intended for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this email.

From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Friday, March 29, 2019 1:52 PM

To: Christian, Angus FLNR:EX **Cc:** Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Have not received contract or shapefiles....

Is this coming soon? I think I only have an hour to get my signature on the contract.

From: Christian, Angus FLNR:EX

Sent: Thursday, March 28, 2019 3:32 PM

To: Day, Vincent

Cc: Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Hi Vincent

We have gone over the submitted files and selected suitable areas for purchase.

The total area in which we are interested is s.17 . Total value of the contract will be \$1,150,917.50 s.17

The contract number will be OP19BMC042.

We will send you the contract and shapefiles outlining these areas tomorrow morning. We will need to receive both an invoice and a copy of the contract signed by someone with appropriate signing authority by 3:00 PM tomorrow afternoon so that we can forward it to our finance department before the fiscal year-end deadline.

Cheers,



Angus Christian

Senior Imagery Specialist | Digital Image Services

GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca www.geobc.gov.bc.ca

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From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Thursday, March 28, 2019 11:15 AM

To: Christian, Angus FLNR:EX Cc: Steiner, Harald FLNR:EX

Subject: FW: [External] lidar - areas we have

Hi Angus. This is closer.... There is more lidar available than this... especially from the 2018 collection which we are still receiving in the central interior and is more wall-to-wall than shown in this file.

Should give good enough estimate for this morning.

VINCENT DAY, RPF
Digital Technology Superintendent
Woodlands Canada
Canadian Forest Products Ltd.

From: Turnbull, Shawn

Sent: Thursday, March 28, 2019 11:02 AM **To:** Day, Vincent < <u>Vincent.Day@canfor.com</u> > **Subject:** RE: [External] lidar - areas we have

Hey Vince,

Here is the updated shapefile of Canfor's LiDAR coverage areas for GeoBC. I've included a screenshot too (LiDAR areas are turquoise, Operating Areas are green, GeoBC LiDAR areas pink).

Feel free to stop by my desk to take a look at it on ArcGIS Pro to make sure its accurate.



Thanks, Shawn From: Christian, Angus FLNR:EX < Angus. Christian@gov.bc.ca >

Sent: Thursday, March 28, 2019 9:40 AM
To: Day, Vincent < Vincent. Day@canfor.com>

Cc: Steiner, Harald FLNR:EX < Harald.Steiner@gov.bc.ca >

Subject: RE: [External] lidar - areas we have

Thanks Vincent

We are very interested in these areas – could you provide a shapefile or .kml of the outlined areas so that we can do area calculations? We are trying to get procurement details to our executive by noon today.

Cheers,



Angus Christian

Senior Imagery Specialist | Digital Image Services

GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca

www.geobc.gov.bc.ca

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From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Thursday, March 28, 2019 8:29 AM

To: Christian, Angus FLNR:EX **Cc:** Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Good morning Angus.

Attached is a rough map of where we have collected lidar. Sorry, with the short notice had to go old school. Certainly not much overlap with what you have.

We are okay with terms of 1. below.

All the lidar was collected at 8pt/m2. There are some areas that came in lower and some higher and most of the area is higher than 8pt.

There is a mixture of costs and contracts in the different areas. In discussion with a few of my contacts we were thinking simple s.13; s.17

We can talk further on the other products if you like. I would need to dig a bit further into exactly what we have available right now in different areas.

We have done "wall-to-wall" in our TFL's and in 2018 we started wall-to-wall everywhere inside our collection areas to obtain the Crown Forest Landbase (CFLB).

VINCENT DAY, RPF

Digital Technology Superintendent

Woodlands Canada Canadian Forest Products Ltd.

T 250-962-3295 C 778-349-3314 F 250-962-3217

vincent.day@canfor.com www.canfor.com

5162 Northwood Pulpmill Rd, Prince George, BC, V2L 4W2

From: Christian, Angus FLNR:EX <Angus.Christian@gov.bc.ca>

Sent: Wednesday, March 27, 2019 3:34 PM **To:** Day, Vincent < <u>Vincent.Day@canfor.com</u>>

Cc: Steiner, Harald FLNR:EX <Harald.Steiner@gov.bc.ca>

Subject: [External] lidar - areas we have

Hi Vincent

Attached please find a shapefile of the areas we already have and are not interested in acquiring (please rename extension from '.zap' to '.zip' and extract).

To summarise our requirements:

- 1. full provincial ownership or unrestricted license permitting the Province to resell the raw data, derive and sell new products based on the data, and the right to show the data publicly via an open license.
 - 2. ground classified LiDAR at a minimum 1pt/ m² density.
 - 3. pricing information (e.g., \$/k m²)
 - 4. Optionally, any additional data products associated with the raw data; e.g., gridded DEM at 1m or better resolution, contours, etc.

Due to time constraints, we require a reply with a map showing any areas you have consistent with the above requirements by 9:00 AM tomorrow (Thursday, march 28) morning.

Cheers,



Angus Christian
Senior Imagery Specialist | Digital Image Services
GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca

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Canfor Legal Disclaimer: This e-mail and any attachment(s) are confidential. If you are not the intended recipient, please notify the sender immediately by return e-mail, delete this e-mail and do not copy, use or disclose it to any other person.

Hlasny, Brad FLNR:EX

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Sent:March 29, 2019 1:52 PMTo:Christian, Angus FLNR:EXCc:Steiner, Harald FLNR:EX

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Cheers,



Angus Christian

Senior Imagery Specialist | Digital Image Services

GeoBC

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VINCENT DAY, RPF

Digital Technology Superintendent

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Canadian Forest Products Ltd.

T 250-962-3295 **C** 778-349-3314 **F** 250-962-3217

vincent.day@canfor.com www.canfor.com

5162 Northwood Pulpmill Rd, Prince George, BC, V2L

4W2

From: Turnbull, Shawn

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To: Day, Vincent < Vincent.Day@canfor.com >
Subject: RE: [External] lidar - areas we have

Hey Vince,

Here is the updated shapefile of Canfor's LiDAR coverage areas for GeoBC. I've included a screenshot too (LiDAR areas are turquoise, Operating Areas are green, GeoBC LiDAR areas pink).

Feel free to stop by my desk to take a look at it on ArcGIS Pro to make sure its accurate.



Thanks, Shawn

From: Christian, Angus FLNR:EX < Angus. Christian@gov.bc.ca >

Sent: Thursday, March 28, 2019 9:40 AM **To:** Day, Vincent < <u>Vincent.Day@canfor.com</u>>

Cc: Steiner, Harald FLNR:EX < Harald.Steiner@gov.bc.ca >

Subject: RE: [External] lidar - areas we have

Thanks Vincent

We are very interested in these areas – could you provide a shapefile or .kml of the outlined areas so that we can do area calculations? We are trying to get procurement details to our executive by noon today.

Cheers,



Angus Christian Senior Imagery Specialist | Digital Image Services GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca

www.geobc.gov.bc.ca

The good ended happily and the bad unhappily. That is what fiction means.

From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Thursday, March 28, 2019 8:29 AM

To: Christian, Angus FLNR:EX **Cc:** Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Good morning Angus.

Attached is a rough map of where we have collected lidar. Sorry, with the short notice had to go old school. Certainly not much overlap with what you have.

We are okay with terms of 1. below.

All the lidar was collected at 8pt/m2. There are some areas that came in lower and some higher and most of the area is higher than 8pt.

There is a mixture of costs and contracts in the different areas. In discussion with a few of my contacts we were thinking simple s.13; s.17

We can talk further on the other products if you like. I would need to dig a bit further into exactly what we have available right now in different areas.

We have done "wall-to-wall" in our TFL's and in 2018 we started wall-to-wall everywhere inside our collection areas to obtain the Crown Forest Landbase (CFLB).

VINCENT DAY, RPF

Digital Technology Superintendent

Woodlands Canada

Canadian Forest Products Ltd.

T 250-962-3295 **C** 778-349-3314 **F** 250-962-3217

vincent.day@canfor.com www.canfor.com

5162 Northwood Pulpmill Rd, Prince George, BC, V2L

4W2

From: Christian, Angus FLNR:EX < Angus. Christian@gov.bc.ca >

Sent: Wednesday, March 27, 2019 3:34 PM
To: Day, Vincent < Vincent. Day@canfor.com >

Cc: Steiner, Harald FLNR:EX < Harald.Steiner@gov.bc.ca >

Subject: [External] lidar - areas we have

Hi Vincent

Attached please find a shapefile of the areas we already have and are not interested in acquiring (please rename extension from '.zap' to '.zip' and extract).

To summarise our requirements:

- 1. full provincial ownership or unrestricted license permitting the Province to resell the raw data, derive and sell new products based on the data, and the right to show the data publicly via an open license.
 - 2. ground classified LiDAR at a minimum 1pt/ m² density.
 - 3. pricing information (e.g., \$/k m²)
 - 4. Optionally, any additional data products associated with the raw data; e.g., gridded DEM at 1m or better resolution, contours, etc.

Due to time constraints, we require a reply with a map showing any areas you have consistent with the above requirements by 9:00 AM tomorrow (Thursday, march 28) morning.

Cheers,



Angus Christian
Senior Imagery Specialist | Digital Image Services

GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca

www.geobc.gov.bc.ca

The good ended happily and the bad unhappily. That is what fiction means.

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Hlasny, Brad FLNR:EX

From: Steiner, Harald FLNR:EX
Sent: March 29, 2019 12:54 PM
To: Christian, Angus FLNR:EX

Subject: drafts

Attachments: Proj costs and areas.xlsx; Contract_2019_RESMAP LIDAR_CanFor_OP19BMC042.docx;

canfor_lidar_final2.shp; canfor_lidar_final2.shp.rtree; canfor_lidar_final2.shx; Canfor_lidar.kmz; canfor_lidar.PNG; canfor_lidar_final2.dbf; canfor_lidar_final2.prj; canfor_lidar_final2.qpj

Angus,

waiting for funding approval . just have a look

Н



Harald Steiner, P.Eng Team Lead | Digital Image Services

GeoBC

3rd Floor, 3400 Davidson Ave

Victoria BC V8Z 3P8

Phone (778)-974-3631

Mobile (778)-677-6976

Forests, Lands and Natural Resource Operations

Harald.Steiner@gov.bc.ca

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"Man must rise above the Earth—to the top of the atmosphere and beyond—for only thus will he fully understand the world in which he lives." Plato



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Consulting and General Services Contract

CONTRACT./FILE NO: OP19BMC042

THIS AGREEMENT DATED FOR REFERENCE THE 29TH DAY OF MARCH, 2019

PROJECT DESCRIPTION:

2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring), AREA3

BETWEEN:

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA, as represented by the MINISTER OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS

3400 DAVIDSON AVENUE VICTORIA BC V8Z 3P8 PO Box station 9375 Prov Gov't Victoria BC V8W 9M5 Phone Number: (250) 952 6520 Ministry Representative: Brad Hlasny E-mail Address: Brad.Hlasny@gov.bc.ca

(the "Province", "we", "us", or "our" as applicable)

AND:

Canadian Forest Products Ltd. 5162 Northwood Pulpmill Rd Prince George, BC, V2L 4W2 Dir: 250-962-3295 Contact: Vincent Day, vincent.day@canfor.com

Corporate Business Number: WorkSafe BC Number:

(the "Contractor", "you", or "your" as applicable)

The Province wishes to retain the Contractor to provide the Services specified in Schedule A and, in consideration for the remuneration set out in Schedule B, the Contractor has agreed to provide those Services, on the terms and conditions set out in this Agreement.

The Province and the Contractor agree as follows:

(a) DEFINITIONS

- 1.01 In this Agreement, unless the context otherwise requires:
 - "Business Day" means a day, other than a Saturday or Sunday, on which Provincial government offices are open for normal business in British Columbia;
 - "Incorporated Material" means any material in existence prior to the start of the Term or developed independently of this Agreement, and that is incorporated or embedded in the Produced Material by the Contractor or a Subcontractor;
 - "Material" means the Produced Material and the Received Material;

- "Produced Material" means records, software and other material, whether complete or not, that, as a result
 of this Agreement, are produced by the Contractor or a Subcontractor and includes the Incorporated Material;
- e) "Received Material" means records, software and other material, whether complete or not, that, as a result of this Agreement, are received by the Contractor or a Subcontractor from the Province or any other person;
- f) "Record" is the definition of "record" in the *Interpretation Act* and as incorporated into this Agreement and "records" will bear a corresponding meaning;
- g) "Services" means the services described in Schedule A;
- h) "Subcontractor" means a person described in Section 16.05;
- "Term" means the term of the Agreement described in Section 3.01 of this Agreement subject to that term ending earlier in accordance with this Agreement; and
- j) "Unit of Measure" has the meaning described in Schedule B.

(b) CONTRACT DOCUMENTS AND MODIFICATIONS

1.01 The attached schedules are applicable to and form part of this Agreement:

| Schedule | Title |
|--------------|------------------|
| Schedule 'A' | Services |
| Schedule 'B' | Contract Payment |
| | |
| | |
| | |
| | |
| | |
| | |

1.02 No modification of this Agreement is effective unless it is in writing and signed by, or on behalf of, the parties.

Article 3 TERM OF CONTRACT

- 2.01 The Term of this Agreement is from and including March 29, 2019 to and including March 29, 2019 inclusive.
- 2.02 Regardless of the date of execution or delivery of this Agreement, the Contractor must provide the Services during the Term.
- 2.03 Time is of the essence in this Agreement and, without limitation, will remain of the essence after any modification or extension of this Agreement, whether or not expressly restated in the document effecting the modification or extension.

Article 4 CONTRACTOR'SOBLIGATIONS

- 4.01 You must provide the Services described in Schedule A (the "Services") in accordance with this Agreement.
- 4.02 Unless the parties otherwise agree in writing, you must supply and pay for all labour, materials, equipment, tools, facilities, and approvals and licences necessary or advisable to perform your obligations under this Agreement, including the license under Section 8.04.
- 4.03 Unless otherwise specified in this Agreement, you must perform the Services to a standard of care, skill, and diligence maintained by persons providing, on a commercial basis, services similar to the Services.
- 4.04 You must provide, instruct, and supervise a sufficient number of qualified personnel to enable timely and proper performance and completion of the Services. All such personnel shall be competent, English literate, efficient and qualified by education, training and experience to carry out the tasks to which each is assigned.
- 4.05 We may from time to time give you reasonable instructions (in writing or otherwise) as to the performance of the Services. You must comply with those instructions but, unless otherwise specified in this Agreement, you may determine the manner in which the instructions are carried out.
- 4.06 If we provide an instruction under Section 4.05 other than in writing, you may request that the instruction be confirmed by us in writing, which request we must comply with as soon as it is reasonably practicable to do so.

- 4.07 Requesting written confirmation of an instruction under Section 4.06 does not relieve you from complying with the instruction at the time the instruction was given.
- 4.08 In the performance of your obligations under this Agreement, you must comply with all applicable laws.

Article 5 PAYMENT

- (a) If you comply with this Agreement, we must pay you at the rates and times described in Schedule B:
 - (a) the fees described in that Schedule;
 - (b) the expenses, if any, in accordance with that Schedule if they are supported, where applicable, by proper receipts and, in our opinion, are necessarily incurred by you in providing the Services; and
 - (c) any applicable taxes payable by us under law or agreement with the relevant taxation authorities on the fees and expenses described in paragraphs (i) and (ii).

We are not obliged to pay you more than the maximum amount or dollar limit specified in Schedule B on account of fees and expenses.

- (b) In order to obtain payment of any fees or expenses, if any, under this Agreement, you must submit written statements of account to us in a form satisfactory to us, but no sooner than the dates referred to in Schedule B.
- (c) Without limiting Section 11.01 we may withhold from any payment due to you an amount sufficient to indemnify, in whole or in part, the Province and its employees and agents against any liens or other third-party claims that have arisen or could arise in connection with the provision of the Services. An amount withheld under this section must be promptly paid by the Province to you upon the basis for withholding the amount having been fully resolved to the satisfaction of the Province.
- (d) Our obligation to pay money to you is subject to the Financial Administration Act, which makes that obligation subject to an appropriation being available in the fiscal year of the Province during which payment becomes due.
- (e) Unless otherwise specified in this Agreement, all references to money are to Canadian dollars.
- (f) If you are not a resident in Canada, you acknowledge that we may be required by law to withhold income tax from the fees described in Schedule B and then to remit that tax to the Receiver General of Canada on your behalf.
- (g) Without limiting Section 16.11(a), you must not, in relation to performing your obligations under this Agreement, commit or purport to commit us to pay any money except as may be expressly provided for in this Agreement.
- (h) You must:
 - 18.01 apply for, and use reasonable efforts to obtain, any available refund, credit, rebate or remission of federal, provincial or other tax or duty imposed on you as a result of this Agreement that the Province has paid or reimbursed to you or agreed to pay or reimburse to you under this Agreement; and
 - 18.02 immediately on receiving, or being credited with, any amount applied for under paragraph (a) remit that amount to us.

ARTICLE 6 REPRESENTATIONS AND WARRANTIES

- 3.01 As at the date this Agreement is executed and delivered by, or on behalf of, the parties, you represent and warrant to us as follows:
 - (a) except to the extent you have previously disclosed otherwise in writing to us:
 - (i) all information, statements, documents and reports furnished or submitted by you to us in connection with this Agreement (including as part of any competitive process resulting in this Agreement being entered into) are in all material respects true and correct,
 - (ii) you have sufficient trained staff, facilities, materials, appropriate equipment and approved subcontractual agreements in place and available to enable you to fully perform the Services, and
 - (iii) you hold all permits, licenses, approvals and statutory authorities issued by any government or government agency that are necessary for the performance of your obligations under this Agreement; and
 - (b) if the Contractor is not an individual:

- (i) you have the power and capacity to enter into this Agreement and to observe, perform and comply with the terms of this Agreement and all necessary corporate or other proceedings have been taken and done to authorize the execution and delivery of this Agreement by, or on behalf of, you, and
- (ii) this Agreement has been legally and properly executed by, or on behalf of, you and is legally binding upon and enforceable against you in accordance with its terms except as enforcement may be limited by bankruptcy, insolvency or other laws affecting the rights of creditors generally and except that equitable remedies may be granted only in the discretion of a court of competent jurisdiction.

ARTICLE 7 PRIVACY, SECURITY AND CONFIDENTIALITY

- 6.01 You must comply with the Privacy Protection Schedule if attached to this Agreement.
- 6.02 You must make reasonable security arrangements to protect the Material from unauthorized access, collection, use, disclosure, alteration, or disposal and comply with the Security Schedule, if attached.
- 6.03 You must treat as confidential all information in the Material and all other information accessed or obtained by you or a Subcontractor (whether verbally, electronically or otherwise) as a result of this Agreement, and not permit its disclosure or use without our prior written consent except:
 - (a) as required to perform your obligations under this Agreement or to comply with applicable laws;
 - (b) if it is information that is generally known to the public other than as a result of a breach of this Agreement;or
 - (c) if it is information in any Incorporated Material.
- 6.04 Any public announcement relating to this Agreement will be arranged by us and, if such consultation is reasonably practicable, after consultation with you.
- 6.05 You must not, without our prior written approval, refer for promotional purposes to the Province being your customer or the Province having entered into this Agreement.

ARTICLE 7 MATERIAL AND INTELLECTUAL PROPERTY

- 7.01 If you receive a request for access to any of the Material from a person other than us, and this Agreement does not require or authorize you to provide that access, you must promptly advise the person to make the request to us.
- 7.02 We exclusively own all property rights in the Material that are not intellectual property rights. Any equipment property we may provide to you or a subcontractor is our exclusive property. You must deliver any Material or equipment property to us immediately following expiration of this Agreement, or sooner upon our request, in the same condition it was supplied to you, excepting always loss or damage attributable to reasonable wear or tear.
- 7.03 We exclusively own all intellectual property rights, including copyright:
 - (a) in Received Material that you receive from us, and
 - (b) in Produced Material, other than any Incorporated Material.

Upon our request, you must deliver to us documents satisfactory to us that irrevocably waive in our favour any moral rights that you (or your employees) or a Subcontractor (or its employees) may have in the Produced Material and confirm the vesting in the Province of the copyright in the Produced Material, other than any Incorporated Material.

- 7.04 Upon any Incorporated Material being embedded or incorporated in the Produced Material and to the extent that it remains so embedded or incorporated, you grant us:
 - (a) a non-exclusive, perpetual, irrevocable, royalty-free, worldwide license to use, reproduce, modify, and distribute that Incorporated Material; and
 - (b) the right to sublicense to third-parties the right to use, reproduce, modify and distribute that Incorporated Material.

ARTICLE 8 RECORDS AND REPORTS

8.01 You must, upon our request, fully inform us of all work done by you or a Subcontractor in connection with providing the Services.

8.02 If Schedule B provides for you to be paid fees at a Unit of Measure rate or for you to be paid or reimbursed for expenses, you must maintain time records and books of account, invoices, receipts and vouchers of expenses in support of those payments, in form and content satisfactory to us. Unless otherwise specified in this Agreement, the Contractor must retain such documents for a period of not less than seven years after this Agreement ends.

ARTICLE 9 AUDIT

9.01 In addition to any other rights of inspection the Province may have under statute or otherwise, we may at any reasonable time and on reasonable notice to you, enter on your premises to inspect and, at our discretion, copy any of the Material and you must permit, and provide reasonable assistance to, the exercise by us of our rights under this section.

ARTICLE 10 INDEMNITY AND INSURANCE

- 10.01 You must indemnify and save harmless the Province and its employees and agents from any losses, claims, damages, actions, causes of action, costs and expenses that the Province or any of its employees or agents may sustain, incur, suffer or be put to at any time either before or after this Agreement ends, including any claim of infringement of third-party intellectual property rights, where the same or any of them are based upon, arise out of or occur, directly or indirectly, by reason of any act or omission by you or your agents, employees, officers, directors or Subcontractors in connection with this Agreement (each a "Loss"), excepting always liability arising out of the independent acts or omissions of the Province and its employees and agents.
- 10.02 You must comply with the insurance requirements in Schedule D, if attached, as those terms may be modified from time to time in accordance with our directions.
- 10.03 Without limiting the generality of Section 4.08, you must comply with, and must ensure that any Subcontractors comply with, all applicable occupational health and safety laws in relation to the performance of your obligations under this Agreement, including the Workers Compensation Act in British Columbia or similar laws in other jurisdictions.
- 10.04 At your own expense, and where required under *Workers Compensation Act* in British Columbia, you must obtain WorkSafe BC coverage for yourself, all workers and any shareholders, directors, partners or other individuals employed or engaged in the performance of the Services and you shall ensure all approved Subcontractors obtain WorkSafe BC Coverage.
- 10.05 If you are an individual or a partnership of individuals and do not have the benefit of mandatory workers compensation coverage under the *Workers Compensation Act* in British Columbia, you must apply for and maintain Personal Optional Protection under the *Workers Compensation Act*.
- 10.06 You are responsible for all fines, levies, penalties and assessments made or imposed under the *Workers Compensation Act* and regulations relating in any way to the Services.
- 10.07 Upon our request you must provide us with evidence of your compliance with Sections 11.02, 11.04 and 11.05.

ARTICLE 11 FORCE MAJEURE

- 11.01 An "Event of Force Majeure" means a natural disaster, fire, flood, storm, epidemic or power failure, war (declared and undeclared), insurrection or act of terrorism or piracy, strike (including illegal work stoppage or slowdown) or lockout, or a freight embargo if such event prevents a party from performing its obligations in accordance with this Agreement and is beyond the reasonable control of that party.
- 11.02 An "Affected Party" means a party prevented from performing its obligations in accordance with this Agreement by an Event of Force Majeure.
- 11.03 An Affected Party is not liable to the other party for any failure or delay in the performance of the Affected Party's obligations under this Agreement resulting from an Event of Force Majeure and any time periods for the performance of such obligations are automatically extended for the duration of the Event of Force Majeure provided that the Affected Party complies with the requirements of Section 12.04.
- 11.04 An Affected Party must promptly notify the other party in writing upon the occurrence of the Event of Force Majeure and make all reasonable efforts to prevent, control or limit the effect of the Event of Force Majeure so as to resume compliance with the Affected Party's obligations under this Agreement as soon as possible.

ARTICLE 12 NON-COMPLIANCE WITH AGREEMENT CONDITIONS

- 12.01 An "Event of Default" means any of the following:
 - (a) your failure to perform any of your obligations under this Agreement, or
 - (b) any representation or warranty made by you in this Agreement is untrue or incorrect, or
 - (c) an Insolvency Event, which means any of the following;
 - (i) an order is made, a resolution is passed or a petition is filed, for your liquidation or winding up,
 - (ii) you commit an act of bankruptcy, make an assignment for the benefit of your creditors or otherwise acknowledge your insolvency,
 - (iii) a bankruptcy petition is filed or presented against you or a proposal under the *Bankruptcy and Insolvency Act* (Canada) is made by you,
 - (iv) a compromise or arrangement is proposed in respect of you under the *Companies' Creditors Arrangement Act* (Canada),
 - (v) a receiver or receiver-manager is appointed for any of your property, or
 - (vi) you cease, in our reasonable opinion, to carry on business as a going concern.
- 12.02 On the happening of an Event of Default, or at any time thereafter, we may, at our option, elect to do any one or more of the following:
 - (a) by written notice to you, require that the Event of Default be remedied within a time period specified in the notice;
 - (b) pursue any remedy or take any other action available to us at law or in equity; or
 - (c) by written notice to you, terminate this Agreement with immediate effect or on a future date specified in the notice, subject to the expiration of any time period specified under Section 13.02(a).
- 12.03 No failure or delay on our part to exercise our rights in relation to an Event of Default will constitute a waiver by us of such rights.
- 12.04 If you become aware that an Event of Default has occurred or anticipates that an Event of Default is likely to occur, you must promptly notify us of the particulars of the Event of Default or anticipated Event of Default. A notice under this section as to the occurrence of an Event of Default must also specify the steps you propose to take to address, or prevent recurrence of, the Event of Default. A notice under this section as to an anticipated Event of Default must specify the steps you propose to take to prevent the occurrence of the anticipated Event of Default.

ARTICLE 13 TERMINATION

- 13.01 In addition to our right to terminate this Agreement under Section 13.02(c) on the happening of an Event of Default, we may terminate this Agreement for any reason by giving at least 5 days' written notice of termination to you.
- 13.02 Unless Schedule B otherwise provides, if we terminate this Agreement under Section 14.01:
 - (a) we must, within 30 days of such termination, pay you any unpaid portion of the fees and expenses described in Schedule B which corresponds with the portion of the Services that was completed to our satisfaction before termination of this Agreement; and
 - (b) you must, within 30 days of such termination, repay to us any paid portion of the fees and expenses described in Schedule B which corresponds with the portion of the Services that we have notified you in writing was not completed to our satisfaction before termination of this Agreement.
- 13.03 The payment by us of the amount described in Section 14.02(a) discharges us from all liability to make payments to the Contractor under this Agreement.

ARTICLE 14 DISPUTE RESOLUTION

- 14.01 In the event of any dispute between the parties arising out of or in connection with this Agreement, the following dispute resolution process will apply unless the parties otherwise agree in writing:
 - (a) the parties must initially attempt to resolve the dispute through collaborative negotiation;

- (b) if the dispute is not resolved through collaborative negotiation within 15 Business Days of the dispute arising, the parties must then attempt to resolve the dispute through mediation under the rules of the British Columbia Mediator Roster Society; and
- (c) if the dispute is not resolved through mediation within 30 Business Days of the commencement of mediation, the dispute must be referred to and finally resolved by arbitration under the *Commercial Arbitration Act*.
- 14.02 Unless the parties otherwise agree in writing, an arbitration or mediation under Section 15.01 will be held in Victoria, British Columbia.
- 14.03 Unless the parties otherwise agree in writing or, in the case of an arbitration, the arbitrator otherwise orders, the parties must share equally the costs of a mediation or arbitration under Section 15.01 other than those costs relating to the production of expert evidence or representation by counsel.

ARTICLE 15 GENERAL

- 15.01 Any notice or document contemplated by this Agreement, to be effective, must be in writing and delivered as follows:
 - (a) hand delivered to the party or the specified party representative, in which case it will be deemed to be received on the day of its delivery; or
 - (b) by prepaid post to the party's address specified on the first page of this Agreement, in which case if mailed during any period when normal postal services prevail, it will be deemed to be received on the fifth Business Day after its mailing; or
 - (c) delivered by courier service to the party's address specified on the first page of this Agreement, in which case it will be deemed received on the fifth Business Day after collection by the courier service; or
 - (d) by facsimile or electronic transmission to the specified facsimile number or Email address on the first page of this Agreement, in which case it will be deemed to be received on the day of transmittal unless transmitted after the normal business hours of the addressee or on a day that is not a Business Day, in which cases it will be deemed to be received on the next following Business Day.
- 15.02 Either party may from time to time give notice to the other party of a substitute address, Email address, or fax number, which from the date such notice is given will supersede for purposes of Section 16.01 any previous address, Email address, or fax number specified for the party giving the notice.
- 15.03 You must not assign your rights under this Agreement without our prior written consent.
- 15.04 You must not subcontract any of your obligations under this Agreement without our prior written consent, excepting persons listed in Schedule A.
- 15.05 No subcontract, whether consented to or not, relieves you from any obligations under this Agreement. You must comply with the Subcontracting Schedule if attached to this Agreement. You must ensure that any person retained by you or any person retained by a person retained by you fully complies with this Agreement in performing the subcontracted obligations.
- 15.06 We may, for reasonable cause, object to the use of a proposed Subcontractor and require you to retain another qualified subcontractor.
- 15.07 A waiver of any term or breach of this Agreement is effective only if it is in writing and signed by, or on behalf of, the waiving party and is not a waiver of any other term or breach.
- 15.08 This Agreement and any modification of it constitute the entire Agreement between the parties as to performance of the Services.
- 15.09 Sections 4.08, 5.01 to 5.04, 5.07, 5.08, 7.01 to 7.05, 8.01 to 8.04, 9.01, 9.02, 10.01, 11.01, 11.02, 11.07, 12.01 to 12.04, 13.02, 13.03, 14.02, 14.03, 15.01 to 15.03, 16.01, 16.02, 16.09, and 16.11, any accrued but unpaid payment obligations, and any other sections of this Agreement (including schedules) which, by their terms or nature, are intended to survive the completion of the Services or termination of this Agreement, will continue in force indefinitely, even after this Agreement ends.
- 15.10 The schedules to this Agreement (including any appendices or other documents attached to, or incorporated by reference into, those schedules) are part of this Agreement.
- 15.11 In relation to the performance of your obligations under this Agreement, you are an independent contractor and not our:

- (a) employee or partner; or
- (b) agent except as may be expressly provided for in this Agreement.
- You must not act or purport to act contrary to this section.
- 15.12 You must not do anything that would result in personnel hired or used by you or a Subcontractor in relation to providing the Services being considered our employees.
- 15.13 If one or more individuals are identified in the schedules as "Key Personnel", you must cause those individuals to perform the Services on your behalf and not remove or replace them, without our prior written approval. Any approved replacement is at your expense.
- 15.14 We must make available to you all information in our possession which we consider pertinent to the performance of the Services.
- 15.15 You must not provide any services to any person in circumstances which, in our reasonable opinion, could give rise to a conflict of interest between your duties to that person and your duties to us under this Agreement.
- 15.16 If there is a conflict among provisions of this Agreement, a provision in the body of this Agreement will prevail over any conflicting provision in, attached to, or incorporated by reference into a schedule, unless that conflicting provision expressly states otherwise and a provision in a schedule will prevail over any conflicting provision in a document attached to or incorporated by reference into a schedule, unless the schedule expressly states otherwise.
- 15.17 This Agreement does not operate as a permit, license, approval or other statutory authority which you may be required to obtain from the Province or any of its agencies in order to provide the Services. Nothing in this Agreement is to be construed as interfering with, or fettering in any manner, the exercise by the Province or its agencies of any statutory, prerogative, executive or legislative power or duty.
- 15.18 If any provision of this Agreement or the application of it to any person or circumstance is invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provision to any other person or circumstance will not be affected or impaired and will be valid and enforceable to the extent permitted by law.
- 15.19 Each party must perform the acts, execute and deliver the writings, and give the assurances as may be reasonably necessary to give full effect to this Agreement.
- 15.20 This Agreement is governed by, and is to be interpreted and construed in accordance with, the laws applicable in British Columbia.

ARTICLE 16 INTERPRETATION

- 16.01 In this Agreement:
 - (a) "we", "us", and "our" refer to the Province alone and never refer to the combination of the Contractor and the Province:
 - (b) the Contractor and the Province are referred to as "the parties" and each of them as a "party";
 - (c) "includes" and "including" are not intended to be limiting;
 - (d) unless the context otherwise requires, references to sections by number are to sections of this Agreement;
 - (e) "attached" means attached to this Agreement when used in relation to a schedule;
 - (f) unless otherwise specified, a reference to a statute by name means the statute of British Columbia by that name, as amended or replaced from time to time;
 - (g) the headings have been inserted for convenience of reference only and are not intended to describe, enlarge or restrict the scope or meaning of this Agreement or any provision of it;
 - (h) "person" includes an individual, partnership, corporation or legal entity of any nature; and
 - (i) unless the context otherwise requires, words expressed in the singular include the plural and vice versa.

ARTICLE 17 EXECUTION AND DELIVERY

17.01 This Agreement may be entered into by a separate copy of this Agreement being executed by, or on behalf of, each party and that executed copy being delivered to the other party by a method provided for in Section 16.01 or any other method agreed to by the parties.

The Parties have executed this Agreement as follows:

| SIGNED AND DELIVERED on behalf of the Province by an authorized representative of the Province | SIGNED AND DELIVERED by or on behalf of the Contractor (or by an authorized signatory of the Contractor if a corporation) |
|--|---|
| (Authorized Ministry Expense Authority) | (Contractor or Authorized Signatory) |
| (PRINTED NAME of Ministry Expense Authority) | (PRINTED NAME of Contractor) |
| Dated this day of, 2019 | Dated this day of, 2019 |

SCHEDULE "A"

Attachment to the Agreement for 2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring) AREA3

1. Foreword

The Province of BC intends to directly purchase light detection and range data (LiDAR) for an area of 2002 km² (Figure 1). The objective of this project is to provide a high resolution/high accuracy base data set, suitable to support modeling of overland flows and other resource mapping projects for the Province as well as providing open data for public use. In addition, GeoBC requires full licensing right for the Province with respect to unlimited data use, rights to derive and sell products and make the data available for public use under an open data license agreement.

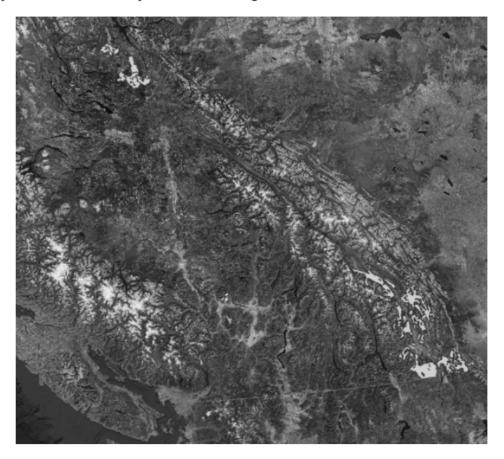


Figure 1 2018 Acquisition Areas (red) for AREA 1

2. DATA requirements

a. Data license

- The Province obtains a license including :
 - o Full licensing rights
 - Unlimited data use
 - All rights to derive and sell products

 Rights to make the data available for public use under an open data license agreement

b. Data format and other technical requirements

- Calibrated LiDAR point cloud data in LAS format, preferably V1.2 or higher
- An InSitu Camera Calibration report is desirable if available
- A minimum point density of 1pt/m² or higher
- Intensity and multi return (echoes) are desirable
- Ground classification if LiDAR data is no mandatory but preferred
- Horizontal/Vertical Datum in NAD83/CGVD2013 or NAD83/CGVD28 in UTM are acceptable (ESRI .asc format or USGS .dem)
- Tiling scheme for LAS/ LAZ point cloud data: Geographic BC tiling scheme in UTM projection is desirable but not mandatory; please see additional info for LAZ data in Section 6.4 of the "Specifications for LiDAR" V3.1 April 2018, GeoBC.
- Submission of LiDAR point cloud data on Digital Hard drive, USB 3.0 compatible (single copy)

3. Liaison

 All project liaison and submissions must be handled through GeoBC, Ministry of Forests, Lands and Natural Resource Operations. Contact information is below:



Harald Steiner, P.Eng
Team Lead | Digital Image Services

GeoBC

3rd Floor, 3400 Davidson Ave

Victoria BC V8Z 3P8

Phone (778)-974-3631

Mobile (778)-677-6976

Forests, Lands and Natural Resource Operations

Harald.Steiner@gov.bc.ca

www.geobc.gov.bc.ca

4. Data and Materials Supplied

• Electronic Submission of a shape file outlining the areas provided



SCHEDULE "B" - FEES

Attachment to the Agreement for 2019 Purchase of Lidar Data for emergency management and resource mapping of the Province (Floodplain mapping, BC3D, Environmental Monitoring) AREA3

CONTRACT NO: OP19BMC042

FEES

The total flat rate fee (excluding taxes) payable to the Contractor under this Agreement, for all Services, including those described in Schedule A, will not exceed \$1,130,897.50 (no tax) without the prior written approval of the Ministry Representative.

Any work other than the Services that is requested by the Province will not be undertaken except in accordance with a written amendment to this Agreement.

EXPENSES

The Province will not pay any expenses incurred by the contractor in relation to the performance of the Services.

SUBMISSION OF STATEMENT OF ACCOUNT

In order to obtain payment for any fees (and any applicable taxes under the Agreement, you must submit to us a written Statement of Account/invoice in a form satisfactory to us.

The Statement of Account(s) / invoice(s) must show the following:

- **ARTICLE 5** your legal name, address, the date and the period of time which the invoice applies ("Billing Period"), the contract number, and a statement number for identification;
- **ARTICLE 6**the calculation of all fees claimed under this Agreement for the Billing Period, with hours, dates, rates, and name(s) of persons providing the Services, a description of specific services/works completed during the Billing Period, including a declaration that the Services have been completed;
- **ARTICLE 7** the calculation of any applicable GST tax payable by the Province in relation to the Services provided under this Agreement and for the Billing Period as a separate line item;
- ARTICLE 8 your GST registration number, and
- **ARTICLE 9**Payment units are based on the amount of "Line Km" flown and "Line Km" produced.
- **ARTICLE 10** any other billing information reasonably requested by us.

Subject to any holdback provided for in this Agreement, within thirty days (30) of our receipt of your invoice, or the date we authorize payment, whichever is the later, we must pay you fees for those Services we determined were satisfactorily performed during the Billing Period.

PAYMENT SCHEDULE

(a) One complete invoice to be submitted by no later than 29th March 2019 for the amount identified.

Invoices should be submitted to:



Harald Steiner, P.Eng
Team Lead | Digital Image Services
GeoBC
3rd Floor, 3400 Davidson Ave
Victoria BC V8Z 3P8
Phone (778)-974-3631
Mobile (778)-677-6976
Forests, Lands and Natural Resource Operations
Harald.Steiner@gov.bc.ca
www.geobc.gov.bc.ca

Invoices are paid within thirty (30) days of receipt of goods.

Hlasny, Brad FLNR:EX

From: Day, Vincent <Vincent.Day@canfor.com>

Sent: March 29, 2019 12:43 PM **To:** Christian, Angus FLNR:EX

Subject: RE: [External] lidar - areas we have

Attachments: invoice template.docx

Just getting things ready on Canfor end.

Here is draft invoice....

Not sure who to put under Bill to: and Sold to: sections...

From: Christian, Angus FLNR:EX

Sent: Thursday, March 28, 2019 3:32 PM

To: Day, Vincent

Cc: Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Hi Vincent

We have gone over the submitted files and selected suitable areas for purchase.

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We will send you the contract and shapefiles outlining these areas tomorrow morning. We will need to receive both an invoice and a copy of the contract signed by someone with appropriate signing authority by 3:00 PM tomorrow afternoon so that we can forward it to our finance department before the fiscal year-end deadline.

Cheers,



Angus Christian

Senior Imagery Specialist | Digital Image Services

GeoBC

Phone (778 974-3634)

Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca www.geobc.gov.bc.ca

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Digital Technology Superintendent

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vincent.day@canfor.com www.canfor.com

5162 Northwood Pulpmill Rd, Prince George, BC, V2L

4W2

From: Turnbull, Shawn

Sent: Thursday, March 28, 2019 11:02 AM
To: Day, Vincent < Vincent.Day@canfor.com >
Subject: RE: [External] lidar - areas we have

Hey Vince,

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Feel free to stop by my desk to take a look at it on ArcGIS Pro to make sure its accurate.



Thanks, Shawn

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Subject: RE: [External] lidar - areas we have

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We can talk further on the other products if you like. I would need to dig a bit further into exactly what we have available right now in different areas.

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 - 3. pricing information (e.g., \$/k m²)
 - 4. Optionally, any additional data products associated with the raw data; e.g., gridded DEM at 1m or better resolution, contours, etc.

Due to time constraints, we require a reply with a map showing any areas you have consistent with the above requirements by 9:00 AM tomorrow (Thursday, march 28) morning.

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Canfor Legal Disclaimer: This e-mail and any attachment(s) are confidential. If you are not the intended recipient, please notify the sender immediately by return e-mail, delete this e-mail and do not copy, use or disclose it to any other person.

INVOICE



CANADIAN FOREST PRODUCTS LTD

100-1700 WEST 75TH AVE VANCOUVER, BC CANADA V6P 6G2 Phone (604)261-5111 Fax (604)261-5111 Email

Invoice Date : Mar-28-2019 Invoice No : MOFMAR2919

Bill To

MINISTRY OF FORESTS PO BOX 9375 STN PROV GOVT VICTORIA, BC CANADA V8W 9M5 Sold To

MINISTRY OF FORESTS PO BOX 9375 STN PROV GOVT VICTORIA, BC CANADA V8W 9M5

Customer PO

Funds : CAD Mill/ Division Name : N/A

Payment Terms

NET 10 AFTER DATE OF INVOICE

Remit To

CANADIAN FOREST PRODUCTS LTD. c/o BANK OF MONTREAL

595 BURRARD ST, VANCOUVER, BC

ACCOUNT # 00041256838, SWIFT # BOFMCAM2

| Description | | Quantity | U/M | Unit Price | Fed % | Prov % | Amount |
|---------------------|--------------------|----------|-----|------------|--------------------|--------|---------------------------|
| CONTRACT OP19BMC042 | | | | | 5.00 % | | 1,150,917.50 |
| | | | | | | | 1,150,917.50 |
| GST/HST Reg No | 89740 5643 RT 0001 | | | | GST Grand Total | ı | 57,545.88 1,208,463.38 |

From: Day, Vincent < Vincent.Day@canfor.com>

Sent: March 28, 2019 3:47 PM
To: Christian, Angus FLNR:EX
Cc: Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Sounds good Angus.

I'll get the ball rolling on my side...

From: Christian, Angus FLNR:EX

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Cc: Steiner, Harald FLNR:EX

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From: Steiner, Harald FLNR:EX
Sent: March 28, 2019 3:11 PM
To: Liesch, Nancy FLNR:EX

Cc: Christian, Angus FLNR:EX; Edwards, Brett 1 FLNR:EX

Subject: Projects, costs area

| Contract # | Description | Company | Product | Area Km² | Price/Km² | Total Price |
|------------|----------------------------------|--------------|---------------------------|----------|-----------|----------------|
| OP19BMC040 | Purchasing of | Terra Remote | LiDAR point cloud data | s.17 | | \$110,110.00 |
| | LiDAR data for | Sensing | (unclassified/classified) | | | |
| | emergency | | | | | |
| | management and | | | | | |
| | resource mapping | | | | | |
| | of the Province | | | | | |
| | (Floodplain | | | | | |
| | mapping, BC3D, | | | | | |
| | environmental | | | | | |
| | monitoring) | | | ļ | | |
| OP19BMC041 | Purchasing of | McElhanney | LiDAR point cloud data | | | \$238,972.50 |
| | LiDAR data for | | (unclassified/classified) | | | |
| | emergency | | | | | |
| | management and | | | | | |
| | resource mapping | | | | | |
| | of the Province | | | | | |
| | (Floodplain | | | | | |
| | mapping, BC3D, | | | | | |
| | environmental | | | | | |
| | monitoring) | | | ļ | | 44 450 045 50 |
| OP19BMC042 | Purchasing of | Canfor | LiDAR point cloud data | | | \$1,150,917.50 |
| | LiDAR data for | | (unclassified/classified) | | | |
| | emergency | | | | | |
| | management and | | | | | |
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| | (Floodplain | | | | | |
| | mapping, BC3D, | | | | | |
| | environmental | | | | | |
| | monitoring) | | | | | |
| | monitoring) | | | Ţ | | |

Total \$1,500,000.00



Harald Steiner, P.Eng
Team Lead | Digital Image Services
GeoBC
3rd Floor, 3400 Davidson Ave
Victoria BC V8Z 3P8
Phone (778)-974-3631

Mobile (778)-677-6976 Forests, Lands and Natural Resource Operations Harald.Steiner@gov.bc.ca www.geobc.gov.bc.ca

"Man must rise above the Earth —to the top of the atmosphere and beyond—for only thus will he fully understand the world in which he lives." Plato



Please consider the environment before printing this email.

This message contains confidential information and is intended for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this email.

From: Christian, Angus FLNR:EX
Sent: March 28, 2019 2:33 PM
To: Edwards, Brett 1 FLNR:EX

Subject: FW: [External] lidar - areas we have **Attachments:** canfor_lidar_areas_for_geobc.zap

From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Thursday, March 28, 2019 11:15 AM

To: Christian, Angus FLNR:EX Cc: Steiner, Harald FLNR:EX

Subject: FW: [External] lidar - areas we have

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VINCENT DAY, RPF

Digital Technology Superintendent Woodlands Canada Canadian Forest Products Ltd.

T 250-962-3295 C 778-349-3314 F 250-962-3217

<u>vincent.day@canfor.com</u> <u>www.canfor.com</u> 5162 Northwood Pulpmill Rd, Prince George, BC, V2L 4W2

From: Turnbull, Shawn

Sent: Thursday, March 28, 2019 11:02 AM

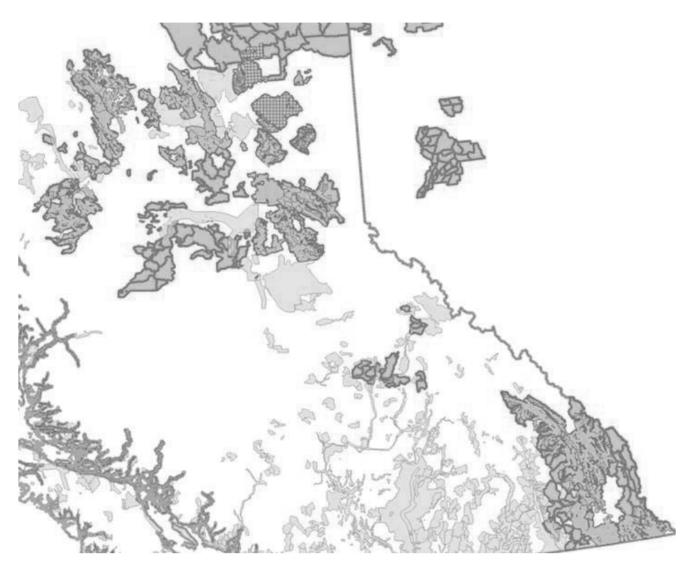
To: Day, Vincent

Subject: RE: [External] lidar - areas we have

Hey Vince,

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Thanks, Shawn

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Sent: Thursday, March 28, 2019 9:40 AM
To: Day, Vincent < Vincent. Day@canfor.com >

Cc: Steiner, Harald FLNR:EX < Harald.Steiner@gov.bc.ca >

Subject: RE: [External] lidar - areas we have

Thanks Vincent

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Cheers,



Angus Christian Senior Imagery Specialist | Digital Image Services GeoBC

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Forests, Lands, Natural Resource Operations and Rural Development

angus.christian@gov.bc.ca

www.geobc.gov.bc.ca

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From: Day, Vincent [mailto:Vincent.Day@canfor.com]

Sent: Thursday, March 28, 2019 8:29 AM

To: Christian, Angus FLNR:EX **Cc:** Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Good morning Angus.

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From: Christian, Angus FLNR:EX < Angus. Christian@gov.bc.ca >

Sent: Wednesday, March 27, 2019 3:34 PM
To: Day, Vincent < Vincent. Day@canfor.com >

Cc: Steiner, Harald FLNR:EX <Harald.Steiner@gov.bc.ca>

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From: Day, Vincent < Vincent.Day@canfor.com>

Sent:March 28, 2019 11:15 AMTo:Christian, Angus FLNR:EXCc:Steiner, Harald FLNR:EX

Subject: FW: [External] lidar - areas we have **Attachments:** canfor_lidar_areas_for_geobc.zap

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4W2

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To: Day, Vincent

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4W2

From: Christian, Angus FLNR:EX < Angus. Christian@gov.bc.ca >

Sent: Wednesday, March 27, 2019 3:34 PM **To:** Day, Vincent < <u>Vincent.Day@canfor.com</u>>

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From: Christian, Angus FLNR:EX
Sent: March 28, 2019 10:35 AM
To: Steiner, Harald FLNR:EX
Subject: Canfor vs BC Lidar
Attachments: Canfor_vs_BC_lidar.kml

Canfor areas are in red, other lidar in yellow/green

Total Canfor area ~ 53,000 km²

Southeastern (East Kootenays) Canfor area ~ 20,000 km²



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From: Day, Vincent < Vincent.Day@canfor.com>

Sent: March 28, 2019 10:14 AM
To: Christian, Angus FLNR:EX

Subject: RE: [External] lidar - areas we have

Working on it...

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Sent:March 28, 2019 8:29 AMTo:Christian, Angus FLNR:EXCc:Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Attachments: canfor_lidar.pdf

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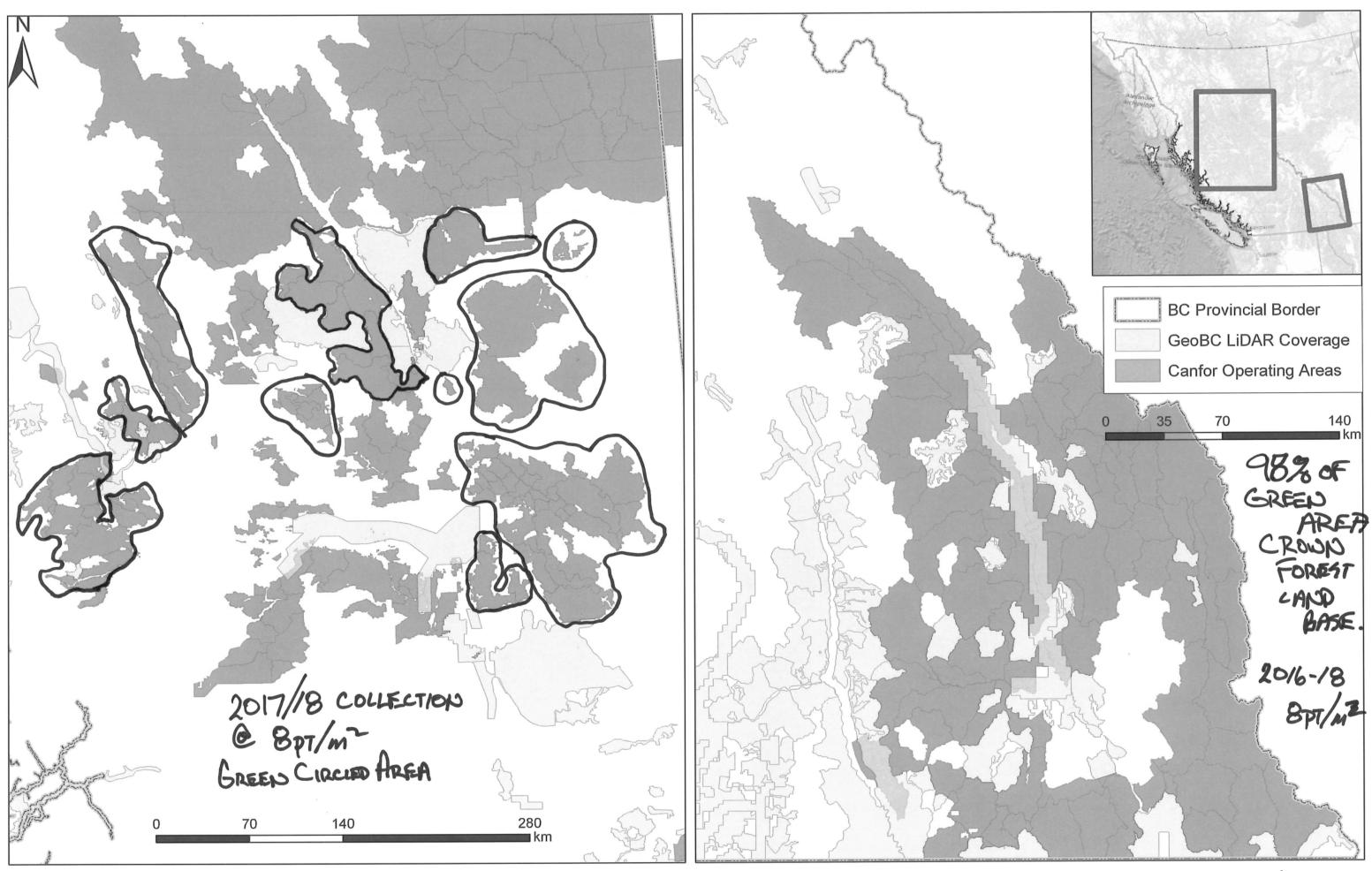
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From: Day, Vincent < Vincent.Day@canfor.com>

Sent: March 27, 2019 3:51 PM
To: Christian, Angus FLNR:EX
Cc: Steiner, Harald FLNR:EX

Subject: RE: [External] lidar - areas we have

Thanks Angus.

Pretty big time constraint. I'll do my best to get you the information by 9.

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To: Day, Vincent

Cc: Steiner, Harald FLNR:EX

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Cc: Steiner, Harald FLNR:EX
Subject: lidar - areas we have
Attachments: lidar_areas_we_have.zap

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From: Babak Ameri <bar>eosys.ca>

Sent: March 27, 2019 3:12 PM **To:** Christian, Angus FLNR:EX

Cc: Steiner, Harald FLNR:EX; Babak Ameri

Subject: RE: lidar - areas we have

Thanks Angus for the file, I did review our current archive of LiDAR data "processed and/or collected" and the contractual obligations for each contract. Unfortunately we are unable to sell any of the data we collected as they are all owned by our clients. That being said there might be some opportunities to purchase a significant amount of data outside of your existing area (approximately 2.5 million ha, some are processed and the rest is being processed this year) from our client CANFOR. The dataset is collected in 2017 and 2018 with a pulse density of 8 ppm. In addition to classified ground pts the client has or will receive DEM grid, CHM, and contours.

If interested you can contact Vincent Day directly at:

VINCENT DAY, RPF

Digital Technology Superintendent Canadian Forest Products Ltd. (CANFOR) Tel:\$.22

Email: vincent.day@canfor.com

I am not sure if he can meet your deadline but he is certainly interested in exploring the options.

I hope this helps. Please let me know if I can assist you further.

Regards Babak

From: Christian, Angus FLNR:EX [mailto:Angus.Christian@gov.bc.ca]

Sent: March-27-19 2:33 PM

To: 'Babak Ameri'

Cc: Steiner, Harald FLNR:EX **Subject:** lidar - areas we have

Hi Babak

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