



Klahoose First Nation



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## Cortes Forestry General Partnership

### Five Year Plan

Operations Planning 2018 - 2022

January 26, 2018

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# Cortes Forestry General Partnership Operations Planning 2018 - 2022

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## OVERVIEW:

Since the Community Forest Agreement (CFA) was awarded in September 2013 the Cortes Forestry General Partnership (CFGP) has successfully completed three harvests totalling approximately 9,500 m<sup>3</sup>. This includes 1,600 m<sup>3</sup> that went to mills on Cortes Island and 1,300 m<sup>3</sup> of firewood for the local community, or approximately 30% of the total. The CFGP also planted approximately 13,500 seedlings and built approximately 600m of new road during this period.

The Cortes Community Forest enters its second five year cut control period in January of 2018. This Operations Plan provides a projected schedule of road construction, harvesting, and other silviculture activities over the next five years, as well as a rationale for how and why each area selected for development fits with the long term vision.

The plan is designed to meet the overarching goals of the community to use an ecosystem based approach in planning for access, harvesting, and silvicultural activities, while also providing for a consistent supply of timber and forest activity to help sustain the island economy.

The Cortes CFA consists of 3,869 hectares spread out over nine separate operating areas, a large portion of which is not currently accessible off the public roads. A key goal of this plan is to begin the process of developing long-term access to the land base.

The projected harvest in 2018 is accessible via existing public and private road infrastructure, while the projected harvest activities for 2019 through 2022 are in areas that will require more time and planning to develop. These will require some new road construction and upgrading of existing roads in the northern areas of the CFA, as well as developing access agreements with adjacent land owners.

The proposed areas of operations exclude old growth areas, wetlands & riparian management zones, sensitive soils, and shoreline areas. The plan also calls for leaving many of the tallest and oldest trees in each area, exceeding legal requirements for riparian buffers, and operating in more sensitive areas during the dry season. All major road building activities are projected to get under way in the fall after the tourism sector is winding down and conditions are still dry.

The details and timeframes outlined in this plan are subject to change based on a wide range of variables. It is a key goal of the CFGP to have multiple options available in order to maintain a high level of operational flexibility. As such, the CFGP may choose to make changes to the timeline or other operational details described in this document. This document will evolve over time as more detailed engineering and planning work is completed.

Location	When	What	Why	Harvest Volume	Stand Type	Comments
Green Mountain	Spring 2018	Road Construction	This area is currently accessible by road and is expected to allow for a profitable selective harvest due to the low cost of development. Road reactivation into the area of proposed harvest will include approximately 475m of reconstruction.	n/a	n/a	Winter 2018 will be used to set up road use agreements and permit applications. Road reactivation proposed will include an existing old road bed accessed from Jimmy Smith Way.
Green Mountain	Spring 2018	Harvest	A variable retention system will be used for harvesting this area and prescribe the removal of approximately 30% of the volume over a 13ha area.	Up to 3,000m <sup>3</sup> *	Fd, Cw, Hw mature stand	Access for logging will include skid trails dispersed in appropriate locations within the cutblock. Site Plan and permit applications to be completed during winter 2017-2018.
Carrington	Fall 2018	Road Construction	Road construction planned for dry season fall 2018, initial phase will be approximately 550m. The Carrington Area has high recreation and visual values, and care will be taken to mitigate visual disturbance, including a narrow right of way. Also potential for additional harvest volume to meet local demand, return to other operational areas, work in areas that were previously too wet or need more work.	Up to 1,500m <sup>3</sup>	Fd, Hw, Cw mature	Right of way is proposed to originate from Coulter Bay Road. Assessments & engineering completed summer/fall 2017. Applications completed and submitted winter 2017-2018.
Carrington	Spring 2019	Harvest	Harvest plans include a selective harvest within a 12ha area to remove approx. 30% of the volume. A variable retention system will be used to keep the impact low and to mitigate visual disturbance. This area is proposed for development because it is accessible from a public road, will provide a valuable source of logs to the local sawmills, and enables future access to the area to the north.	Up to 3,000m <sup>3</sup>	Fd, Hw, Cw mature	This first phase of harvest within the Carrington Area will be accessed via the new road, logging will include skidder and excavator forwarding.
Optional Harvest	Fall 2019	Harvest	Flexibility to return to operational areas under permit to meet local mill demand, work in areas previously too wet, site rehabilitation, etc.	Up to 2,000m <sup>3</sup>		
Von Donop 1	Fall 2019	Road Construction	Road construction is projected to access the Von Donop area for future harvest. Options are to be determined.	n/a	n/a	Access to area to be confirmed by late 2018 pending agreements with adjacent land owners.
Von Donop 1	Spring 2020	Harvest	The CFGP will need to develop access to the northern portion of the Community Forest land base. The Von Donop 1 project is considered to be the start of developing long-term access. Proposed operations will include utilizing a variable retention system prescribing removal of approximately 30% - 40% of the volume over the harvest area.	3,000m <sup>3</sup>	Mature Fd dominated stands	
Von Donop 2	Fall 2020	Road Construction	The road network to access Von Donop 2 is largely in place and will require upgrading.	n/a	n/a	Developing access is intended to take advantage of existing road/infrastructure.
Optional Harvest	Fall 2020	Harvest	Flexibility to return to operational areas under permit to meet local mill demand, work in areas previously too wet, site rehabilitation, etc.	Up to 2,000m <sup>3</sup>		
Von Donop 2	Spring 2021	Harvest	Continued operations as in Von Donop 1.	Up to 4,000m <sup>3</sup>		Mature Fd dominated stands
Haywire Bay	Fall 2021/2022	Initial Access & Harvest	Large development area for future harvesting. The planning for this area will continue over 2018, 2019 to confirm access, harvest areas and costs/value. Ideal opportunity for on-site milling.	Up to 6,000m <sup>3</sup>		Haywire Bay is an isolated area with no public access. Planning includes engineering, environmental assessments and public consultation.
Cortes Bay (Alternate)	2022	Harvest	Cortes Bay has been considered as an alternative harvest area which may be included if one of the other options above cannot go ahead. A rationale will be provided if plans for Cortes Bay are considered during this cut control period.	3,000m <sup>3</sup>		

\*Volumes are subject to change



## OPERATIONAL PLANNING - Green Mountain Operating Area

### Road Construction (See Appendix A page 12)

Road construction in the Green Mountain Operating Area will consist of reactivation of an existing road bed originating from Jimmy Smith Way off Whaletown Road. This proposed road reactivation will access an area of merchantable timber that exists to the South, East and North of the proposed road. The road reactivation will be approximately 475m in length, and will terminate at a landing of suitable size for decking and loading of timber.

The road construction will consist of existing subgrade materials, with additional locally sourced material where required, and the addition of temporary drainage structures where required. No significant volume of merchantable timber is expected to be generated from maintenance of the existing ROW. This road reactivation will be extended in the future to achieve further access to the Green Mountain Operating Area. Road reactivation activities are projected to commence in the Spring of 2018 pending permitting, public consultation, and the establishment of a road use agreement for 400m of private road to access the public road. See Appendix A for detailed maps of the area including the proposed road.

### Harvesting GM1

Block GM1 is an engineered 14ha harvest area in the Green Mountain Operating Area<sup>1</sup>. It includes 13ha. of cutting permit area and 1ha. of road permit area. This block is designed to utilize skidder and hoe forwarding to access and bring timber to roadside by way of forwarding trails.

Forwarding trails will be cleared to widths up to 15m. The stand will be harvested utilizing sub-hectare openings anchored around forwarding trails and single stem selection from the adjacent standing timber.

Timber will be felled from the adjacent stand towards the openings in an arrangement that leaves incremental standing retention increasing in density towards the "backline". Areas of elevated bedrock outcrops, riparian features and areas of sensitive soils will act as anchors for higher levels of retention. The low harvesting intensity and adjacency to permanent access will allow for subsequent selective harvesting of small volumes from this area in the future.

The goal is to harvest approximately 40% of the volume of timber from this area netting approximately 2,500m<sup>3</sup> of merchantable timber. A small volume of incidentally harvested firewood is also expected to be produced. This area has been engineered and a pre-harvest map is shown in Appendix A.

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<sup>1</sup> For further planning & engineering details visit: <http://www.cortesforestrypartnership.com/news/update-november-2017/>

## OPERATIONAL PLANNING - Carrington Operating Area

### Road Construction (See Appendix B Page 12)

Road construction into the Carrington Operating Area will consist of a primary access road originating from Coulter Bay Road where it crosses the community forest at the southwest corner. The initial phase of this road will be approximately 550m in length. It will bisect the Southwest corner of the Carrington Operating Area and provide access to an area of merchantable timber approximately 500 meters off the southern boundary. This road is planned to terminate at a landing of suitable size for decking and loading timber.

The road will consist of a cleared right-of-way (ROW) that ranges in width between 15 and 20m, depending on operational needs and visual quality concerns. The road surface will be approximately 5m wide, and the subgrade will consist of materials sourced locally during construction. There will also be a permanent drainage structure installed where the road crosses a seasonal stream.

Approximately 300m<sup>3</sup> of timber is expected to be generated by clearing the ROW. The road could be extended in the future (next 10, 20 yr cycle) to achieve access to the Northern regions of the Carrington Operating Area. Road construction is under consideration for the fall 2018, and is pending permitting and tendering.

An extensive community consultation for this road building project was conducted in the fall of 2017, and a number of concerns were brought forward by the community. These included, but were not limited to: Noise levels during the harvesting and road building period, the ability of the public road in the area to handle the weight of loaded trucks, water quality, and visual quality.

The CFGP has heard these concerns and will seek to address these concerns in its operational planning.

### Harvesting CAR1

The initial harvest in the Carrington Operating Area is for the spring of 2019. The Carrington Operating Area is approximately 225ha. This proposed initial harvest comprises up to 3000m<sup>3</sup> of merchantable timber from an area of approximately 12 hectares, including a fairly uniform stand of Fir dominant second growth forest with Hemlock and Cedar components. Volume is estimated at 600m<sup>3</sup>/ha, with an estimated total of 7200m<sup>3</sup> for the targeted stand.

The harvest system will utilize hoe and skidder forwarding to yard logs to a central landing. Forwarding trails will be cleared to widths up to 15m, and up to 20m where additional room is required for turning equipment and decking logs. The stand will be harvested utilizing sub-hectare openings anchored around forwarding trails and single stem selection from the adjacent standing timber. Openings will be approximately 0.5ha. oriented NE to SW to capture available sunlight while mitigating windthrow hazard.

The CFGP expects to undertake a smaller second phase of the project in order to supply local demand within a couple years of the first project, and to complete areas that would be too wet to work in during a spring harvest. A key aspect of the project will be to rehabilitate

areas with significant Hemlock mistletoe, as well as areas that would be too sensitive to work in during the wet season.

Areas of thinner soil over bedrock will see a lower intensity of selective harvest, while highly productive areas with dense stands will be the focus of moderate intensity selection and sub-hectare openings. Higher levels of retention will be anchored around riparian features and sensitive soil areas. This harvest will be designed to ensure that adjacent private lands and existing recreational features are not impacted, while minimizing impact to the greater ecology of the area. This area is the current focus of engineering efforts and updates to the harvest plan will be posted on the CFGP website as they are developed. A map outlining the projected harvest area and road location is available in Appendix A.

#### OPERATIONAL PLANNING: Von Donop Operating Area

##### Road Access (See Appendix B)

The Von Donop Operating Area and the areas beyond it are isolated from the public road system by multiple adjacent parcels of private land. The CFGP is exploring multiple options for developing long-term access to this area.

One option is to use the existing network of roads in the area which would require one or more long term road use agreements and may also require extensive road reactivation and realignment of adverse sections within the CFA.

There are also options to develop new access roads in collaboration with neighbouring land owners, which could alleviate some of the need for realignment of the more adverse sections of the existing roads. Detailed planning and evaluation of these options will get under way in 2018 in order to be ready for initial work to get under way in 2019.

Developing access to this area by road is favourable to the CFGP over creation of a log dump because of costs, environmental concerns and the logistics of marketing wood locally. This will involve an ongoing process of road engineering and negotiations with stakeholders, and will take some time to finalize.

Due to these factors the commencement of construction of permanent access structures for forestry operations in the Von Donop Operating Area are tentatively planned for the year 2019. Due to the privacy concerns of parties involved in the negotiation of road use agreements, maps of this road network are not available at this time.

##### Harvesting VON 1

The VON1 projected harvest area is approximately 14ha. of densely stocked mature Fir dominant timber that exists within the Southern-most block of the Von Donop Operating Area. This projection would ideally be accessed by way of reactivation of existing road (discussed in the Road Construction section). This area requires further assessment for constraints in order to determine harvest volume, systems, and yarding methods.



This proposed undertaking will require further road engineering, watercourse classification, timber and non-timber value identification and analysis, negotiations with land use stakeholders and public and professional consultation. Harvest volume and methods will be determined as more data is collected. See Appendix B for an overview map of VON 1 & 2.

#### Harvesting VON 2

Block VON2 encompasses an area of approximately 12 hectares with pockets of densely stocked mature stands and an estimated volume of approximately 600m<sup>3</sup>/ha. This area has mature timber that meets the goal of harvesting longer rotation age timber, and is adjacent to an existing all season road that connects to the road network discussed in the road construction section.

#### OPERATIONAL PLANNING: Haywire Bay Operating Area

The Haywire Bay Operating Area is a parcel of land North of the Squirrel Cove Lagoon that is isolated from public road infrastructure by private legal boundaries. This poses a unique challenge for access. A study will be conducted into the feasibility of multiple access options for this area. These options may include a log dump, road access by way of multiple road use agreements and/or on site value added processing.

This area will be the focus of a detailed planning p that will seek to meet the challenges of access and forest management in the Haywire Operating Area for the year 2021. This undertaking will include road engineering, watercourse classification, timber and non-timber value identification and analysis, negotiations with land use stakeholders and public and professional consultation. Please see Appendix C for an initial reconnaissance map of the area.

## ONGOING SILVICULTURE

### Larsens Meadow Operating Area

There are two regenerating cutblocks in the Larsens Meadow Operating area that are currently overgrown with alder. These stands will be surveyed in the spring of 2018, and a prescription will be written depending on what options are identified.

The CFGP is working on dealing with extensive deer browse of the newly planted fir seedlings in cut blocks LAR3, 4, and 5 which were planted in the spring of 2016. A regeneration survey will be completed in the winter of 2018, and fill planting will take place in the spring of 2018.

There is also some concern with the amount of overstore shading of the seedlings in LAR1 due to high levels of retention in this block. The CFGP will monitor the growth rate of the seedlings in this area relative to the other four, and may prescribe a small amount of additional harvesting at some point in the next few years.

### Squirrel Cove Operating Area

There are two separate regenerating cutblocks in the Squirrel Cove Operating area, each roughly 12.5ha. in size that are growing Fir dominant stands in the 40 year range. Some sections of these stands are less productive due to an over-density of regenerating stems.

The CFGP has considered various treatment options for these stands and has determined that the only cost effective solution is to allow these to self-prune and thin naturally given the advanced age of the stands.

Blocks SQ1, SQ2, SQ3, and SQ5 which were planted in the spring of 2017 will require ongoing stand tending activities to adjust seedling protectors, remove vegetation in cones, and fill planting as required, beginning in the spring of 2018. See Appendix D for a Map of this area.

### Carrington Operating Area

An area of 25 year old Fir/Hemlock regeneration in the Carrington area will be surveyed in the winter of 2018. A prescription will be written for stand tending in this area, and a contract tendered for silviculture thinning of overstocked areas of the stand in the spring of 2019, concurrently with replanting efforts. Block CAR1 will be will replanted within one year of being harvested.

### Green Mountain & Von Donop Operating Areas

Further stand tending and enhanced silviculture opportunities will be considered in other areas of the land base, including the Green Mountain and Von Donop operating areas as planning moves forward. Each of the proposed harvest areas will be replanted within one year of being harvested.

## URBAN WILDFIRE INTERFACE

The CFGP will continue investigating opportunities to mitigate wildfire risk that can be integrated into harvesting, road building, and enhanced silviculture operations. Existing work in this area includes the Cortes Community Wildfire Protection Plan prepared by the Strathcona Regional District<sup>2</sup>, and the Strategic Threat Analysis completed by the BC Wildfire Service<sup>3</sup>. The CFGP will also investigate funding opportunities to undertake risk reduction projects and treatments.

## KNOWLEGE AND CAPACITY BUILDING

The start-up of a forest licence is a highly complex undertaking, and one that requires the ability to collect and store large amounts of data, and to produce maps and documents. As the capacity to manage data and produce maps does not currently exist on Cortes Island the CFGP will be contracting these services externally.

The types of data requiring management range from forest age, health and stocking to GPS data regarding legal boundaries, roads and timber types. There also exists a large amount of local knowledge of the CFGP license area from local residents. Over the course of the coming 5 years the CFGP will continue building it's capacity to effectively, collect, store, and use this knowledge and information by:

- Continuing to develop a system of communication and information sharing between the CFGP and mapping contractors or consulting professionals.
- Establish permanent sample plots for the purpose of long term forest data collection.
- Develop a standardized method for public consultation and local knowledge input.
- Increasing knowledge of operability through timber reconnaissance, access planning, terrain operability assessments, multiple road use stakeholder agreements, stream and wetland classification, correspondence with adjacent land owners and land use stakeholders.
- Developing relationships with professional consulting contractors to be able to source a range of practical and professional information.
- Creating part time and contract work associated with the administration of the licence, management of data and implementation of field based objectives such as stand tending and enhanced silviculture.
- Increasing our understanding of various silviculture methods and how they are applied to our unique vision for lighter impact forestry operations.

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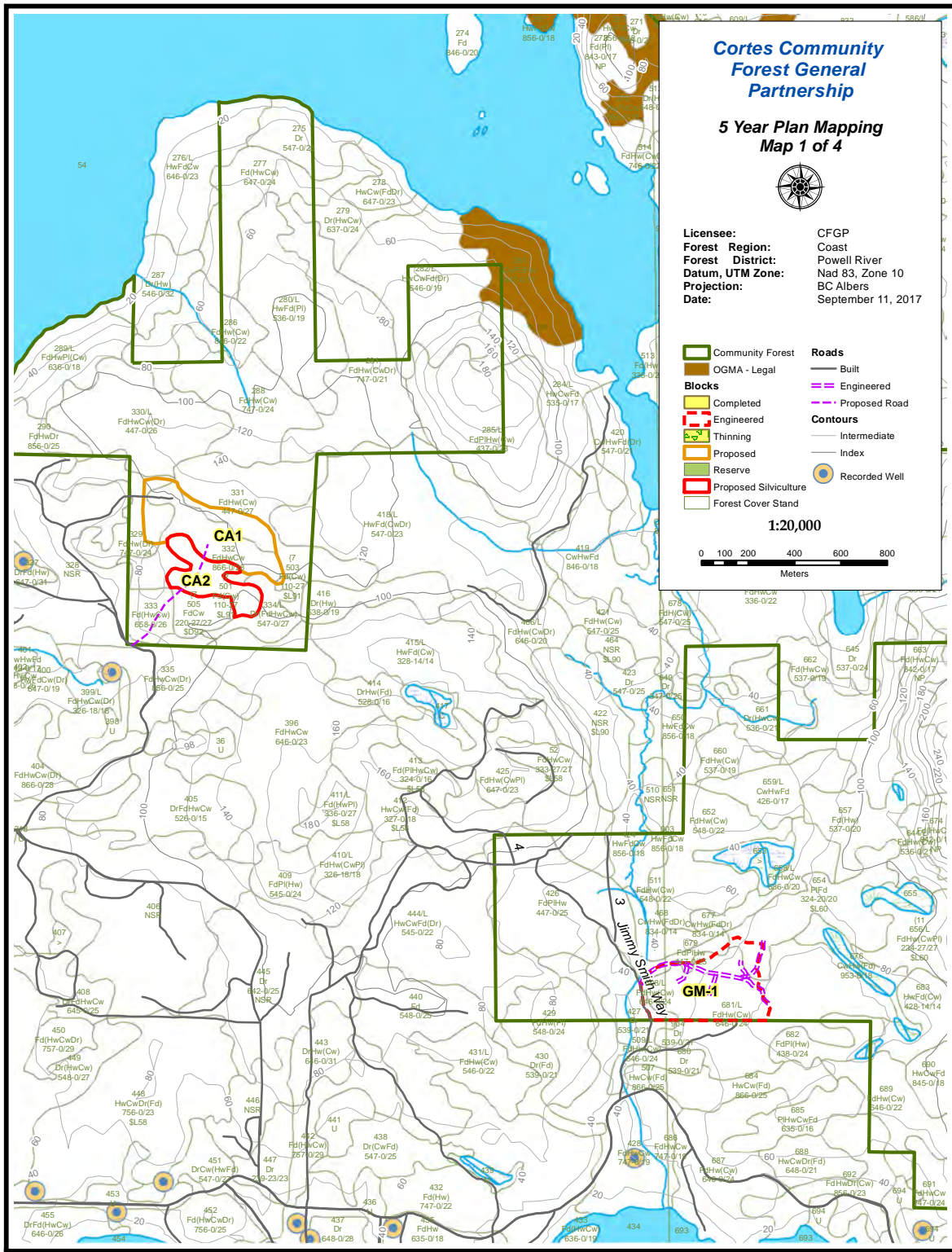
<sup>2</sup> <https://strathconaregionaldistrict.civicweb.net/document/2936>

<sup>3</sup> [https://www.for.gov.bc.ca/ftp/!Project/WildfireNews/PSTA/Provincial\\_Strategic\\_Threat\\_Analysis\\_PSTA\\_2015\\_REPORT.pdf](https://www.for.gov.bc.ca/ftp/!Project/WildfireNews/PSTA/Provincial_Strategic_Threat_Analysis_PSTA_2015_REPORT.pdf)

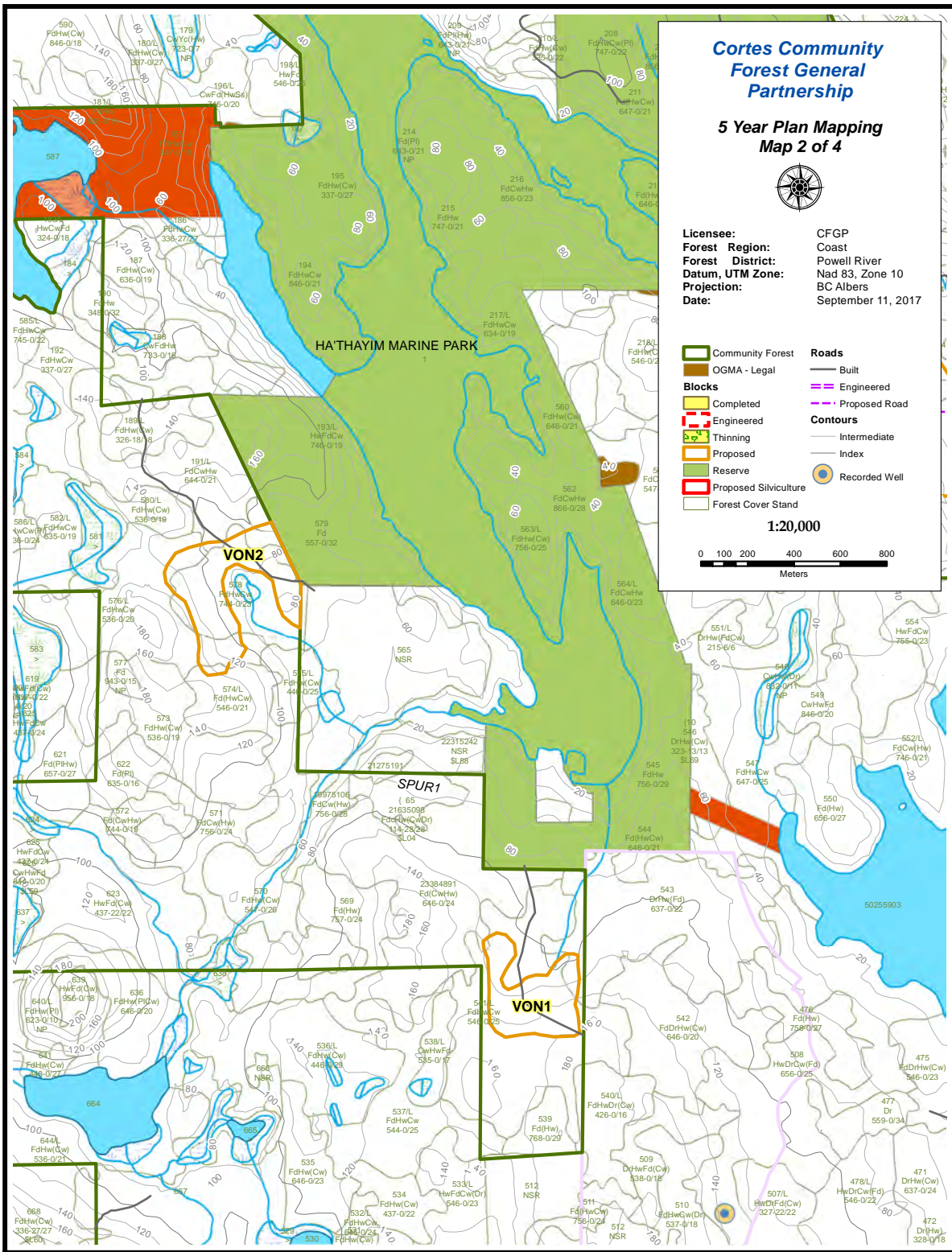
The CFGP also recognizes that any of the projections currently under consideration for harvest in the next five years may not be viable for a number of financial, access, or other reasons. As such, Block CB1 in the Cortes Bay Operating Area has been included as a potential alternative harvest area within the next five years. See Appendix D for a map of this area.

As reconnaissance and planning work is ongoing, additional options for harvest or silviculture will be posted with at least 4 months of notice for consultation and public input.

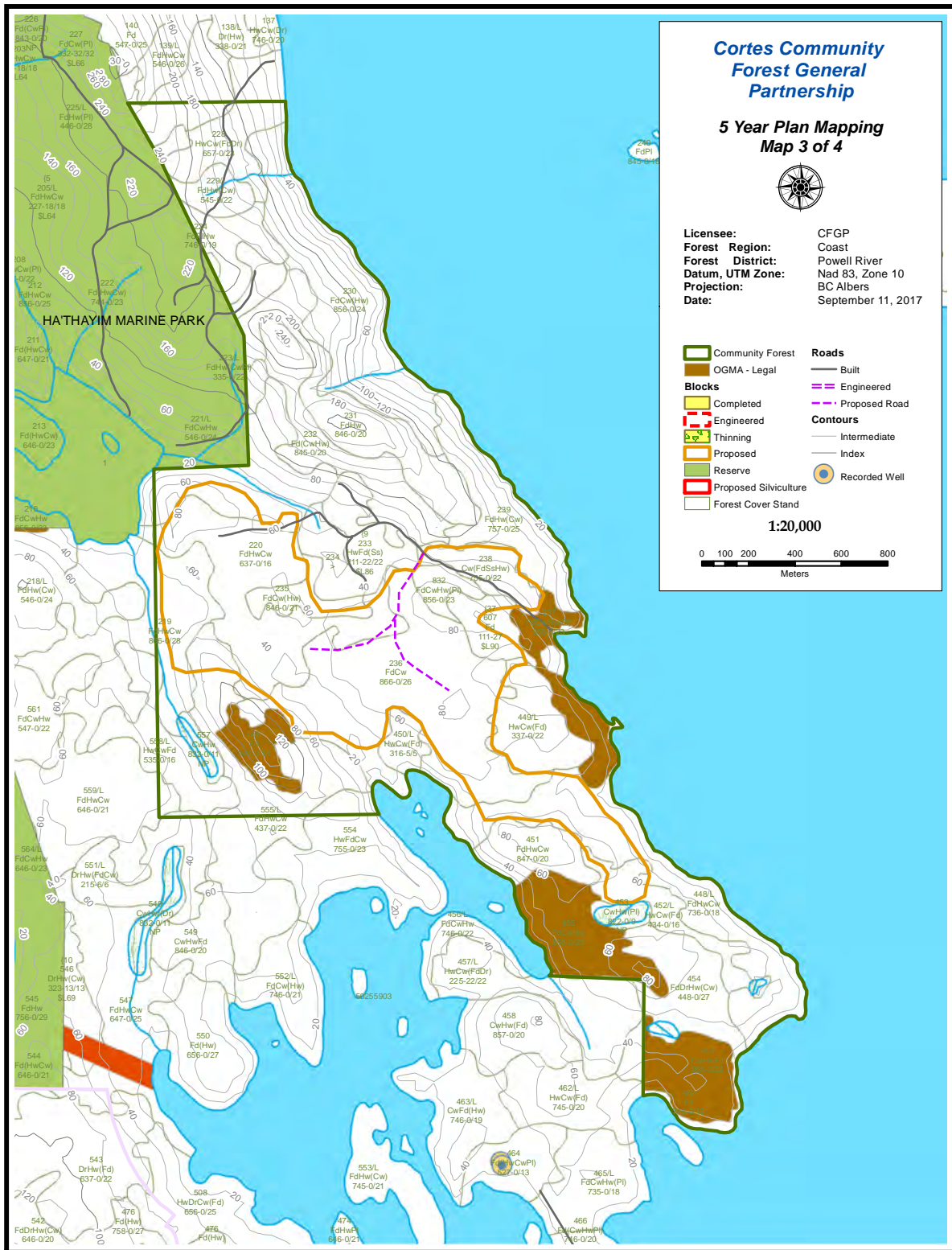
Appendix A: Green Mountain and Carrington Operating Areas



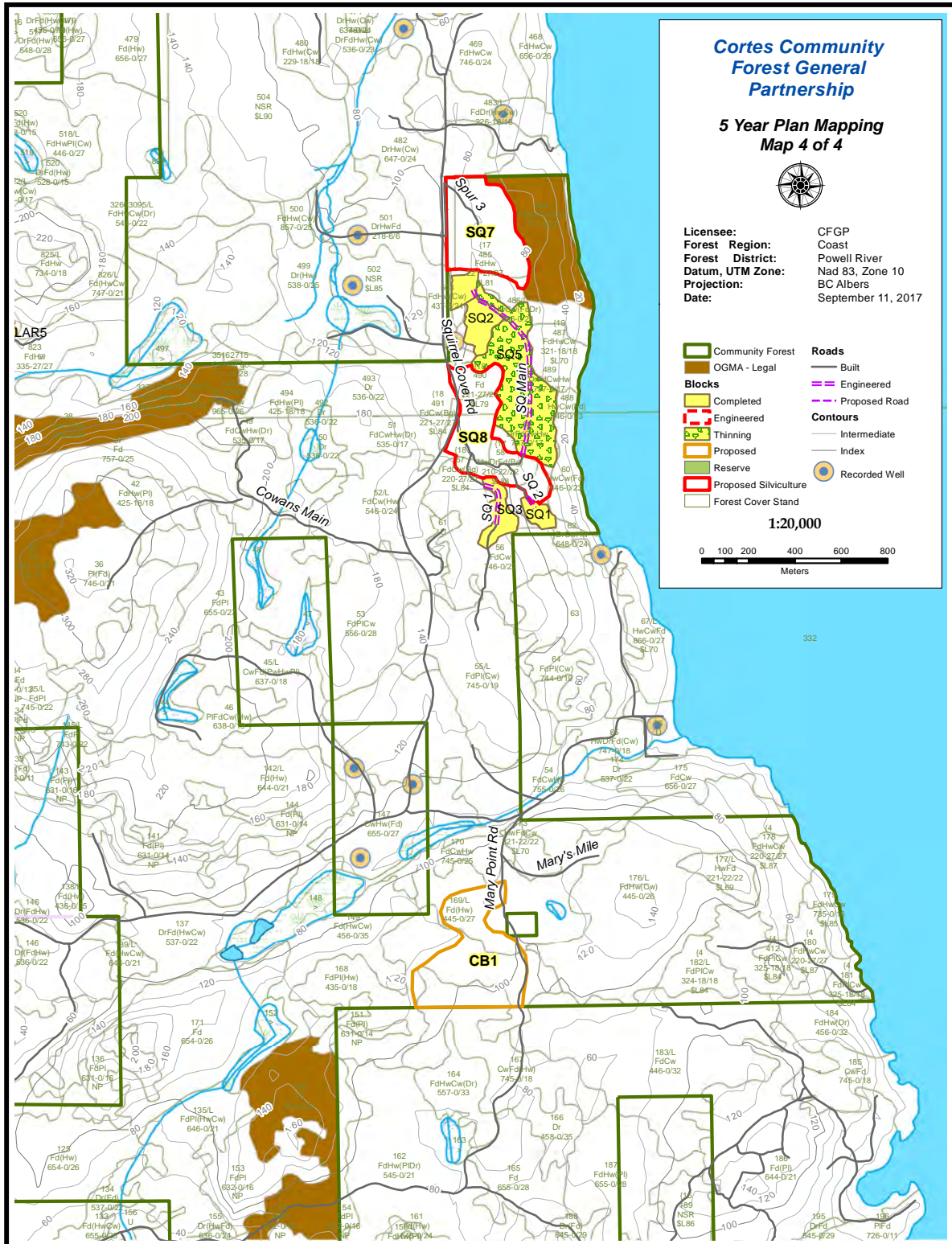
Appendix B: Von Donop Operating Area



Appendix C: Haywire Bay Operating Area

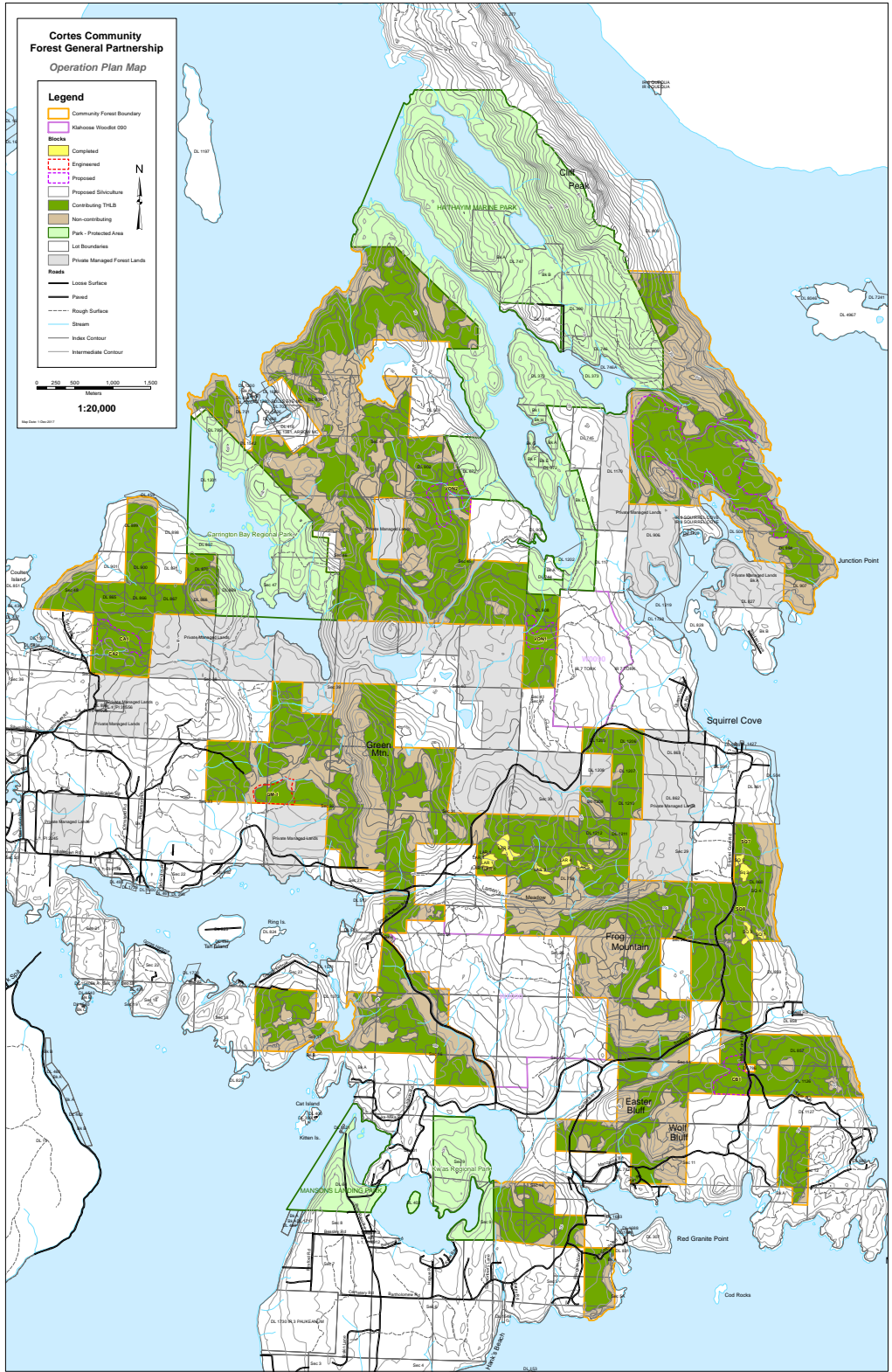


Appendix D: Cortes Bay Operating Area

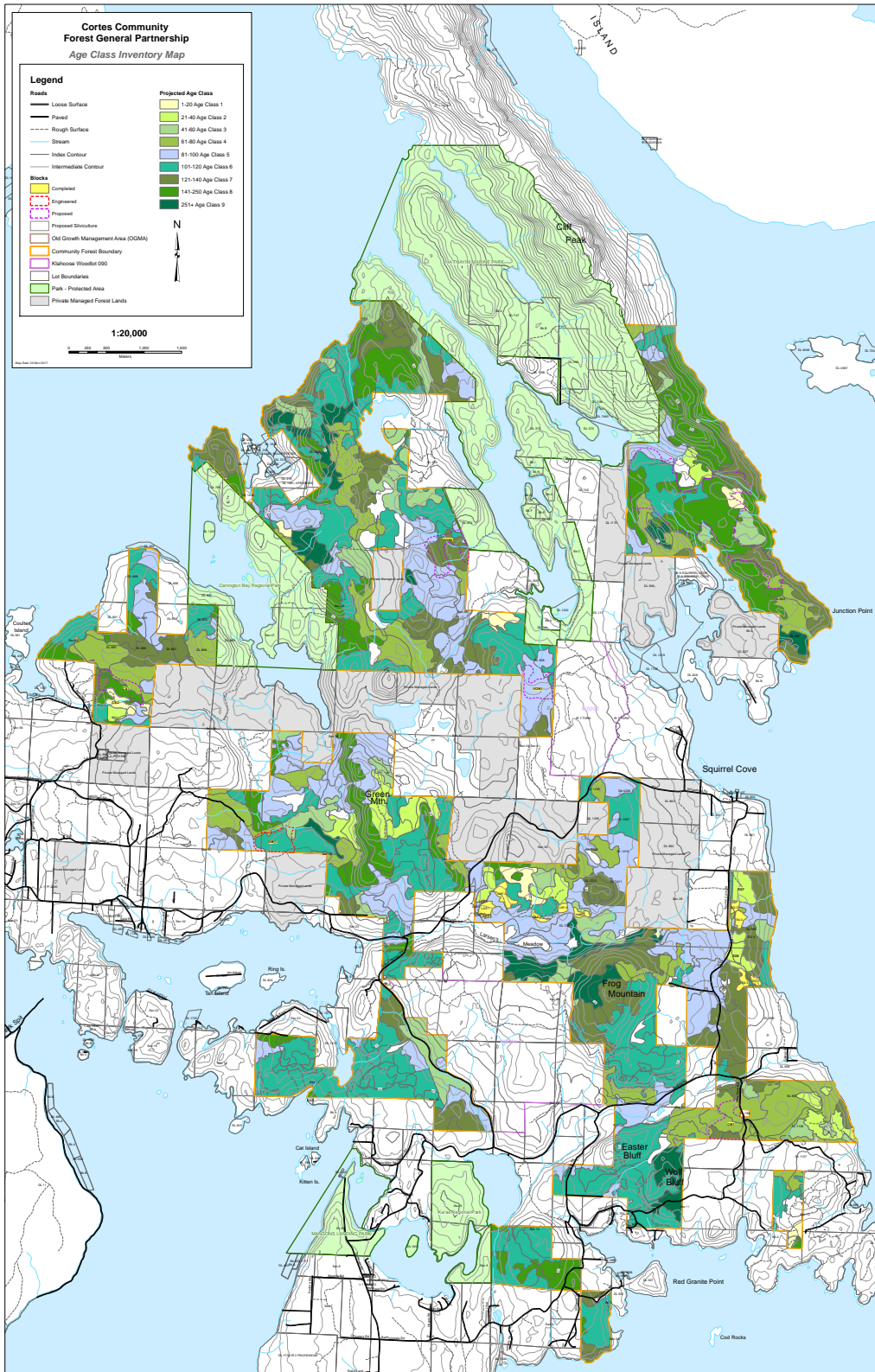




# Appendix E: Operations Planning Map



# Appendix F: Age Class Inventory Map



# Appendix G: Sensitive Ecosystem Map

