

A. PROJECT IDENTIFICATION

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<p>PROJECT ID AND UNIT ID: Cortes Island FMPs “CARR” unit</p>	<p>LAND OR TENURE HOLDER: Cortes Forestry General Partnership (“CFGP”) (K4G – Community Forest)</p>
<p>LATITUDE/LONGITUDE: CARR 50° 07'42.79"N, 125°01'54.41"W</p>	<p>GEOGRAPHIC DESCRIPTION: Located on the west side of Cortes Island approximately 2.6 km north-east of the BC Ferries Whaletown ferry terminal, the CARR (Carrington) treatment unit is a polygon abutting private property and homes on its west edge (along Coulter Bay Road) and is upwind (north) of the Gorgetown community.</p>
<p>HIGHER-LEVEL PLAN(s):</p> <ul style="list-style-type: none"> • Community Forest (CF) Operating Plan (2014) • CFGP Community Forest K4G FSP (2019) • CFGP Five Year Plan (2018) • Vancouver Island Land Use Plan (2000) • Cortes Landscape Unit Plan (2012) • Strathcona Regional District Strategic plan 2020 - 2024 	<p>MAP REFERENCE NUMBER: 92K.015</p>

B. PROJECT DESCRIPTION

FUEL MANAGEMENT OBJECTIVES:	<p>This prescription addresses an area identified in the 2020 Cortes Island CWPP as a priority for fuel management. The unit is composed of mature forest stands comprised of mixed C-3 and C-5 fuel types. Conifer stem densities are relatively high and suppressed stems and surface loading due to hemlock mistletoe exist. Treatment would create a large interface fuel break. The area under prescription is managed by the Province and the Cortes Forestry General Partnership (CFGP) for timber harvesting and conservation objectives.</p> <p>The objectives of this prescription are to:</p> <ul style="list-style-type: none"> • Reduce the chances of a wildfire being propagated by reducing surface, ladder, and crown fuels in the TU; • Reduce overall wildfire behaviour threat and ignition potential in the TU; • Create an anchor point for firefighting and fire suppression efforts for a fire moving from the north (following prevailing winds) towards homes/properties (Gorgetown) to the south. • Create job opportunities for local contractors able to implement the works outlined in this prescription. • Minimize negative impacts to the stand, and, where possible, enhance the many values of the treated stand. Values include, but are not limited to wildlife habitat, water quality, forest health, air quality, and recreation. • Retain a commercially viable stand for future harvesting by the CFGP. 	
	PUBLIC SAFETY <input checked="" type="checkbox"/>	RANGE IMPROVEMENT <input type="checkbox"/>
	ECOSYSTEM RESTORATION <input checked="" type="checkbox"/>	RECREATION <input type="checkbox"/>
	WILDLIFE HABITAT <input checked="" type="checkbox"/>	OTHER:
STRATEGIES:	<p>The proposed treatments will modify stand structure to reduce potential surface and crown fire behaviour by:</p> <ul style="list-style-type: none"> • Retaining dominant and co-dominant canopy trees to maintain a cool and moist understorey microclimate; • Thinning from below: i.e., removing dead, suppressed, and intermediate trees to reduce the risk of potential crown fire behaviour associated with high crown bulk density and fire laddering into crowns; • Reducing fine surface fuel loading to limit potential head fire intensity to a critical threshold of 2,000 kW/m - Rank 3 or less, reduce potential fire severity, and increase potential control; • Reducing fine surface fuel loading to limit critical surface fire intensity between 1,000 - 2,000 kW/m; and • Retaining wildlife habitat features (e.g. wildlife logs and wildlife trees); • Retaining live deciduous tree and shrub species with a high moisture content to reduce potential fire behaviour, maintain biodiversity, and provide wildlife habitat. • Retaining a commercially viable stand for future harvesting by the CFGP. 	
<p>METHODS: HTR= Hazard tree removal, TFB=Thin from below, PR = Pruning, SFR= Surface fuel removal.</p>		
<p>FIELD MARKING: Treatment area boundaries, falling corners, and stations have been flagged according to the following specifications:</p> <ul style="list-style-type: none"> • Boundary marked with single 'orange and black candy-stripe' ribbon every 5-10 m. • Treatment unit falling corners marked with two 'orange and black candy-striped' ribbons and a white ribbon that is labelled with falling corner information. • Stand data collection plot centers are marked with a double yellow ribbon labelled with plot information. • Streams are marked with blue ribbon every 3-5 m. 		

TREATMENT SPECIFICATIONS SUMMARY:

TU 1-A Standards for fuel reduction objective:

Surface fuels post-treatment (<22.5 cm size):

Not to exceed a total of **1.0 kg/m² (10 tonnes/ha)** on average across the treatment area. Discrete areas of higher loading should not exceed 10 m² in patch size.

Pruning (ladder fuels) post-treatment: 3 m

Retained tree scarring post-treatment: **<5% of stems/ha**

Stand density post-treatment:

(manual/mechanical): thin from below to **450 sph conifers (all L1 > 22.5cm dbh)**

TU 1-B Standards for fuel reduction objective:

Surface fuels post-treatment (<22.5 cm size):

Not to exceed a total of **1.0 kg/m² (10 tonnes/ha)** on average across the treatment area. Discrete areas of higher loading should not exceed 10 m² in patch size.

Pruning (ladder fuels) post-treatment: 3 m

Retained tree scarring post-treatment: **<5% of stems/ha**

Stand density post-treatment:

(manual/mechanical): thin from below to **440 sph conifers (all L1 > 22.5cm dbh)**

Treatment outcomes for the fuel reduction objective will also be measured by the reduction of the fuel subcomponent on the 2012 Wildfire Threat Assessment (WTA) worksheet, reducing/retaining the overall threat rating to moderate (41-95 points) wildfire threat. This will be achieved by adhering to the above standards for the fuel reduction objective.

See Section H for a complete description of treatment specifications and rationale.

C. TREATMENT UNIT (TU) SUMMARY

TU	NET AREA (ha)	GROSS AREA (ha)	LEAVE AREAS (ha)	NP (ha)	NAR (ha)	TREATMENT REGIME (i.e. PRU, TFB, PR, BURN)	GENERAL DESCRIPTION

CARR 1-A	9.8	11.4	1.6	0.0	0.0	TFB, PR, SFR, HTR	This TU is characterized by a mature (~120-140 yrs. old) Douglas-fir (Fd) leading stand with lesser components of western red cedar (Cw) and western hemlock (Hw) and a small component of western white pine (Pw) and dead standing stems. Crown closure is variable (40-80%), more open on bedrock dominated expressions (dry, thin soils). The understory (poles and saplings) is dominated by dead stems, western hemlock, and western red cedar. Surface fuel loading is generally low across all size classes (averaging 1.0 kg/m ²). The average density of dominant and co-dominant trees (>17.5cm DBH) is 611 sph, and across all diameter classes is 1,594 sph (including dead stems). Hemlock mistletoe is present across the stand in affected western hemlock trees.
CARR 1-B	1.0	1.0	0.0	0.0	0.0	TFB, PR, SFR, HTR	This TU is characterized by a mature (~120-140 yrs. old) Douglas-fir (Fd) leading stand with a lesser component of lodgepole pine (PI) and western red cedar (Cw), with scattered dead stems. Primary SW and on thin soils, many mature Cw's are showing signs of drought stress. Crown closure is consistent around 50%, but more open on bedrock dominated expressions (dry, thin soils). The understory (poles and saplings) is dominated by dead stems, with lesser amounts of western hemlock, and western red cedar. Surface fuel loading is generally low across all size classes (averaging 0.5 kg/m ²). The average density of dominant and co-dominant trees (>17.5cm DBH) is 717 sph, and across all diameter classes is 1,717 sph (including dead stems).
CARR Total	10.8	12.4	1.6	0.0	0.0		

D. SITE CHARACTERISTICS

TU	CFFBPS FUEL TYPE	TIMBER TYPE (>17.5cm dbh)	BGC SUBZONE, VARIANT & SITE ASSOC.	ELEVATION RANGE (m)	SLOPE POSITION	SLOPE RANGE (%)	ASPECT
CARR 1-A	C-3/C-5	Fd72 Cw14 Hw14	CWHxm1 04/01	80m	Lower-Upper	13-25	10-310 (variable)

CARR 1-B	C-3/C-5	Fd70 PI15 Cw15	CWHxm1 03	110m	Middle-Upper	15-25	200-240
FUEL TYPE DETERMINATION		Fuel type was determined based on field inspection, field photos, and interpretation of empirical stand measurement data undertaken in March 2021.					

E. SOIL CHARACTERISTICS							
TU	SOIL TEXTURE	DUFF DEPTH (cm)	COARSE FRAGMENTS (%)	SOIL DISTURBANCE LIMIT (%)	SOIL HAZARD RATING		
					Compaction	Erosion	Displacement
CARR 1-A	S	5	10	5	L	H	H
CARR 1-B	S	8	15	5	L	H	H

F. VALUES – FOREST AND RANGE PRACTICES ACT					
RIPARIAN & LAKESHORE AREAS - Forest Planning and Practices Regulation (FPPR) division 3, Government Action Regulation (GAR) section 6, Forest and Range Practices Act (FRPA) sections 180 and 181					
Is the proposed cutting, modification or removal of trees, or site preparation, in an area that contains streams, lakes or wetlands?	<u>Yes</u>	No	Stream MN-3 (class S4)		
RIPARIAN MANAGEMENT AREAS (RMAs) - FPPR sections 51 and 52					
STREAM, LAKE, WETLAND	CLASS	RRZ (m)	RMZ (m)	RMA (m)	SPECIFICATIONS FOR RIPARIAN OR LAKESHORE MANAGEMENT AREAS
Stream MN-3	S4	0	30	30	To protect water quality, within the RMA or 30 m of all mapped and unmapped water courses (with or without water present), the following specifications apply: <ul style="list-style-type: none"> No refuelling of any equipment (chainsaws, chippers, brush saws, pole saws, etc.); No burn piles or distribution of chips; No use of heavy machinery; Do not construct trails; Fall trees away from the stream.
TEMPERATURE SENSITIVE STREAMS - FPPR section 53, GAR section 15, FRPA sections 180 and 181					
Are there temperature sensitive streams or direct tributaries to temperature sensitive streams within or adjacent to the proposed treatment area?	Yes	<u>No</u>	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.		
ROAD CONSTRUCTION IN RIPARIAN MANAGEMENT AREAS - FPPR section 50					

Is road construction proposed in riparian management areas within the treatment area or an associated road permit (RP)?	Yes	No	n/a
STREAM CROSSINGS - FPPR section 55			
Will stream crossings be constructed within the proposed treatment area or a road permit road providing access to the treatment area?	Yes	No	n/a
MAINTAINING STREAM BANK AND CHANNEL STABILITY ON S2, S3, S4, S5, and S6 STREAMS - FPPR section 52 (2)			
Is the proposed treatment in the RMZ of an S4, S5 or S6 stream that is directly tributary to an S1, S2 or S3 stream and the activity is likely to contribute significantly to the destabilization of the stream bank or the stream channel?	Yes	No	All TUs: Planned treatment will not contribute significantly to the destabilization of the stream bank or the stream channel.
DOMESTIC WATER LICENCES (inside or outside of community watershed) - FPPR section 59			
Does the proposed treatment area contain water sources that are diverted for human consumption by a licensed waterworks?	Yes	No	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.
LICENCED WATER WORKS (inside or outside of a community watershed) - FPPR section 60			
Does the proposed treatment include areas that are within 100 m of a licensed waterworks?	Yes	No	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.
FISHERIES SENSITIVE WATERSHED - GAR section 14, FPPR section 8.1			
Are any activities proposed within a fisheries sensitive watershed?	Yes	No	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.
COMMUNITY WATERSHED - GAR section 8, FPPR section 8.2, 61, 62 and 84			
Does the proposed treatment area include areas that are within a community watershed?	Yes	No	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.
Will this project require road construction or deactivation within a community watershed?	Yes	No	All TUs: No work is planned within a community watershed.
WATERSHED ASSESSMENT CONSIDERATIONS - FRPA section 180 areas with "significant watershed sensitivity"			

Does the proposed treatment area include areas that have watershed assessment considerations?	Yes	<u>No</u>	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.	
SOIL DISTURBANCE AND PERMANENT ACCESS STRUCTURES - FPPR sections 35 and 36				
Treatment Unit	Proposed Max. Allowable Soil Disturbance (%) (5% or 10%)	Proposed Max. Soil Disturbance for Roadside Work Areas (%)	Proposed Max. Permanent Access Structures (%)	Comments
CARR 1-A/1-B	5%	25%	0	
Do the proposed Permanent Access Structures exceed 7% of the total area?	Yes	<u>No</u>	All TUs: No permanent access structures are proposed as part of this prescription.	
LANDSLIDES AND TERRAIN STABILITY - FPPR section 37				
Does the proposed treatment area include areas where terrain stability is a concern?	Yes	<u>No</u>	All TUs: There are no terrain stability areas of concern within the TU.	
SUITABLE SECONDARY STRUCTURE - FPPR section 43.1				
Does the proposed treatment area include a "targeted pine leading stand"?	Yes	<u>No</u>	All TUs: Section 43.1 and 43.2 of FPPR were reviewed and no portions of the proposed treatment area are designated as targeted pine leading stands.	
UNGULATE WINTER RANGE - GAR section 12, FRPA sections 180 and 181, FPPR section 69				
Does the proposed treatment area include areas within an Ungulate Winter Range?	Yes	<u>No</u>	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.	
WILDLIFE HABITAT AREA - GAR section 10, FRPA sections 180 and 181, FPPR section 69				
Does the proposed treatment area include any wildlife habitat areas (WHA)?	Yes	<u>No</u>	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.	
OBJECTIVES SET BY GOVERNMENT FOR WILDLIFE - FPPR section 7				
Does the proposed treatment area include areas to which objectives for wildlife under FPPR section 7 apply?	Yes	<u>No</u>	All TUs: iMapBC and Conservation Data Centre spatial layers were reviewed on Feb. 25, 2021 and no species at risk occurrences exist.	
OBJECTIVES SET BY GOVERNMENT FOR BIODIVERSITY OBJECTIVES (Landscape Level) - FPPR section 9				

<p>Does the proposed treatment area include areas to which objectives for landscape level biodiversity under FPPR section 9 apply?</p>	<p><u>Yes</u></p>	<p>No</p>	<p>All TUs: The TU lies within the CWHxm1 subzone. The CWHxm1 subzone is characterized as an ecosystem with infrequent stand-initiating events, or Natural Disturbance Type (NDT) 2. NDT2 ecosystems can be generalized as even-aged forest stands with extended post-fire regeneration periods. As a result, uneven-aged tendencies (i.e., patch dynamics) can occur when forested areas remain undisturbed for significant periods of time. Fires are often moderate in size (20 – 1000 ha), with unburned areas resulted from sheltering terrain features and high site moisture. Fires have historically resulted in a mosaic of mature forests across the landscape interspersed with younger forests. The mean return interval for fires and disturbances in the NDT2 has generally been 200 years. The fire regime in the CWHxm1 has been modified by human activities during the last century, which include forest harvesting and fire suppression. The proposed treatments will maintain existing even-aged stand characteristics by targeting understorey stems for removal and prioritizing the retention of co-dominant and dominant mature trees. This approach is consistent with the spatial and temporal patterns of natural disturbance in the CWHxm1 ecosystem.</p>
<p>OBJECTIVES SET BY GOVERNMENT FOR BIODIVERSITY OBJECTIVES (Stand Level) - FPPR section 9.1</p>			
<p>Are considerations for maintaining stand structure (wildlife trees, wildlife tree reserves, etc.), coarse woody debris, and maintaining tree and vegetation species composition incorporated into this prescription?</p>	<p><u>Yes</u></p>	<p>No</p>	<p>All TUs: Prior to the commencement of treatment activities, a Wildlife Danger Tree Assessment must be completed. Wherever safe and practicable, trees with wildlife attributes such as internal decay, crevices, evidence of wildlife use, or a structure preferred by wildlife, will be retained. Retention of coarse woody debris is recommended, particularly logs >22.5 cm in diameter, but must follow prescription specifications for fuel loading (see Section H: Surface Fuel Loading). This prescription also calls for the retention of all fire-resistant tree and shrub species (deciduous). Wherever possible, the prescription recommends the removal of suppressed or dead stems, and the retention of a variety of tree species to ensure biodiversity levels are maintained across the treatment areas. All decaying (Class III and above) logs and stumps should be left in place to avoid disturbing wildlife habitat.</p>
<p>RECREATION FEATURES - FRPA section 56 and 149, FPPR section 70</p>			
<p>Does the proposed treatment area contain interpretive sites, recreation trails, recreation sites, recreation facilities that are considered to be of significant recreation value and are designated a resource feature?</p>	<p>Yes</p>	<p><u>No</u></p>	<p>All TUs: iMapBC layers were reviewed on Feb. 25, 2021 and the treatment area does not overlap with any provincially designated recreation features. However, the treatment area is adjacent to public use hiking (summer) and skiing (winter) trails.</p>
<p>VISUAL QUALITY OBJECTIVES - GAR section 7, FRPA sections 180 and 181, FPPR section 9.2</p>			

Is the proposed treatment within a scenic area?	<u>Yes</u>	No	<p>All TUs: The TU partially overlaps one EVQO polygons: VLI #569 – Partial Retention). The prescription aims to retain ~440-450 sph (~65-75%) of L1 (dominant and co-dominant) trees which will retain the visual characteristics of the stand and meet the established visual quality objectives.</p>
ARCHAEOLOGICAL RESOURCES/CULTURAL HERITAGE RESOURCES - FPPR section 10			
Are there any known archaeological sites or cultural heritage resources that are important to First Nations within the proposed area?	Yes	<u>No</u>	<p>All TUs: A shapefile of the proposed treatment areas was submitted to the MFLNRORD Archaeology Branch on Feb. 25, 2021, to assess any overlaps with archaeological sites or cultural heritage resources. A response was received on March 12, 2021, indicating that no known archaeological sites overlapped. Archaeological sites (both recorded and unrecorded) are protected under the <i>Heritage Conservation Act</i> and must not be altered or damaged without a permit from the Archaeology Branch.</p> <p><i>Fuel treatment operations have the potential to find and disturb currently unrecorded heritage sites, above and below ground. If archaeological materials or other heritage remains are uncovered during treatment, work in the area of the find must cease immediately, the location shall be secured, and the Archaeology Branch contacted for direction at 250-953-3334.</i></p>
INVASIVE PLANTS - FRPA section 47 and FPPR section 17			
Is the introduction and spread of invasive plants likely as a result of the proposed treatment?	Yes	<u>No</u>	<p>The Invasive Alien Plant Program (IAPP) did not identify occurrences of species within the treatment areas, however there are known invasive plant occurrences along public roads used to access the TU (Canada thistle, Oxeye daisy, and Scotch Broom). Best management practices should be followed (listed below). Invasive plant sightings should be reported through reportaweedbc.ca or by calling 1-888-WEEDSBC.</p> <p><i>General best management practices to reduce the introduction and spread of invasive plants include:</i></p> <ul style="list-style-type: none"> • <i>Any equipment used in fuel modification works must be clean of excess soil and plant material prior to transport to site.</i> • <i>Minimize trips through identified invasive plant sites. If known invasive plant sites are traversed by foot crew or machinery, clean clothing, boots, and equipment thoroughly before transitioning within and between treatment units.</i> • <i>Avoid driving through or parking on weed infestations.</i> • <i>Areas of soil exposed as part of undertaking this treatment that are within 50 m of known invasive plant infestations may be considered for planting with native deciduous trees/shrubs. If required, a planting prescription should be developed by a Registered Professional Forester with consideration for site specific ecology and applicable species mix.</i>
NATURAL RANGE BARRIERS - FRPA section 48, FPPR section 18			

Are there natural range barriers within the proposed treatment area that are likely to be removed or rendered ineffective?	Yes	<u>No</u>	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.
LAND USE OBJECTIVES (Higher Level Plans and objectives set by Government under the <i>Land Act</i>)			
Are there land use objectives (higher level plans or objectives under the <i>Land Act</i>) that apply to the proposed treatment area or a Road Permit necessary to provide access to the treatment area?	Yes	<u>No</u>	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.
Do the proposed activities conflict with land use objectives (higher level plans or objectives under the <i>Land Act</i>)?	Yes	<u>No</u>	All TUs: iMapBC spatial layers were reviewed on Feb. 25, 2021 and no overlaps nor adjacencies exist.

G. OTHER CONSIDERATIONS AND REQUIREMENTS

CONSULTATION – FIRST NATIONS

FIRST NATION	CONCERNS IDENTIFIED AND MEASURES TO ADDRESS
Stz'uminus First Nation	Feb. 16, 2021: A referral package was emailed including a KML of the TU. A read receipt was received from the referral coordinator. March 12, 2021: A referral reminder email was sent.
Penelakut Tribe	Feb. 16, 2021: A referral package was emailed including a KML of the TU. March 12, 2021: A referral reminder email was sent.
Lyackson First Nation	Feb. 16, 2021: A referral package was emailed including a KML of the TU. March 12, 2021: A referral reminder email was sent.
Halalt First Nation	Feb. 16, 2021: A referral package was emailed including a KML of the TU. March 12, 2021: A referral reminder email was sent.
Lake Cowichan First Nation (Ts'uubaa-asatx Nation)	Feb. 16, 2021: A referral package was emailed including a KML of the TU. A read receipt was received from the referral coordinator. March 12, 2021: A referral reminder email was sent.
Cowichan Tribes	Feb. 16, 2021: A referral package was emailed including a KML of the TU. March 12, 2021: A referral reminder email was sent. April 12, 2021: Response received: "no comment on this referral."
Nanwakolas Council	Feb. 16, 2021: A referral package was emailed including a KML of the TU. A read receipt was received from the referral coordinator. March 12, 2021: A referral reminder email was sent.

Wei Wai Kum Nation	<p>Feb. 16, 2021: A referral package was emailed including a KML of the TU. Referral coordinator called back – their traditional territory doesn't fall on Cortes, but it would surround the coast, which is probably why we got them on the CAD. <i>Will not be reviewing</i></p>
We Wai Kai Nation	<p>Feb. 16, 2021: A referral package was emailed including a KML of the TU. A read receipt was received from the referral coordinator. March 12, 2021: A referral reminder email was sent.</p>
Homalco First Nation (Xwemalhkwu Nation)	<p>Feb. 16, 2021: A referral package was emailed including a KML of the TU. March 12, 2021: A referral reminder email was sent.</p>
K'omoks First Nation	<p>Feb. 16, 2021: A referral package was emailed including a KML of the TU. A read receipt was received from the referral coordinator. March 12, 2021: A referral reminder email was sent.</p>
Tla'amin Nation	<p>Feb. 16, 2021: A referral package was emailed including a KML of the TU. A read receipt was received from the referral coordinator. March 12, 2021: A referral reminder email was sent. March 12, 2021: A response was received stating they will have information/comments delivered by the deadline on March 15, 2021. March 15, 2021: Information and comments received. They have been incorporated into this prescription. Tla'amin Nation requests that the plans be referred again prior to treatment as a site assessment of the area may be required. August, 2021: <i>Through continuing referral communications, TFN has requested Archaeological Impact Assessments and Traditional Use Surveys be completed prior to treatment implementation.</i></p>
Klahoose First Nation	<p>Feb. 16, 2021: A referral package was emailed including a KML of the TU. March 12, 2021: A referral reminder email was sent.</p>
First Nations consultation complete?	<p style="text-align: center;">Yes No</p> <p>All First Nations associations were identified through the Consultative Areas Database. A 30-day review period will be in place from day of receivership. Any concerns identified by will be incorporated into the prescription with an amendment, and as required thereafter.</p>

CONSULTATION – GENERAL

<p>British Columbia Wildfire Service (BCWS) – Coastal Fire Centre</p>	<p>Tony Botica (Wildfire Prevention Officer – Coastal Fire Centre) The prescription, an overview map, and a KML outlining the treatment unit was referred on August 26, 2021. Response is pending.</p>
<p>Cortes Forestry General Partnership (CFGP)</p>	<p>Mark Lombard & Ione Brown (Planning Forester) The cutting specifications and associated maps and spatial data were referred to Mark Lombard, Ione Brown, and the CFGP first on August 18, 2021. A phone conversation took place August 25, 2021 with Ione Brown to discuss stocking standards and removing merchantable timber under the CF's one cutting permit. The final prescription was referred August 26, 2021.</p>

Adjacent Private Landowners

Private property borders the entire west edge of the prescription unit. Treatment unit ribbons have not been hung along this edge. It should be surveyed by a qualified professional and the border ribboned prior to treatment implementation. Private property owners should be notified at least 2 weeks prior to the start of treatment activities.

**EXISTING TENURE HOLDERS
(Forest, Range, Guide Outfitters, Trappers)**

Trapline (TR0115T964): No contact data available via Sunshine Coast NRD

Guide Outfitter – Certificate Holder: 1054991 BC Ltd / Guiding Certificate #100685:
No contact data available via Sunshine Coast NRD

PRIVATE PROPERTY

Does private property border the proposed treatment area?	<u>Yes</u>	No	All TUs: Private property borders the entire west edge of the treatment unit.
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SMOKE MANAGEMENT

Does a smoke management plan exist for the proposed treatment area?	Yes	<u>No</u>	<p>All TUs: Burning is prescribed as a treatment/slash disposal option. The Province of BC Open Burning Smoke Control Regulation applies. A smoke management plan may be required. Note: consultation with the CFGP outlines that wood waste from harvest activities is firstly supplied to the community as firewood, and then secondly the remaining fibre is removed from site. This practice is preferred.</p> <p><i>Open burning for wildfire fuel reduction must be done in accordance with the provincial Open Burning Smoke Control Regulation. This prescription lies within a “High Smoke Sensitivity Zone”, but allowances are made for open burning under a fuel reduction prescription. The operations contractor must be compliant in all aspects of this regulation, including notifications.</i></p>
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SAFETY

Have any specific safety concerns been identified in or adjacent to the proposed treatment area?	Yes	<u>No</u>	<p>All TUs: No specific safety concerns are identified.</p> <p><i>See Section G. ‘Access Control’ and ‘Traffic Control’ below for safety and operating recommendations.</i></p>
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UTILITIES

Are utilities located in or adjacent to the proposed treatment area? i.e., power lines, gas lines, etc.	Yes	<u>No</u>	All TUs: n/a
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ACCESS CONTROL

Are there any foreseen issues with access and access control during and post treatment?

Yes

No

All TUs: The gate at the start of the forest resource road (from the main gravel public road – Coulter Bay Rd) should be closed and locked during treatment activities.

For all units, See Section I. 'Roads, Landings, and Trails' for more detail on access and staging.

TRAFFIC CONTROL

Is traffic control required at any point during operations?

Yes

No

All TUs: See above.

OTHER

Wildfire response: All operations must be in compliance with the *Wildfire Act* and *Regulation*. Use of machinery (power saws, ATV's, etc.) and pile burning is associated with higher risk for accidental wildfire ignition if conducted during the fire season. When treatment activities take place during the fire season, it is recommended that a project notice is sent to the Cortes Island Fire Rescue and the BCWS Coastal Fire Centre.

H. STAND AND STOCK TABLE:

TU CARR 1-A

Statement of Limitations: Stand descriptions and pre-harvest stand structure numbers are estimates only and should not be relied upon by Contractors for estimating budgets used in bidding or tender preparation. Contractors are responsible for conducting site visits to gather sufficient information for tender preparation.

LAYER	Definition	Species Composition by basal area (L1) by density (L2-L4)	Stems per hectare	Basal area (m ² /ha)	DBHq (cm)	Heightq (m)	Volume (m ³)	Crown Closure (% Cover)	Height to Live Crown (m)
L1 Merch	>17.5cm DBH	Fd ₇₂ Cw ₁₄ Hw ₁₄	612	56	42	30	497	50-80	2-20
L1 Submerch	12.5 - 17.5 cm DBH	Fd ₄₀ Dead ₂₇ Cw ₂₀ Hw ₁₃	250	4.4	16	13	13		
L2	7.5 - 12.5 cm DBH	Dead ₅₇ Cw ₃₉ Hw ₄	384						
L3	<7.5 cm DBH, >1.3m height	Dead ₇₀ Hw ₁₆ Cw ₇ Ss ₅ Fd ₁ Bg ₁	349						
L4	<1.3m height	n/a	0						

Species and Diameter Class	Average Crown to Base Height (m)	Average Tree Height (m)	STEMS PER HECTARE (sph)			VOLUME PER HECTARE (m ³ /ha)		
			Existing	Cut	Leave	Existing	Cut	Leave
Layer 1 (> 27.5 cm dbh)*								
Fd	16	33.4	262	0	262	335	0	335
Cw	3	25.2	29	0	29	40	0	40
Hw	14	26.6	72	0	72	63	0	63
Total All Species	-	-	363	0	363	438	0	438
Total Conifers (live)	-	-	363	0	363	438	0	438
Layer 1 (> 22.5 cm - 27.5 cm dbh)*								
Fd	13	28.2	59	0	59	22	0	22
Cw	3	16.8	29	0	29	6	0	6
Total All Species	-	-	88	0	88	28	0	28
Total Conifers (live)	-	-	88	0	88	28	0	28
Layer 1 (> 17.5cm dbh - 22.5 cm dbh)								
Fd	10	21.7	124	124	0	25	25	0
Cw	2	16.8	37	37	0	6	6	0
Total All Species	-	-	161	161	0	31	31	0
Total Conifers (live)	-	-	161	161	0	31	31	0
Layer 1s (≥ 12.5 cm - 17.5 cm dbh)								
Fd	6	18.2	100	100	0	6	6	0
Cw	1.5	10.5	50	50	0	2	2	0
Hw	6	17.5	33	33	0	2	2	0
Dead	2	15.0	67	67	0	3	3	0

Total All Species	-	-	250	250	0	13	13	0
Total Conifers (live)	-	-	183	183	0	10	10	0
Total Layer 1								
Total Layer - All Species	n/a	n/a	862	411	451	510	44	466
Total Layer – Live Conifers Only	n/a	n/a	795	344	451	507	41	466
Layer 2 (≥ 7.5 - 12.5 dbh)								
Cw	-	-	150	150	0	-	-	-
Hw	-	-	17	17	0	-	-	-
Dead	-	-	217	217	0	-	-	-
Total Layer 2 - All Species	-	-	384	384	0	-	-	-
Layer 3 (≥ 1.3m height - 7.5cm dbh)								
Cw	-	-	33	33	0	-	-	-
Hw	-	-	83	83	0	-	-	-
Dead	-	-	233	233	0	-	-	-
Total Layer 3 - All Species	-	-	349	349	0	-	-	-
Layer 4 (<1.3m height)								
Total Layer 4 - All Species	-	-	0	-	-	0	-	-
SURFACE FUEL LOADING (kg/m²)	Existing average total fuel loading: Fine + Medium = 0.4 kg/m ² Coarse = 0.6 kg/m ²		Fine and medium woody debris (<7.0 cm diameter): Maintain at <= 1.0 kg/m ² . Coarse woody debris (CWD) (>7.0 cm diameter): Retain at <= 0.5 kg/m ² . <i>Wildlife logs will not be counted in the loading target, but instead have a piece target listed below.</i> Wildlife Logs (CWD) (>22.5 cm diameter): 20-150 pieces/ha					
	Distribution: Fine and medium debris is scattered throughout the unit, but hazardous build-ups occur in depressions, in areas of clumped trees, and where dead trees have fallen.		Distribution: Fine and medium woody debris should be reduced in depressions and concentration areas where build-up has occurred and left scattered throughout the unit. CWD should be spaced at a minimum 1 m from other pieces along its length and left on or as close to the ground as possible. CWD that is decay class III or greater does not count towards CWD fuel loading.					
	Method used to measure: US Forest Service (Rocky Mountain Research Station) Photoload Sampling Technique							
Crown Closure (%) (dominant, co-dominant)	Existing: 50-80%		Target: No target is set for post-treatment crown closure as the tree removal strategy is based on species and diameter class, not crown position. However, it is expected that an incidental reduction in crown closure will occur in the range 5-10% from the top number of the range value.					

TREATMENT SPECIFICATIONS SUMMARY	
TU	TREE REMOVAL/RETENTION STRATEGY BY SIZE/SPECIES (Summarize specifications identified in table above)

Thin from below using the following guidelines:

- From all layers (L1-L4), regardless of dbh: remove all dead stems (unless assessed as wildlife trees).
 - From all layers (L1-L4), regardless of dbh: retain all deciduous stems.
 - From all layers (L1-L4), regardless of dbh: retain all western white pine trees.
 - From layers L1-L4 (dbh <22.5 cm), remove all conifers.
 - From layer L1 (dbh >22.5cm), remove only dead trees and danger trees.
- Post-treatment target density (L1-L4) of **450 sph** (~450sph > 22.5cm dbh)
 - Target intertree distance (L1-L4) of **5.1 m**.

Although uniform thinning is preferred, it is likely not possible due to stand variability. The Site Supervisor may approve clumpy retention where appropriate. Refer to Section H above and figure below for existing stocking and prescribed cutting specifications by diameter class.

CARR 1-A

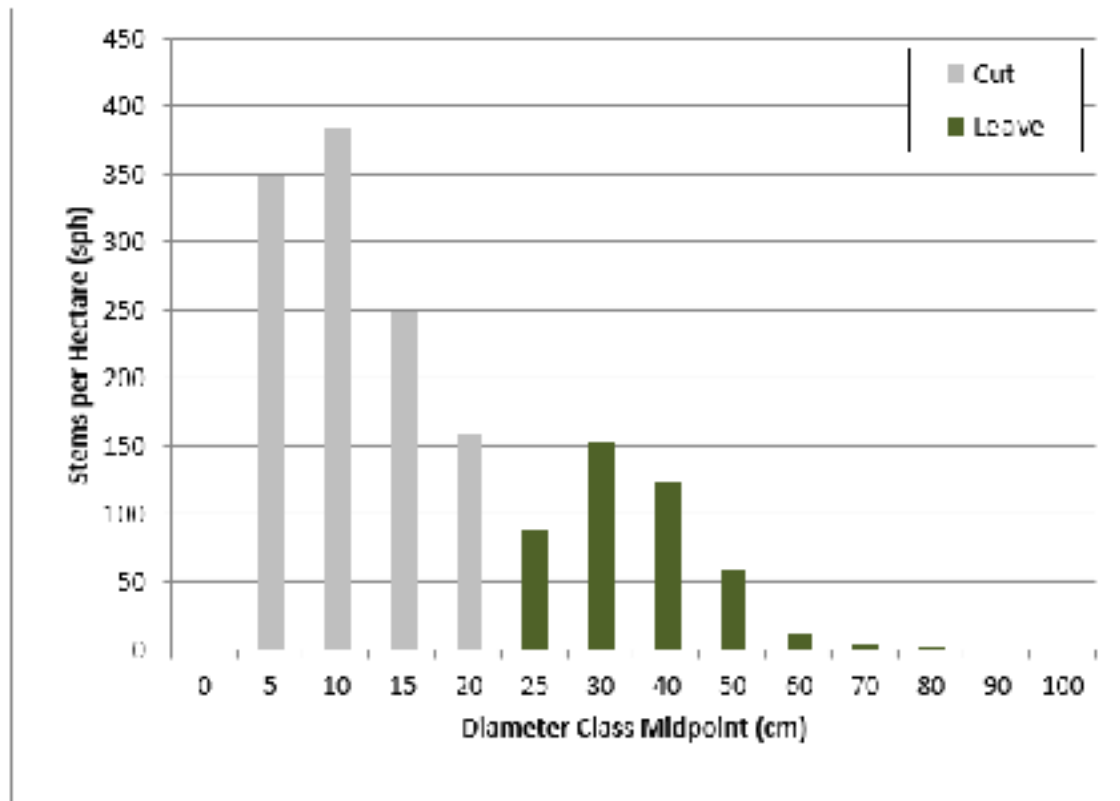


Figure 1. Cutting specifications for CARR 1-A: stems per hectare (sph) cut and leave

TREATMENT SPECIFICATION RATIONALE (See notes to assist)

The unit under prescription is intended to limit fire behaviour potential and provide suppression crews with an improved opportunity to protect homes along Coulter Bay Rd. The prescription calls for a reduction in surface fuel loading (mostly in hazardous clumps/depressions), ladder fuels, and vertical and horizontal fuel continuity to create a north-south polygon fuel-break along private property edges. Fuel management in the treatment unit will function to reduce aggressive fire behaviour to an extent that will limit crown fire behaviour, improve fire-retardant efficacies, and the ability of fire crews to apply direct attack at the fire front. This fuel management prescription provides the prescriptive guidelines as well as the recommended treatment activities to implement a proactive wildfire hazard reduction project.

The overall intents of this prescription are to:

- 1) Develop a fuel treatment area that will meet the objective of public safety and wildfire risk reduction while maintaining ecosystem structure and function by pruning and removing dead and suppressed understory stems, fuel continuity, and ladder fuels, thereby increasing the fuel strata gap. In conjunction with reducing surface fuel loading (fine, medium, and coarse woody debris), the critical surface fire intensity threshold is raised, thereby reducing the probability of crown fire initiation.
- 2) Retain a commercially viable stand for future harvesting by the CFGP.

TU CARR 1-B

Statement of Limitations: Stand descriptions and pre-harvest stand structure numbers are estimates only and should not be relied upon by Contractors for estimating budgets used in bidding or tender preparation. Contractors are responsible for conducting site visits to gather sufficient information for tender preparation.

LAYER	Definition	Species Composition by basal area (L1) by density (L2-L4)	Stems per hectare	Basal area (m ² /ha)	DBHq (cm)	Heightq (m)	Volume (m ³)	Crown Closure (% Cover)	Height to Live Crown (m)
L1 Merch	>17.5cm DBH	Fd ₅₄ Cw ₂₃ Pl ₂₃	718	35	28	23	233	Range: 45-60	Range: 1-12
L1 Submerch	12.5 - 17.5 cm DBH	Fd ₇₈ Dead ₂₂	300	5.3	16	18	37		
L2	7.5 - 12.5 cm DBH	Fd ₃₀ Dead ₃₀ Cw ₂₀ Hw ₂₀	334						
L3	<7.5 cm DBH, >1.3m height	Dead ₆₇ Fd ₂₂ Cw ₁₁	300						
L4	<1.3m height	Hw ₁₀₀	67						

Species and Diameter Class	Average Crown to Base Height (m)	Average Tree Height (m)	STEMS PER HECTARE (sph)			VOLUME PER HECTARE (m ³ /ha)		
			Existing	Cut	Leave	Existing	Cut	Leave
Layer 1 (> 27.5 cm dbh)*								
Fd	5	25.9	119	0	119	82	0	82
Total All Species	-	-	119	0	119	82	0	82
Total Conifers (live)	-	-	119	0	119	82	0	82
Layer 1 (> 22.5 cm - 27.5 cm dbh)*								
Fd	3	24.7	264	0	264	99	0	99
Cw	2	16.9	57	0	57	12	0	12
Total All Species	-	-	321	0	321	111	0	111
Total Conifers (live)	-	-	321	0	321	111	0	111
Layer 1 (> 17.5cm dbh - 22.5 cm dbh)								
Cw	1.5	15.0	111	111	0	13	13	0
Pl	4	18.2	167	167	0	27	27	0
Total All Species	-	-	278	278	0	40	40	0
Total Conifers (live)	-	-	278	278	0	40	40	0
Layer 1s (≥ 12.5 cm - 17.5 cm dbh)								
Fd	1.5	15.1	233	233	0	31	31	0
Dead	1.0	10.0	67	67	0	6	6	0
Total All Species	-	-	300	300	0	37	37	0
Total Conifers (live)	-	-	233	233	0	31	31	0
Total Layer 1								
Total Layer - All Species	n/a	n/a	1018	578	440	270	77	193
Total Layer – Live Conifers Only	n/a	n/a	951	511	440	264	71	193
Layer 2 (≥ 7.5 - 12.5 dbh)								

Fd	-	-	100	100	0	-	-	-
Cw	-	-	67	67	0	-	-	-
Hw	-	-	67	67	0	-	-	-
Dead	-	-	100	100	0	-	-	-
Total Layer 2 - All Species	-	-	334	334	0	-	-	-
Layer 3 (≥ 1.3m height - 7.5cm dbh)								
Fd	-	-	67	67	0	-	-	-
Cw	-	-	33	33	0	-	-	-
Dead	-	-	200	200	0	-	-	-
Total Layer 3 - All Species	-	-	300	300	0	-	-	-
Layer 4 (<1.3m height)								
Hw	-	-	67	67	0	-	-	-
Total Layer 4 - All Species	-	-	67	67	0	-	-	-
SURFACE FUEL LOADING (kg/m²)	Existing average total fuel loading: Fine + Medium = 0.5 kg/m ² Coarse = 0.2 kg/m ²		Fine and medium woody debris (<7.0 cm diameter): Maintain at <= 1.0 kg/m ² . Coarse woody debris (CWD) (>7.0 cm diameter): Retain at <= 0.5 kg/m ² . <i>Wildlife logs will not be counted in the loading target, but instead have a piece target listed below.</i> Wildlife Logs (CWD) (>22.5 cm diameter): 20-150 pieces/ha					
	Distribution: Fine and mediums debris is scattered throughout the unit, but hazardous build-ups occur in depressions, in areas of clumped trees, and where dead trees have fallen.		Distribution: Fine and medium woody debris should be reduced in depressions and concentration areas where build-up has occurred and left scattered throughout the unit. CWD should be spaced at a minimum 1 m from other pieces along its length and left on or as close to the ground as possible. CWD that is decay class III or greater does not count towards CWD fuel loading.					
	Method used to measure: US Forest Service (Rocky Mountain Research Station) Photoload Sampling Technique							
Crown Closure (%) (dominant, co-dominant)	Existing: 50%		Target: No target is set for post-treatment crown closure as the tree removal strategy is based on species and diameter class, not crown position. However, it is expected than an incidental reduction in crown closure will occur in the range 5-10%.					

TREATMENT SPECIFICATIONS SUMMARY	
TU	TREE REMOVAL/RETENTION STRATEGY BY SIZE/SPECIES (Summarize specifications identified in table above)

Thin from below using the following guidelines:

- From all layers (L1-L4), regardless of dbh: remove all dead stems (unless assessed as wildlife trees).
 - From all layers (L1-L4), regardless of dbh: retain all deciduous stems.
 - From all layers (L1-L4), regardless of dbh: retain all western white pine trees.
 - From layers L1-L4 (dbh <22.5 cm), remove all conifers.
 - From layer L1 (dbh >22.5cm), remove only dead trees and danger trees.
- Post-treatment target density (L1-L4) of **440 sph** (~440sph > 22.5cm dbh)
 - Target intertree distance (L1-L4) of **5.1 m**.

Although uniform thinning is preferred, it is likely not possible due to stand variability. The Site Supervisor may approve clumpy retention where appropriate. Refer to Section H above and figure below for existing stocking and prescribed cutting specifications by diameter class.

CARR 1-B

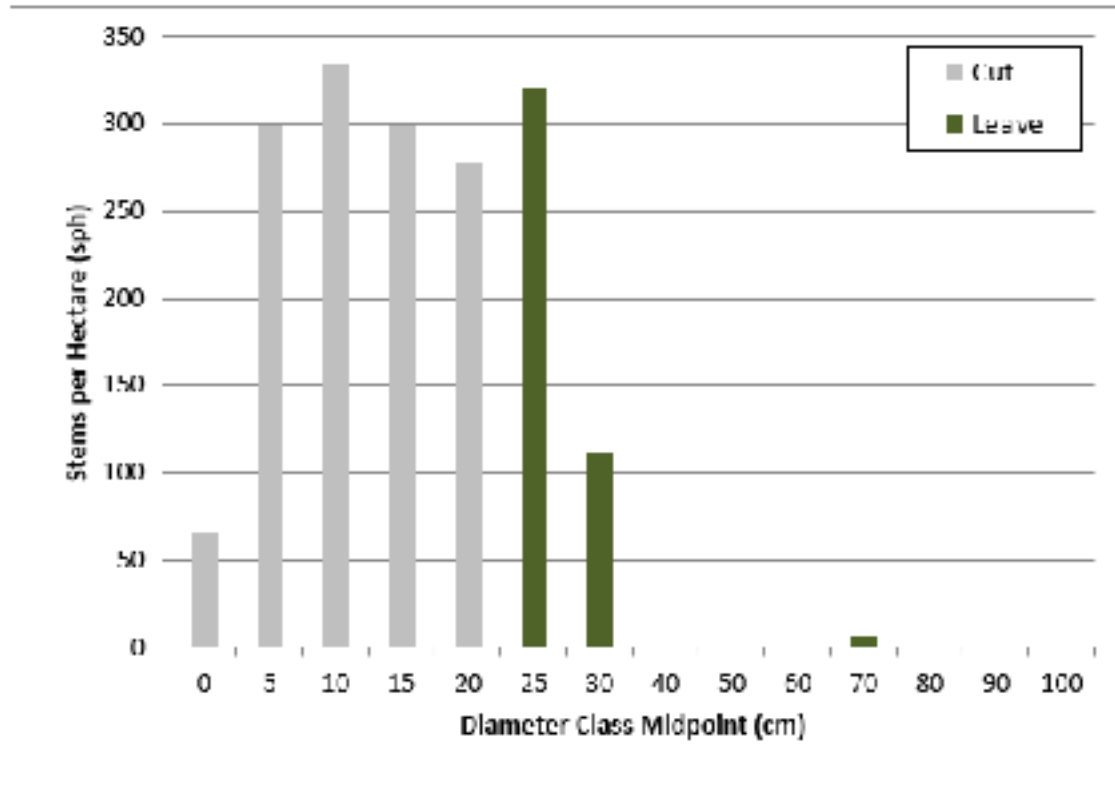


Figure 2. Cutting specifications for CARR 1-B: stems per hectare (sph) cut and leave

TREATMENT SPECIFICATION RATIONALE (See notes to assist)

The unit under prescription is intended to limit fire behaviour potential and provide suppression crews with an improved opportunity to protect homes along Coulter Bay Rd. The prescription calls for a reduction in surface fuel loading (mostly in hazardous clumps/depressions), ladder fuels, and vertical and horizontal fuel continuity to create a north-south polygon fuel-break along private property edges. Fuel management in the treatment unit will function to reduce aggressive fire behaviour to an extent that will limit crown fire behaviour, improve fire-retardant efficacies, and the ability of fire crews to apply direct attack at the fire front. This fuel management prescription provides the prescriptive guidelines as well as the recommended treatment activities to implement a proactive wildfire hazard reduction project.

The overall intents of this prescription are to:

- 1) Develop a fuel treatment area that will meet the objective of public safety and wildfire risk reduction while maintaining ecosystem structure and function by pruning and removing dead and suppressed understory stems, fuel continuity, and ladder fuels, thereby increasing the fuel strata gap. In conjunction with reducing surface fuel loading (fine, medium, and coarse woody debris), the critical surface fire intensity threshold is raised, thereby reducing the probability of crown fire initiation.
- 2) Retain a commercially viable stand for future harvesting by the CFGP.

BIODIVERSITY AND FOREST HEALTH CONSIDERATIONS AND TARGETS

<p>WILDLIFE LOG RETENTION TARGET - SPH and Distribution</p> <p>TU CARR 1-A/1-B</p>	<p>Wildlife logs provide valuable habitat for small mammals, plants, insects and other organisms. Larger pieces are particularly valuable as habitat elements. Approximately 20-150 pieces/ha of wildlife logs should be retained, with a preference for larger (>22.5 cm diameter, measured at one butt end of log) pieces. These wildlife logs should have a minimum length of 3 m <i>with longer pieces preferred</i>. Retained wildlife logs should be bucked if necessary, so that they lay flat on the ground along 70% or more of their length. Distribution of CWD should be scattered (not piled or continuous) and logs should be separated by a minimum of 1 m. Existing decayed (class III and above) large diameter wildlife logs will be retained to enhance wildlife habitat and provide ecosystem values and will not be counted in the target.</p> <p>All TUs: CWD above the retention targets must be bucked, piled, and removed off-site to an approved green waste or incineration facility. There is potential for it to be made available as firewood to residents. See Stand Modification Treatments: Other, below.</p>
<p>WILDLIFE TREE RETENTION TARGET</p> <p>TU CARR 1-A/1-B</p>	<p>The contractor(s) must conduct a Wildlife/Danger Tree Assessment to identify and retain high value wildlife trees in the treatment area, without unduly reducing the effectiveness of the fuel management treatment. The retention of trees with cavities or broken tops should be maximized. Hazardous trees (as defined in the Workers' Compensation Board Occupational Health and Safety Regulation Part 26: Forestry Operations and Similar Activities) must be assessed for risk, and if determined to pose a risk to workers, be removed or have a No Work Zone (NWZ) established of suitable size to protect workers. This assessment must be done by a qualified individual who has completed a training program acceptable to the WorkSafeBC Board. The responsibility of ensuring this assessment is completed lies with the Designated Prime Contractor of the forestry operation.</p> <p><i>No more than 5% of the treatment area may be designated as NWZs without review and approval from by a contract supervisor.</i> The shape and size of the NWZ should be determined based on the nature of the hazard and the lean of the tree and should aim to reduce the amount of area removed from the treatment.</p>

FOREST HEALTH

TU CARR 1-A/1-B

All TUs:

The following forest health strategies will be applied: dead stems will be targeted for removal before healthy stems unless they are identified as a high value wildlife tree and are assessed as safe to retain.

Hemlock mistletoe is present in some understorey western hemlocks in the TU's. All understorey western hemlocks (dbh < 22.5cm) are planned for removal.

Windthrow: Windthrow hazard was rated as Low.

I. TREATMENT DESCRIPTION
MERCHANTABLE TIMBER HARVEST
<p>ROADS, LANDINGS AND TRAILS: No road construction is planned. Main access is via an existing forest resource road off Coulter Bay Rd. Trails will need to be created within the TU for machine access and skidding. <i>Refer to the Prescription Map to see exact locations of roads, landings, and trails. Machine and/or foot access points must be determined in consultation with the CFGP and the Site Supervisor.</i></p>
<p>FELLING: Hand felling with chainsaw, brush saw, or felling by light machinery (as approved by the CFGP and Site Supervisor) are the only appropriate tree felling methods for treatment unit. Prescribed maximum stump height is 20 cm, cut at an angle <10 degrees.</p>
<p>YARDING/SKIDDING: All access trails will be temporary and should be the minimum required for a safe and efficient operation. All trails used during implementation will be returned to their original condition or better following treatment, including the removal of any brush matting. Any additional access trails required during operations must be approved by the CFGP and the Site Supervisor.</p>
<p>LOADING AND HAULING: Suitable locations for decking and loading wood will be determined in consultation with Prime Contractor, the Site Supervisor, and the CFGP. Loading and hauling of all merchantable and alternate fibre usage stems is preferred.</p>
<p>SLASH DISPOSAL: Pruning, regen brushing, bucking, and piling of slash and surface fuel should be done outside the fire season. Options for slash disposal are described in sections below. The contractor may remove wood waste (non-merchantable timber, branches etc.) via the use of a large bin or container. If this is proposed, the Site Supervisor and Prime Contractor, in consultation with the CFGP, will agree on the location(s) for the bin or container to facilitate the safe and efficient transport of wood waste to a local composting or fuel facility. Slash may be chipped or mulched prior to transport. If this is not feasible, then pile and burn is prescribed.</p>
<p>SITE DISTURBANCE: During burning, debris hauling, and/or equipment transport:</p> <ul style="list-style-type: none"> Minimize soil disturbance (<5%, see Section F-Values and <i>Forest and Range Practices Act</i>) and forest floor displacement. Minimize visual impact of harvest and maintain cut stump height at less or equal to 20 cm from ground. Should an unacceptable level of soil disturbance occur within the treatment area, the Contract Supervisor will develop an appropriate rehabilitation plan. At the minimum, pre-existing trails will be maintained in or restored to pre-treatment condition. The Site Supervisor has the discretion to specify a higher standard of trail restoration or rehabilitation after the completion of fuel management activities.
<p>SPECIAL MEASURES: n/a</p>
STAND MODIFICATION TREATMENTS
<p>MERCHANTABLE TIMBER UTILIZATION: Was commercial timber harvest considered? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Estimate volumes (m³ /ha) to be removed (*This estimate assumes all live standing conifers with a dbh >= 17.5cm to be merchantable): All TUs: Live merchantable volume = 40 m³/ha</p>
<p>BRUSHING: Brushing activities to achieve thinning targets is allowed.</p>
<p>PRUNING: Prune branches on retained conifers to 3 m above ground.</p>

THINNING: Existing stand condition and target retention density for the treatment units are described in detail in Section H of this prescription. The target density was determined with consideration for existing stand structure, wildlife habitat, visual quality, and wildfire threat reduction objectives.

DEBRIS PILING: Manual and machine debris piling will be used as necessary to facilitate removal of logs and slash and pile burning.

PILE BURNING: Pile burning is prescribed.

MULCHING/CHIPPING: Prescribed, but must be removed from site via a bin, truck, or container.

MASTICATION: Not prescribed.

GRINDING: Not prescribed.

PRESCRIBED FIRE: Not prescribed.

PLANTING: Not prescribed.

OTHER: There is potential for firewood production through thinning activities. If firewood production occurs, firewood will be left at designated locations to facilitate pickup by community members. The pickup location must be approved by the contract supervisor and CFGP. Piece size should not exceed 1.5 m in length. The contractor must ensure that all wood is removed from the site prior to project completion.

AUTHORIZATION AND TIMBER TENURE

FRPA Section 52: If unable to cut under the CFGP's one CP, then potentially applicable. If not, then see FLTC below.

Forestry Licence to Cut (FLTC): Applicable (in the form of a cutting permit) – cutting authorization can be approved under the CFGP's existing cutting permit.

Park Use Permit: Not applicable.

Road Permit or Road Use Permit: Not applicable.

Other (i.e. local government, utilities, etc.): CFGP approval.

J. POST TREATMENT

EXPECTED VEGETATION RESPONSE:
 This prescription is expected to achieve the outlined fuel management objectives for a period of approximately 15-20 years. After this time, it is expected that understorey regeneration in gaps may create ladder fuels that are likely to incrementally increase hazard and potential fire behaviour. Natural overstorey mortality will lead to an increase in coarse woody debris and surface accumulations over this time frame. A moderate response in the growth of understorey herbs and shrubs is expected due to increased light penetration to the forest floor.

ADDITIONAL TREATMENTS OR MAINTENANCE:
 Maintenance may be required at about the 15-20 year mark following treatment implementation. Maintenance required at a future time may include understorey thinning, brushing and removal of flammable vegetation, and/or surface fuel disposal to perpetuate the effectiveness of the treatment.

SILVICULTURE OBLIGATIONS: Do silvicultural obligations apply to the treatment area? Yes No

PLANTING: Is planting a treatment identified in this prescription or required as a legislative obligation? Yes No
**Planting is a legislative obligation to meet the CFGP's stocking standards, which are met by this prescription. Thus, planting is no required.*

STOCKING STANDARDS: Do standards apply to the treatment area? Yes No

CARR 1-A:

This prescription retains a fully stocked stand as per the Cortes Forestry General Partnership FSP, Appendix B: Stocking Standards for the CWHxm 04/01 (Table 4(b): Intermediate Cut Stocking Standards):

- Ecologically suitable species = Fd, Cw, Hw
- Target stocking basal area = 40m²/ha
- The resulting stand (outlined above in H. STAND AND STOCK TABLE: TU 1 and summarized in H: TREATMENT SPECIFICATIONS SUMMARY) is expected to maintain ~50m²/ha basal area in the L1 layer consisting of Fd, Cw, and Hw.

CARR 1-B:

This prescription retains a fully stocked stand as per the Cortes Forestry General Partnership FSP, Even-Aged Stocking Standards for the CWHxm1 03 (Table 1: Even-Aged Stocking Standards):

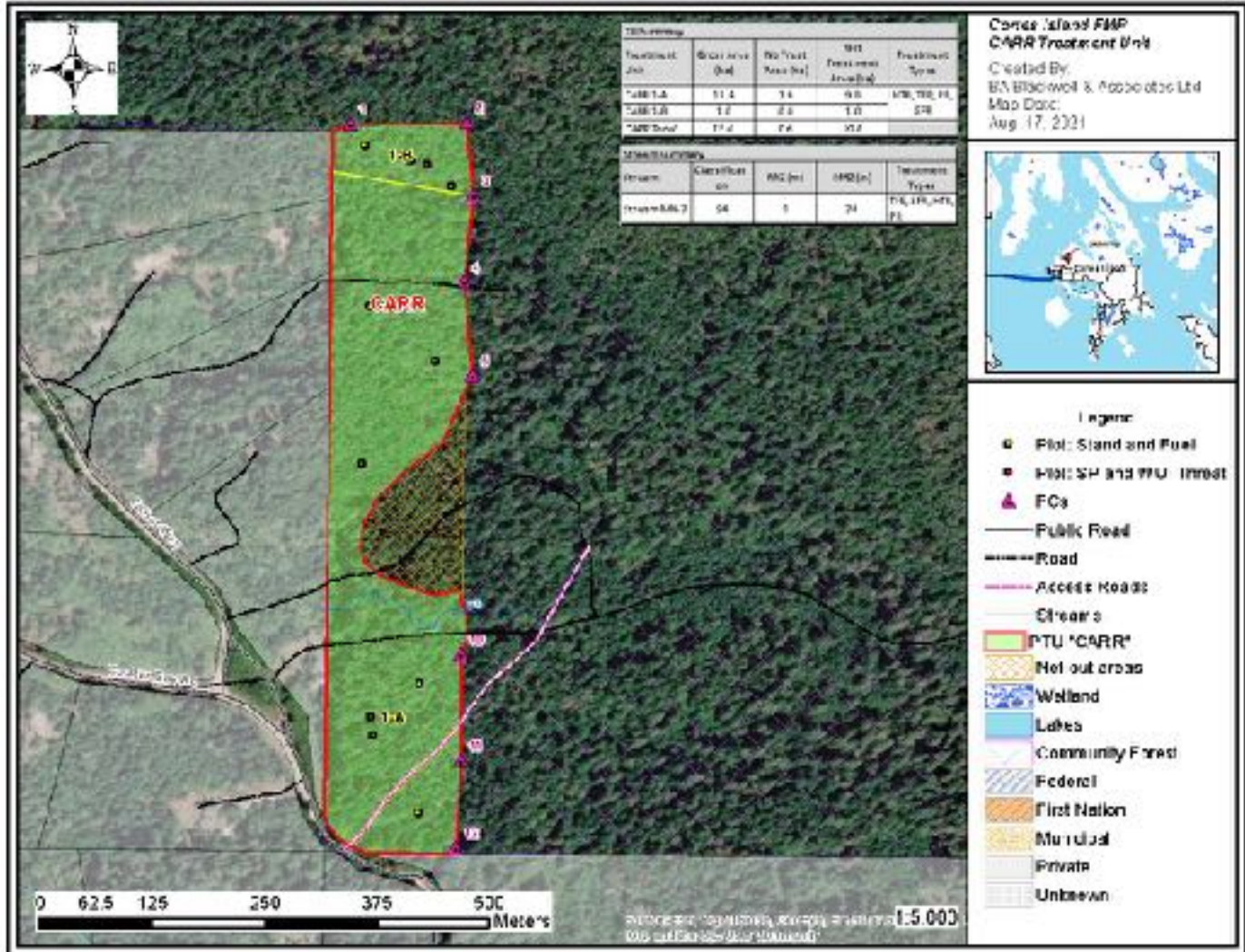
- Preferred + Acceptable species = Fd, Pl, Cw, Hw
- Minimum well-spaced sph = 400
- The resulting stand (outlined above in H. STAND AND STOCK TABLE: TU 1 and summarized in H: TREATMENT SPECIFICATIONS SUMMARY) is expected to maintain ~4400m²/ha basal area in the L1 layer consisting of Fd and Cw.

K. Outstanding Works

1. Tla'amin First Nation has requested Archaeological Impact Assessments and Traditional Use Surveys be completed prior to treatment implementation.
2. A cutting authorization must be approved by the District. It can be applied for under the CFGP's active cutting permit.
3. Prior to treatment implementation, a survey by a qualified professional must be done to establish the private property/crown land boundary along the west edge of the treatment unit. Once established, this line should be clearly flagged (with falling corners) using the ribboning standards described in this prescription (Section B: Field Marking).
4. Flagging/Ribboning:
 - Immediately prior to treatment implementation, flagging of boundaries and falling corners must be checked and 'refreshed' where required.
5. Prior to the commencement of treatment activities, a Wildlife/Danger Tree Assessment must be performed by a person who holds a valid certificate issued under the Wildlife/Danger Tree Assessor's Certificate Program.
6. Prior to the commencement of treatment activities, access, staging, and landings must be confirmed with the CFGP.
7. Consultation with First Nations and stakeholders is completed, but this should always be considered 'ongoing'. If any other concerns are identified following prescription finalization which impact the prescription specifications described herein, the prescription will be amended to reflect these changes.
8. Consultation with BCWS is ongoing. If any concerns are identified following prescription finalization which impact the prescription specifications described herein, the prescription will be amended to reflect these changes.
9. All operations must be conducted in compliance with the Migratory Bird Convention Act and the BC Wildlife Act. If treatment activities are proposed during the bird breeding season (March 12 – August 17), breeding bird activity must be monitored by a qualified professional. Nest sites may be temporarily excluded from the treatment area. Operators must adhere to survey results and recommendations including reserve zones, should they be necessary to protect breeding birds.
10. If burning of debris is planned, all burn permits must be approved and obtained prior to burning commencement.

L. ADMINISTRATION	
PREPARATION	
<u>Louis Orioux, RPF</u> <u>Max Catt, FIT</u> <u>Bruce Blackwell, RPF, RPBio</u>	
FOREST PROFESSIONAL NAME (<i>Printed</i>)	FOREST PROFESSIONAL SIGNATURE
<u>Louis Orioux</u>	INSERT STAMP AND SIGNATURE HERE
MEMBER NUMBER	DATE
5147	August 25, 2021

M. ATTACHMENTS	
MAPS: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	FIELD DATA CARDS: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
WUI WTA Plots and Photos: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CRUISE DATA: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
AIR PHOTOS/IMAGERY: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	BURN PLAN: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
MODELING/DATA ANALYSIS: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	OTHER: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
TERRAIN STABILITY ASSESSMENT Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Completed By: Date:	VISUAL IMPACT ASSESSMENT Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Completed By: Date:
ARCHAEOLOGY IMPACT ASSESSMENT Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Completed By: Date:	BIOLOGIST ASSESSMENT Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Completed By: Date:
ADDITIONAL COMMENTS:	



Appendix A: Photographs of Treatment Unit CARR 1-A



Appendix A: Photographs of Treatment Unit CARR 1-B



Appendix B: Wind Rose

Figure 1: Initial Spread Index (ISI) roses depicting the average frequency of ISI values by wind direction for four 6-hour periods over the fire season April – October. Data taken from the Maurelle Island weather station (~24 km northeast of the treatment unit) from 1996 to 2015.

