



TENURE IDENTIFICATION

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A93737	-	HAN600	BB3XN		A		53 25 41 / 132 31 51

AREA UNDER THE PLAN

GROSS AREA (TAUP)	PAS	NP	WTRA / WTP	RESERVES	OTHER	NAR
20.7	1.2	0.0	9.9	0.0	0.0	9.6

ADDITIONAL COMMENTS

SENSITIVE AREAS
Road construction through very high hazard terrain stability must follow the recommendation of the Terrain Stability Hazard Assessment(TSHA) January 28, 2016 by Drew Brayshaw P.Geo. In the Harvest Plan under Soil conservation, and on the Harvest Plan Map, the TSHA recommendations are in summary form. The road builder must read the full text of the TSHA prior to commencing road construction.

SOIL DISTURBANCE

SU	Max. Allowable Soil Disturbance (%)	Max. Amount TAS May Exceed MASD Prior To Rehab (%)	Max. Allowable Soil Disturbance For Roadside Work Areas (%)	Maximum Permanent Access Structures (%)
1	5.0	5.0	25.0	5.7
SU	CRITICAL SITE CONDITIONS THAT AFFECT THE TIMING OF OPERATIONS, AND HOW THEY AFFECT THE TIMING			
1	<p>Although the mor humus is matted and thick (15-30+cm), soils will require protection from rutting and gouging by feller bunchers and machine forwarders during ground based harvest. Puncheon must be utilized to protect soil from compaction and displacement. The humus should be kept intact to protect underlying mineral soils from erosion. Rehabilitate hoe trails by opening up woody puncheon, loosen and mix any compacted soils to provide spots for planted trees to grow.</p> <p>Harvesting within the block must prevent downslope drainage diversion or drainage concentration. Measures to prevent this include falling and yarding away from streams, using full suspension if cable yarding across streams, using puncheon along machine trails, and using designated crossing points and temporary drainage structures where machine trails cross streams.</p> <p>Wet Zone (NOT: Very-Wet-Zone) shutdown procedures must be observed in HAN600 as required by the Terrain Stability Field Assessment: Shift End 45mm 24hr : 80mm 48hr: 130mm 72 hr: 170mm Road building and harvest crews must maintain weather instrumentation on site and record data as per BCTS Chinook Wet Weather Safety Shutdown Guidelines.</p>			

RESULTS AND STRATEGIES

Annual Reporting and Data Submission	
Result or Strategy Description	Where applicable features prescribed under the LUO are identified (refer to Table 10, attached), and associated no-harvest zone (including cedar reserves), management zones and stand level retention are established or managed by a Plan Holder, the feature(s) and associated no-harvest zones, management zones and stand level retention will be documented and the digital spatial data will be submitted by said Plan Holder by December 31st of each year to the Council of the Haida Nation and to the Province of BC.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Where applicable features prescribed under the LUO are identified (refer to Table 10), associated no-harvest zones, management zones and stand level retention will be documented and the digital spatial data will be submitted by B.C. Timber Sales by December 31st of each year to the Council of the Haida Nation and to the Province of BC.
Aquatic Habitats	
Result or Strategy Description	In upland stream areas, where stream channels are incised, have steep gradients and support riparian plant communities that are dependent on high-humidity microclimates, sufficient trees and vegetation will be retained to maintain said riparian plant community.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The biogeoclimatic unit name for this development is CWHvh2 very wet hypermaritime. Fog, cloud and drizzle are common throughout the year. Therefore riparian habitat humidity is not dependent on abundance of riparian vegetation. Deer population overcrowding is evident by ubiquitous scats and by the absence of shrubs and herbs. Preharvest shrubs and herbs are scant in upland stream riparian management zones. It is sufficient to have a seven meter machine free zone around upland streams to maintain riparian plant communities.

Result or Strategy Description	Prior to development activities within a watershed sub-unit, the applicable Plan Holders will form an agreement that documents: a) who is responsible for completing the watershed analysis and any updates that may be required; and b) how the rates of harvesting will be allocated, consistent with the watershed sub-unit analysis; and c) who is responsible for tracking the rates of harvest within the watershed sub-unit.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Chartwell Consultants Ltd. does the watershed analysis and updates it for proposed cutblocks. Chartwell Consultants Ltd. also track rates of harvest. Zimmfor Management Services Ltd. tracks and maintains the records and publishes them annually. Cut blocks are identified and licensees are apportioned forest area available for development in excess of 70% hydrologically recovered forest. (Watershed sub-unit 289 specific to this proposed cut-block is discussed under FSP s.6.23 strategies)
Result or Strategy Description	Where upland streams are direct tributaries to Type I or II fish habitat, sufficient vegetation, which may include trees, will be retained to maintain stream bank and channel stability, as determined by a qualified professional.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The two upland streams directly tributary to fish streams are H-1 and A-1. Stream bank stability is managed within the harvest area by a 7 meter no machinery zone. Shrubs and herbs are few to none, so post-harvest there is not likely to be much vegetation except possibly a few saplings. Refer to the Riparian Assessment for each stream where management measures such as fall away yard away and other measures are stated individually by stream. Thus under FSP s.6.27 stream bank and channel stability is conserved.
Result or Strategy Description	Within each watershed sub-unit indicated on LUO Schedule 6, and where development areas are proposed by a Plan Holder, the Plan Holders will do the following, subject to Section 6.24, below: a) a watershed analysis will be completed by a qualified person that indicates the watershed condition and the upland stream area; and b) Plan Holders will ensure that rates of harvesting within a watershed sub-unit are consistent with the watershed analysis results and that >70% of the forest, measured in hectares, in the upland stream area is hydrologically recovered; and c) the Plan Holders will maintain a group ledger, updated annually at a minimum, that tracks the development activities within watershed sub-units.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The hydrological rate of cut analysis was received from Miranda at Chartwell Consultants on February 1, 2016. Planned blocks, with hectares, used in analysis of Hangover creek sub basin 289 are: HAN600 (10.6) HAN601 (10.3) HAN605 (14.4). An equivalent clear-cut area (ECA) is calculated 10.0%; that is 90.0% of sub-basin 289 is projected to be hydrologically recovered after harvest. Chartwell does the analysis, while Zimmfor maintains and annually updates a ledger.
Result or Strategy Description	Despite Section 6.18 above, the combined area of the Type II habitat no-harvest and management zones may be further reduced, provided: a) the reduced area is consistent with the outcome of a completed intergovernmental process; and b) the total amount of mature and old forest in the Type II habitat no-harvest and management zones within the development area is reduced by <= 20%, measured in hectares; and c) the integrity of the Type II habitat is maintained; and d) an adaptive management plan is developed, documented and implemented prior to reducing the size of the Type II reserve and management zones under Section 6.19.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There is no plan to reduce Type II fish habitat since there is none within this development.
Result or Strategy Description	Despite Section 6.20 above, within an individual development unit, the amount of mature and old forest within the AFU management zone(s) may be reduced by up to 10%, measured in hectares.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not located on an active fluvial unit.
Result or Strategy Description	Despite Section 6.23, <70% of the forest, measured in hectares, in the upland stream area maybe retained, provided that the Plan Holders ensure the following, subject to Section 6.26, below: a) the revised upland stream area retention percentage is consistent with the outcome of a completed intergovernmental process; and b) a watershed assessment is completed by a qualified professional that indicates the watershed sub- unit sensitivity to forest development and disturbance; and the amount, type and distribution of forest cover that is required to sustain natural hydrological and fluvial process; and c) the rates of harvesting within a watershed sub-unit are consistent with the watershed assessment results provided in Sub-section 6.25b); and d) an adaptive management plan is developed, documented and implemented prior to reducing the upland stream area retention percentage below 70%, measured in hectares.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	After harvest of this development, greater than 70% of the forest in the upland stream area will be hydrologically recovered.
Result or Strategy Description	Despite Section 6.30 above, for a given sensitive watershed, Plan Holders may maintain a rate of harvest and/ or an ECA that exceeds the thresholds indicated, provided the Plan Holder ensure the following: a) the revised rate of harvest and/ or ECA threshold is consistent with the outcome of a completed intergovernmental process; and b) a watershed sensitivity assessment is completed by a qualified professional that indicates the watershed sensitivity to past, current and proposed forest development and disturbance; and the amount, type and distribution of forest cover that is required to sustain natural hydrological and fluvial process; and c) the rates of harvesting within a watershed sub-unit are consistent with the watershed assessment results provided in Sub-section b), above; and d) an adaptive management plan is developed, documented and implemented prior to increasing the rate of harvest and/ or ECA for the watershed.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There is no plan to exceed the ECA or rate of harvest thresholds specified in HGLUOO s.14.

Result or Strategy Description	In addition to Section 6.21 above, within an individual development unit, the amount of mature and old forest within the AFU management zone(s) may be reduced by an additional 10%, measured in hectares, provided that: a) sufficient functional riparian forest is retained to protect the integrity of the AFU; and b) an adaptive management plan is developed, documented and implemented prior to reducing the size of the AFU management zone(s) under Section 6.22 above.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not located on an active fluvial unit.
Result or Strategy Description	Prior to development activities within a sensitive watershed, the applicable Plan Holders will form an agreement that documents: a) who is responsible for completing the watershed analysis and any updates that may be required; and b) how the rates of harvesting will be allocated, consistent with Section 6.30; and c) who is responsible for tracking the rates of harvest within the sensitive watershed.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Hangover creek watershed is not sensitive according to the HGLUOO Schedule 7.
Result or Strategy Description	Where Plan Holders are proposing to increase the rate of harvest and/or the ECA, within a given sensitive watershed, prior to undertaking the steps required under Section 6.32 above, the applicable Plan Holders will form an agreement that documents: a) who is responsible to complete the process outlined in Sub-sections 6.32a) through 6.32d) above; and b) how the rates of harvesting will be allocated, consistent with the assessment; and c) who is responsible for tracking the rates of harvest within the watershed.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There is no plan to exceed the ECA or rate of harvest thresholds specified in HGLUOO s.14.
Result or Strategy Description	Where Plan Holders are proposing to reduce the upland stream retention within a watershed sub-unit, prior to reducing the upland stream area below 70%, measured in hectares, the applicable Plan Holders will form an agreement that documents: a) who is responsible to complete the process outlined in Sub-sections 6.25a) through 6.25d) above; and b) how the rates of harvesting will be allocated, consistent with the assessment; and c) who is responsible for tracking the rates of harvest within the watershed sub-unit.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	After harvest of this development, greater than 70% of the forest in the upland stream area will be hydrologically recovered.
Result or Strategy Description	With reference to individual development areas, where naturally occurring AFUs occur, any forest located within in the AFU will be retained and a 1.5 tree-length (minimum width) management zone, measured from the outer edge of the AFU, will be established to protect the AFU.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not located on an active fluvial unit.
Result or Strategy Description	With reference to individual development areas, where Type I fish habitat occurs,it will be retained and a2.0 tree-length (minimum width) riparian no-harvest zone, measured from the outer edge of the Type I habitat, will be maintained to protect the Type I fish habitat, subject to all of the following: a) Where necessary to address site specific values, the Type I no-harvest zone identified under Section 6.17 above, may be increased or decreased by up to 0.5 tree-lengths, measured from the outer edge of the no-harvest zone, provided that there is no net loss of Type I no-harvest zone area within the development area. b) Within an individual development area, up to 5% of the total area of the Type I habitat no-harvest zone may be altered or removed, provided that: i) the integrity of the Type I fish habitat is maintained; and ii) the alteration or removal is required for road or bridge construction, or to address a safety concern and no practicable alternative exists; or iii) the alteration or removal may be for a purpose other than those listed in Sub-section ii) above, provided the reasons are consistent with the outcome of a completed intergovernmental process.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Hangover creek is Type I fish habitat 300-400 m downslope of the block, and thus FSP s.6.17 does not apply since it is external to this development.
Result or Strategy Description	With reference to individual development areas, whereType II fish habitat occurs, it will be retained and a1.0 tree-length (minimum width) riparian no-harvest zone, measured from the outer edge of the Type II habitat, will be maintained to protect the Type II fish habitat. Adjacent the no-harvest zone a 0.5 tree- length (average width) management zone will be established to protect the no-harvest zone, subject to all of the following: a) Within an individual development area, up to 5% of the total area of the Type II habitat no-harvest zone may be altered or removed, provided that the integrity of the Type II fish habitat is maintained. b) Within an individual development area, the total area of the Type II habitat management zone may be reduced by up to 20%, measured in hectares. c) The retention of trees within the management zone will be based on consideration of the likelihood of damages to the no-harvest zone caused by windthrow.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There is no Type II fish habitat within this development and thus FSP s.6.18 does not apply since it is external to this development.
Result or Strategy Description	Within each sensitive watershed indicated on LUO Schedule 7, and where development areas are proposed by a Plan Holder, harvest rates will be consistent with the following: a) For watersheds >= 500ha, up to 5% of the watershed area may be harvested in a 5-year period. b) For watersheds < 500ha, up to 10% of the watershed area may be harvested in a 10-year period. c) Despite Sub-sections a) and b) above, no harvesting will occur in sensitive watersheds with an ECA >= 20% d) Harvest rates and ECAs will be based on the watershed analysis required under Section 6.29, above.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Hangover creek watershed is not sensitive according to the HGLUOO Schedule 7.

Result or Strategy Description	Within each sensitive watershed indicated on LUO Schedule7, and where development areas are proposed by a Plan Holder, the Plan Holders will do the following: a) A watershed analysis will be completed by a qualified person that indicates the watershed ECA condition. b) The Plan Holders will maintain, on an ongoing basis, a group ledger which tracks the development activities within the sensitive watersheds.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Hangover creek watershed is not sensitive according to the HGLUOO Schedule 7.
Biodiversity Objectives	
Result or Strategy Description	Where development activities are proposed within a forest area that is classified as a rare or common site-series, consistent with LUO Schedule 10, Plan Holders will retain an amount (measured in hectares) of old forest greater than or equal to the applicable target listed for said site-series in Schedule 10, consistent with Section 6.37 above.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	A site series in HAN 600 that is common is CWHvh2-01:70%. The site series in HAN 601 that is rare is CWHvh2-11:30%. Schedule 10 of the LUO states that Rennell LU ecorep target has been met in protected areas.
Result or Strategy Description	Where practicable,old forest areas that are retained consistent with Section6.37 above,will include habitat for local species at risk and regionally important wildlife, including, but not limited to: a) Northern Goshawk nesting and foraging habitat; and b) Marbled Murrelet nesting habitat, Great Blue heron nesting habitat, and Northern Saw-whet Owl core nesting areas; and c) Black Bear dens and denning habitat.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Indicated wildlife habitat is provided in protected areas, and potentially in the WTRA. No bear dens were discovered during layout activities which comprise of: Cultural Features Identification survey, road engineering, boundary layout, timber cruise, site plan field work.
Result or Strategy Description	With reference to individual development areas, where red or blue-listed ecological communities >= 0.25ha occur, they will be retained.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	An occurrence of devils club is mapped. Drew Brayshaw P.Geo states in the TSFA that bedrock outcrops he saw within and adjacent to HAN600 were conglomerate, agglomerate, and dark coloured, fine textured greywacke sandstone. Thus the base rich bedrock which might give rise to the blue listed cedar-spruce-devils club site series, is not present within HAN600. This is corroborated by vegetation of the zonal site series and cedar-cypress-goldthread within the harvest area, not the richer blue-listed site series. Thus a map unit greater than 0.25ha of CWHvh2-07 CwSs-Devils Club site series was not identified.
Result or Strategy Description	Within each Landscape Unit indicated in LUO Schedule10, and where development areas are proposed by a Plan Holder, prior to development activities the Plan Holders will do the following: a) An ecological representation analysis will be completed by a qualified person that indicates the current inventory of old forest by site series and LU. b) For each LU, the applicable Plan Holders will form an agreement that documents: i) who is responsible for completing the ecological representation analysis; and ii) how the required old forest retention will be allocated; and iii) how any required old forest recruitment, consistent with Section 6.40 below, will be allocated; and iv) who is responsible for tracking the old forest retention. c) The Plan Holders will maintain a group ledger, updated annually at a minimum, which tracks the depletions and additions to the old forest inventory by site series and LU.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	An ecorep analysis was received from Miranda of Chartwell consultants on Feb 1, 2016. It states that in the Rennell Landscape Unit, site series in the CWHwh2 and MHwh are in deficit. The proposed development is in the CWHvh2, therefore none of the site series in deficit occur in the development area. BC Timber Sales arranges with Zimmfor to maintain and annually update a ledger.
Result or Strategy Description	Despite Section 6.35 above, the amount of mature or old forest retained in the management zone may be reduced to 60%, measured in hectares, provided that: a) the amount of mature and old forest retained is sufficient to maintain the integrity of the forested swamp; and b) an adaptive management plan is developed, documented and implemented prior to reducing the percentage of mature and old forest below 70%, measured in hectares.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No such cedar-spruce-skunk cabbage forested swamp as defined in the HGLUOO exists in the harvest area of this development.
Result or Strategy Description	Despite Section 6.41above, up to 30% of the area of each blue-listed ecological community occurring in a development area may be altered or harvested if: a) the harvesting is required for road access or to address a safety concern; or b) the harvesting is required for another reason than specified in Sub-section a) above, provided that the harvesting is consistent with the outcome of a completed intergovernmental process.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	FSP s.6.43 which provides for alteration or harvesting of blue listed site series does not apply. Furthermore, the two devils club plants at the single Class 1 HTFF site are retained and protected in WTRA.
Result or Strategy Description	Despite Section 6.41above, up to 5% of the area of each type of red-listed ecological community occurring in a development area may be altered or harvested if required for road access or to address a safety concern.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There is no red listed ecological community in this development area.

Result or Strategy Description	<p>Where there is insufficient old forest available to meet the requirements under Section6.38 above, Plan Holders will identify, retain and recruit old forest stands where necessary, through natural processes (passive) and may implement voluntary interventions (active), to meet the representation requirements in the shortest possible timeframe. In order to meet the objective in the shortest possible timeframe, older stands will be chosen before younger stands when identifying recruitment areas.</p> <p>Strategies that will be used to identify, retain and recruit old forest stands include:</p> <p>a) Identifying mature stands (of the appropriate site-series) in the LU that are already constrained for other reasons, and designating them as reserves set aside to meet the ecological representation requirements.</p> <p>b) Where there are not enough mature stands (of the appropriate site-series) in the LU that are already constrained for other reasons, unconstrained stands will be identified and designated as reserves set aside to meet the ecological representation requirements.</p> <p>Where mature stands have been designated as reserves set aside to meet the ecological representation requirements, voluntary management intervention strategies to be used to help recruit old forest stands in the earliest possible timeframe include:</p> <p>i) Fertilization treatments, to help accelerate rates of growth and promote old-growth characteristics.</p> <p>ii) Stand thinning or stand modification treatments to help accelerate rates of growth and promote old-growth characteristics.</p>
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Indicated wildlife habitat is provided in protected areas.
Result or Strategy Description	With reference to individual development areas, where forested swamp areas >=0.25ha occur, they will be retained and a 1.5 tree-length (average width) management zone will be established to protect the forested swamp.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No such cedar-spruce-skunk cabbage forested swamp as defined in the HGLUOO exists in the harvest area of this development.
Result or Strategy Description	Within management zone established under Section6.34 above, >70% of the forest, measured in hectares, will be retained as mature or old forest.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No such cedar-spruce-skunk cabbage forested swamp as defined in the HGLUOO exists in the harvest area of this development.
Community Watershed	
Result or Strategy Description	<p>Prior to development activities within a community watershed, the applicable Plan Holders will form an agreement that documents:</p> <p>a) who is responsible for completing the watershed assessment and any updates that may be required; and</p> <p>b) how the rates of harvesting will be allocated, consistent with the watershed analysis; and</p> <p>c) who is responsible for tracking the rates of harvest within the community watershed.</p>
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not in a community watershed.
Result or Strategy Description	<p>Prior to proposing primary forest activities within a community watershed to which section8.2 of the FPPR applies, the Plan Holders will do all of the following:</p> <p>a) ensure a watershed assessment is completed by a qualified professional that assesses the current watershed condition; the potential impacts on water quality, water quantity, including risks to public health, and timing of water flows from primary forest activities; and provides a potential schedule for harvesting within the community watershed that maintains the community watershed's values; and</p> <p>b) ensure that primary forest activities are consistent with any recommendations made in the watershed assessment, and</p> <p>c) ensure the watershed assessment indicated in Sub-section a) above, is updated by a qualified professional at least every five years, unless no additional primary forest activities are proposed; and</p> <p>d) maintain a group ledger, updated annually at a minimum, which tracks the development activities within the community watershed.</p>
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not in a community watershed.
Cultural Heritage Resources	
Result or Strategy Description	The FSP Holders will submit maps for all proposed development areas to the Council of the Haida Nation,30 days prior to cutting authority submission, or 30 days prior Timber Sale posting/approval by the BC Timber Sales Manager.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	BCTS will submit this development to the CHN prior to cutting authourity submission or Timber Sale posting/ approval.
Result or Strategy Description	<p>The FSP Holders will, at a minimum of once annually, provide the Council of the Haida Nation with an opportunity to share information regarding cultural heritage resources that are the focus of traditional use and continued importance to the Haida Nation. Plan Holders will:</p> <p>a) identify areas where harvesting and/ or road construction activities are planned and request information respecting cultural heritage resources that are the focus of traditional use and continued importance within the identified areas; and</p> <p>b) keep a record of any information provided by the Haida First Nation on cultural heritage resources that are the focus of traditional use and continued importance within the Plan Area; and</p> <p>c) document how management activities will attempt to accommodate cultural heritage resources that are the focus of traditional use and continued importance, or why efforts to accommodate the traditional use were not made.</p>
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	BCTS will submit this development to the CHN prior to cutting authourity submission or Timber Sale posting/ approval.

Cultural Objectives	
Result or Strategy Description	"Haida Traditional Heritage Features" are defined in the LUO as being those features listed in Schedule2 of the LUO. However, in order to be measureable in the context of the FSP approval process, the features listed as HTHFs (Class 1 and Class 2) in the LUO are considered to be those that are of continued cultural significance to the Haida Nation, determined by using the following strategies: a) Potential HTHFs will be identified and assessed through the Cultural Features Identification Survey, completed by qualified surveyors. b) Where potential HTHFs are identified, AIAs will be completed, and the significance of the identified feature will be determined. c) Where identified features are deemed to be of continued cultural significance in the AIA, they will be classed as HTHFs and managed accordingly.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No Haida traditional heritage features were identified in the Cultural Features Identification Survey.
Result or Strategy Description	Plan Holders will not harvest within CS Areas (as identified in the LUO, Schedule 3).
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The closest cedar stewardship area to this development is at Riley creek, about3.5 km distant. There is no harvesting proposed in a cedar stewardship area.
Result or Strategy Description	Prior to commencing harvesting or road construction activities in a development area, the applicable FSP Holder will ensure that a Cultural Features Identification Survey has been completed for the proposed area by a surveyor certified by the Council of the Haida Nation.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	A CFI survey was done in July 2015 by Jay Nichol who is CHN certified. He filed a report on Jan 27,2016 with all details and a map.
Result or Strategy Description	Where Class 1 HTFFs are identified, they will be retained and a 1.0 tree-length (average width) no-harvest zone, measured from the edge of the HTHF, will be maintained to protect the HTFF. Adjacent the no- harvest zone a 1.0 tree-length (average width) management zone, measured from the edge of the no- harvest zone, will be established to protect the no-harvest zone, subject to a) and b), below. a) Where necessary to address site specific values, the Class1 HTFF management zone identified under Section 6.7 above, may be decreased by up to 0.5 tree-lengths from the outer edge of the management zone, provided that there is no net loss of management zone area within the development area. b) The area of the management zone may be reduced, if necessary for road access, other infrastructure or to address safety concerns, provided that: i) the integrity of the HTFF is maintained; and ii) the size of the management zone is consistent with the outcome of a completed intergovernmental process.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	One instance of devils club Class 1 Haida Traditional Forest Feature (HTFF) has been identified. Under the HGLUOO s.6(2) a reserve zone of one tree length and management zone of one tree length is mapped. Adjacent tree height of 32m was used as tree length. All is included in the WTRA and thus protected to satisfy FSP s.6.7.
Result or Strategy Description	Where Class 2 HTFFs are identified within a development area, >= 50% of the identified occurrences will be retained and their integrity protected. Stand level retention will be retained where required, to maintain the integrity of the HTFF. Additional strategies for preserving the integrity of HTFFs include the following: a) adjusting operational boundaries to exclude HTFF areas; and b) modifying harvesting practices in the vicinity of HTFFs.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Two species of Class 2 Haida Traditional Forest Feature (HTFF) have been identified in the development area. One instance of yellow pond lily is conserved in WTRA immediately at the source of stream H-1. Under FSP s.6.8a over a thousand Indian hellebore have been conserved in WTRA to satisfy the HGLUOO s.6(6) which requires protection of the integrity of 50% of a Class 2 HTFF.
Result or Strategy Description	Where Class 3 HTFFs are identified within a development area, they will be retained and protected within established stand level retention to the extent practicable. The percentage of HTFF occurrences that are protected within a given development area will range from 0-100%, depending on the location of the HTFFs and the location of stand level retention that is established to meet other objectives.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Some Class 3 HTFF's are included in the Cultural Features Report. Class 3 HTFF's will be retained and protected within the established stand level retention area, the WTRA. No further management action is planned.
Result or Strategy Description	Where cultural cedar stands, CMTs, or monumental cedar greater than120cm (measured at dbh) are identified, they will be retained and a 0.5 tree-length (minimum width) no-harvest zone will be maintained to protect identified feature. The no-harvest zone will be protected by establishing a 1.0 tree-length (average width) management zone, measured from the outer boundary of the no-harvest zone, subject to a), b) and c), below. a) Where alteration or removal of a cultural cedar stand, CMT or monumental cedar is required for road access, other infrastructure, or to address a safety concern, and no practicable alternative exists, a Plan Holder may alter or remove the cultural cedar stand, CMT or monumental cedar consistent with the outcome of a completed intergovernmental process, and the harvested CMT or monumental cedar is made available to the Haida Nation. b) Where a reduction in the size of the no-harvest zone is required for road access, other infrastructure, or to address a safety concern, and no practicable alternative exists, a Plan Holder may reduce the area of the no-harvest zone(s) consistent with the outcome of a completed intergovernmental process, and provided the integrity of the cultural cedar stand, CMT or monumental cedar is maintained. c) Where a reduction in the size of the management zone is necessary to address operational constraints or a safety concern, a Plan Holder may reduce the area of the management zone(s) consistent with the outcome of a completed intergovernmental process, and provided the integrity of the management zone is maintained.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	HAN 601 retains one monumental over 120 cm dbh with its reserve zone and management zone in the WTRA. No alterations are proposed, thus satisfying FSP s.6.15.

Result or Strategy Description	<p>Where development areas are either:</p> <p>i) > 10ha and the pre-harvest cedar (western redcedar and yellow cedar) content >30%; or</p> <p>ii) <= 10ha and the pre-harvest cedar (western redcedar and yellow cedar) content >60%;</p> <p>then Plan Holders will retain a minimum of 15% of the combined pre-harvest cedar composition of the development area, measured in hectares.</p> <p>The pre-harvest cedar composition will be determined by calculating the weighted average cedar content for the entire development area as indicated on the inventory mapping for the polygons in the development area. The areas that contribute to the cedar retention requirements will be calculated by summing the weighted cedar content for the contributing areas, in hectares, based on the inventory mapping for the applicable polygons.</p> <p>Plan Holders will meet the 15% cedar retention requirement using all of the following strategies:</p> <p>a) Areas designated to contribute to the cedar retention requirements will be first be located within no-harvest zones, management zones and stand level retention areas already designated for other objectives.</p> <p>b) Where existing cedar reserves are insufficient to meet the cedar retention requirements, then additional cedar retention areas will be retained.</p> <p>c) Cedar retention areas will located such that the retention areas are large and contiguous to the extent practicable. Cedar retention areas that contribute to meeting the 15% retention requirement will be > 1.0ha in size.</p> <p>d) Within the areas that contribute to the cedar retention requirement, a range of diameters of redcedar and yellow cedar will be retained which are representative of the pre-harvest area, as documented by the signing Forester in the Site Plan documents.</p>
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	<p>The harvest area in this development is 10.77 ha. The western red cedar plus yellow cedar live stems per hectare (sph) from the timber cruise are 229.7 + 106.5 = 336.2 sph which is 65.5% of total live stems per ha. The requirement for old growth cedar retention applies to HAN600 since the harvest area is more than 10 ha and the cedar composition is more than 30%.</p> <p>The WTRA for HAN600 has four polygons. The following discussion starts at the downslope polygon on entering the block and ends at the furthest back polygon to the north.</p> <p>The first polygon with the monumental has high cedar content but is less than one hectare so does not contribute to the 15% retention target. The second polygon between the switchback is larger than one hectare (1.2 ha) and is greater than the cutblock average cedar content. The third polygon is too small and surrounds the yellow pond lily. The fourth polygon is 7.6 ha and includes the devils club. It has comparable cedar content estimated 50-75%.</p> <p>Thus there is 1.2 + 7.6 = 8.8 ha which more than meets the 15% retention target. This satisfies the requirements of FSP s.6.10.</p>
Result or Strategy Description	<p>Where development areas have pre-harvest cedar (western redcedar and yellow cedar)composition greater than 20% in the harvested area, as indicated in the cruise compilation (measured in percent of cedar sph, not including dead potential or dead useless), then the Plan Holder will regenerate the area according to the minimum post-harvest cedar composition and strategies listed below (see Table 8 attached), subject to Section 6.12.</p> <p>The cedar commitment will be determined on a cutblock by cutblock basis. The cedar regeneration requirement for a cutblock will be calculated by multiplying the NAR times the appropriate Minimum Post-Harvest Cedar Composition, as indicated in Table 8, below. Location of planted cedar within the cutblock will be at the discretion of the prescribing Forester, and consistent with approved stocking standards.</p> <p>Plan Holders will use the following strategies to meet the objective:</p> <p>a) Plan Holders will strive to meet the cedar commitment through planting and/ or natural regeneration.</p> <p>b) Where deer browse hazard is moderate to high, planted cedar trees will be protected. Protection measures may include coning, scented deterrents, or caging.</p> <p>c) For areas that have been planted with cedar, where the cedar content falls below 80% of the Minimum Post-Harvest Cedar Composition requirement, the area will be fill-planted once. The cedar content will be assessed using Plan Holder survey information.</p> <p>d) Cedar acceptability criteria will be as follows:</p> <p>i) Regenerated cedar will only be accepted if they are of good form and vigour (refer to Appendix B).</p> <p>ii) Regenerated cedar will only be accepted if they are >= 1.2m tall.</p> <p>e) The cedar regeneration obligation due-date will be no sooner than 6 years, and no later than 20 years, post-harvest commencement. Plan Holders will complete cedar obligation surveys and data will be declared within the Ministry of Forests RESULTS system.</p> <p>Should the full cedar regen obligation not be fully met at the time of assessment, the amount of cedar regenerated will be accepted, provided that a) through c) from above have been completed, and the obligation will be deemed to have been met, with no further actions required.</p>
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	<p>The preharvest old forest has 336.2 live sph (Cw+Yc). FSP s.6.11 says the preharvest stand composition is obtained from the cruise compilation: percent of cedar (Cw+Yc) live stems per hectare, for HAN600 this is 65.5%. FSP s.6.11 Table 8 describes a minimum postharvest free growing standard for cedar: 250 sph measured at free growing. The preferred regeneration strategy outlined in detail at the end of this site plan will enable the plan holder to meet and exceed the FSP s.6.11 Table 8 requirement.</p>
Result or Strategy Description	<p>Where monumental cedar are identified in a development area, and are not located within a cultural cedar stand and are < 120cm (measured at dbh), they may be harvested, subject to:</p> <p>a) the applicable Plan Holder completing an intergovernmental process confirming that the monumental cedar is not required for cultural use; or</p> <p>b) the applicable Plan Holder completing an intergovernmental process confirming that harvesting the monumental cedar is required for road access, other infrastructure, or to address a safety concern and the Plan Holder will make the monumental cedar available to the Haida Nation, or other specific measures will be identified.</p> <p>Where monumental cedar are harvested under Section 6.16, the greater of 10% (measured in stems per hectare), or one monumental cedar will be retained within the development area.</p>
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no monumental cedar under 120 cm dbh identified in this development.
Result or Strategy Description	Where yew trees are identified within a development area and do not meet the definition of a western yew patch, the trees will be incorporated within stand level retention areas, where practicable.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	<p>Eight yew stems are identified with three of them in the ground based harvest area, three of them in the road right of way, and two outside the development area. Regarding the three yew stems in the ground based harvest area, BCTS should ensure the TSL operator has freshly remarked in the field, these three yew stems prior to harvest (located on the map). However due to machine operational and safety requirements it is possible that they may be damaged and not survive after harvest. It is expected the two yew stems outside the harvest area will survive.</p> <p>Due to the distribution of yew stems, it is not practicable to include the yew stems in a retention area.</p>

Result or Strategy Description	Despite Section 6.1 above, circumstances may arise where harvesting within Cedar Stewardship Area(s) (CS Area) for commercial purposes is desired. Where harvesting is proposed within a CS Area, the Plan Holders will ensure all of the following: a) any proposed harvest activities with CS Areas are consistent with the outcome of an intergovernmental process, completed by the Plan Holders as a group; and b) ensure the total CS Area area harvested is less than or equal to 10% of the total of all CS Areas (2,536.3ha, as indicated in Table 8, below), and that no more than 250ha is harvested in a 10 year period; and c) the CS Area harvest within a given Landscape Unit, for each 10 year period, will be proportional to the occurrence of CS Areas within the LU (see Table 7, below); and d) the Plan Holders will maintain a group ledger, updated annually at a minimum, which tracks any CS Area harvest activities; and e) where CS Areas overlap tenures outside of the Plan Area, the Plan Holders will make reasonable efforts to consult with the relevant tenure holder(s) to ensure that CS Area harvest level do not exceed the limits described in b) and c), above. Tables 7 and 8 are attached.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No harvesting is proposed in a LUO Schedule 3 cedar stewardship area.
Result or Strategy Description	The cedar regeneration requirement for a given cutblock may be lower than those set in Section6.11 above, provided that the new requirement is consistent with the outcome of a completed intergovernmental process.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	BCTS plans to meet or exceed the cedar regeneration requirement set out in FSP s.6.11.
Result or Strategy Description	Where Class 1 HTHFs are identified, they will be retained and a 500m (minimum width) no-harvest zone, measured from the edge of the HTHF, will be maintained to protect the HTHF, subject to a) and b), below. a) Where a reduction in the no-harvest zone is required for road access, other infrastructure, or to address a safety concern and no practicable alternative exists, a Plan Holder may reduce the size of the no-harvest zone consistent with the outcome of a completed intergovernmental process. b) Where necessary to address site specific values, the no-harvest zone may be decreased by up to 0.5 tree-lengths from the outer edge of the zone, provided that there is no net loss of no-harvest zone area within the development area. Site specific values will be determined by the signing Forester and documented within the Site Plan.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No Haida traditional heritage features were found.
Result or Strategy Description	Where Class 2 HTHFs are identified, they will be retained and a 100m (average width) no-harvest zone, measured from the edge of the HTHF, will be maintained to protect the HTHF, subject to a) and b), below. a) Where alteration, removal or reduction of the Class2 HTHF or no-harvest zone is required for road access, other infrastructure, or to address a safety concern and no practicable alternative exists, a Plan Holder may alter, remove or reduce the HTHF and/ or the size of the no-harvest zone consistent with the outcome of a completed intergovernmental process. b) Where necessary to address site specific values, the no-harvest zone may be decreased by up to 0.5 tree-lengths from the outer edge of the zone, provided that there is no net loss of no-harvest zone area within the development area. Site specific values will be determined by the signing Forester and documented within the Site Plan. Where the Class 2 HTHF is a "Karst Feature", it will be also be subject to Section 6.80, below.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No Haida traditional heritage features were found.
Result or Strategy Description	Where western yew patches are identified within a development area,they will be protected by establishing stand level retention areas, subject to: a) western yew patches may be altered or removed to accommodate operational requirements for road and bridge construction, where no practicable alternative exists.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No yew patches were identified within the development area.
Forest Reserves	
Result or Strategy Description	Plan Holders will retain all the Forest Reserves, as shown on LUO Schedule 8.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not adjacent to a Forest Reserve, and retains LUO Forest Reserves.
Result or Strategy Description	Despite Section 6.58 above, the area of an individual Forest Reserve may be reduced by up to 5%, provided that: a) applicable results and strategies within this FSP address the target requirements indicated in LUO Schedules 9 and 10; and b) the remaining Forest >= 5.0ha; and c) the reduction is necessary to: i) accommodate operational requirements for road or bridge construction, where no practicable alternative exists; or ii) accommodate road maintenance, deactivation, removal of danger trees, brushing and clearing within a right-of way, or for safety purposes, on any existing road under active tenure; or iii) to mitigate the impact of windthrow.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not adjacent to a Forest Reserve, thus FSP s.6.59 quoted above does not apply.

Result or Strategy Description	Despite Section6.58 above, a portion of a Forest Reserve may be moved to another location within the same Landscape Unit, provided that: a) the alteration of the Forest Reserve is consistent with the outcome of a completed intergovernmental process; and b) applicable results and strategies within this FSP (i.e., Marbled Murrelet and Ecological Representation) address all of the target requirements indicated in LUO Schedules9 and 10 for the applicable LU; and c) the portion removed is <=20 ha; and d) the areas retained are > 200m in width; and e) the relocation does not result in any Forest Reserve that is <5.0ha; and f) the relocation follows the recommendations of an assessment completed by a qualified professional which focuses on identifying candidate reserve areas consistent with meeting the LUO objectives established for Marbled Murrelet nesting habitat and ecological representation.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not adjacent to a Forest Reserve, thus FSP s.6.60 quoted above does not apply.

Measures for Preventing the Introduction or Spread of Invasive Plants																																																	
Result or Strategy Description	<p>7.0 Measures for Invasive Plants FRPA s. 47; FPPR s. 17 Sections 7.1 through 7.8 apply to FDU A. Table 11: Invasive Plants known to occur in the Plan Area, including high-priority species</p> <table><thead><tr><th>Common Name</th><th>Scientific Name</th><th>High Priority Invasive Plant Species on the Haida Gwaii?</th></tr></thead><tbody><tr><td>Gorse</td><td>Ulex europaeus</td><td>Y</td></tr><tr><td>Scotch Broom</td><td>Cytisus scoparius</td><td>Y</td></tr><tr><td>Japanese Knotweed</td><td>Polygonum cuspidatum</td><td>Y</td></tr><tr><td>Yellow Flag Iris</td><td>Iris pseudacorus</td><td>Y</td></tr><tr><td>Common Tansy</td><td>Tanacetum vulgare</td><td>Y</td></tr><tr><td>Meadow Hawkweed</td><td>Hieracium pilosella</td><td>Y</td></tr><tr><td>Orange Hawkweed</td><td>Hieracium aurantiacum</td><td>Y</td></tr><tr><td>Marsh Plume Thistle</td><td>Cirsium palustre</td><td>Y</td></tr><tr><td>Tansy Ragwort</td><td>Senecio jacobaea</td><td>Y</td></tr><tr><td>Himalayan Knotweed</td><td>Polygonum polystachyum</td><td>Y</td></tr><tr><td>Spotted Hawkweed</td><td>Hieracium maculatum</td><td>Y</td></tr><tr><td>Canada Thistle</td><td>Cirsium arvense</td><td></td></tr><tr><td>Bull Thistle</td><td>Cirsium vulgare</td><td></td></tr><tr><td>Common Burdock</td><td>Arctium minus</td><td></td></tr><tr><td>Oxeye Daisy</td><td>Chrysanthemum leucanthemum</td><td></td></tr></tbody></table> <p>Where the introduction or spread of invasive plants is likely the result of forest practices of a Plan Holder, the Plan Holder will do the following, unless the Plan Holder deems the area to be an active running surface: Training 7.1 Provide appropriate personnel training in the recognition of invasive plants that are, or may potentially be within (i.e., known to occur in adjacent areas) the Plan area. Training will include the use of the provincial IAPP application, map display and Report-A-Weed form and procedures. Monitoring & Reporting 7.2 Monitor for the presence of invasive plant species during forest development fieldwork, silviculture surveys, routine inspections and general travel. Where new invasive plant incidences are identified, they will be reported within 30 days to the NWIPC, or by filing a report in the IAPP application directly. 7.3 Where new occurrences of invasive plants are detected (either a newly introduced plant species, or a new location of a plant species known to already exist within the Plan Area), the site will be assessed by trained personnel. Where practicable, an appropriate action plan will be prepared and implemented to address the invasive plant occurrence. Action plans may include working with government agencies to develop and implement an eradication or management plan. Sanitation & Disposal 7.4 Recommend their logging and road building contractors to inspect vehicles and equipment, particularly tracks and undercarriages, for the presence of plant parts and that equipment be cleaned prior to leaving an area that is known to contain priority invasive plant species. 7.5 Where invasive plant material is disposed of it will be disposed of in a landfill or by burning, to the extent practicable. Re-vegetation 7.6 For newly (after the date of Plan commencement) developed areas (roads and cutblocks) that result in exposed mineral soils (where contiguous area is greater than 0.1ha, with a contiguous minimum width of 5m, excluding the running surface of a road), the Plan Holder will do the following: a) re-vegetate the exposed area as climatic and soil conditions allow and within one year of disturbance, if: i) the disturbed area is not to be reforested and is not the running surface of a road; and ii) the soil disturbance is likely to result in the introduction or spread of the established invasive plants; and iii) re-vegetating the site will materially reduce that likelihood of the spread of the invasive plants. b) monitor the seeded areas for one year from the date of initial seeding to determine if the seed germinates to the extent necessary to occupy the areas of exposed soil; and c) if within one year of the area being initially seeded, the seed does not germinate to the extent necessary to occupy the areas of exposed soil, the Plan Holder will re-seed the area as soon as practicable. Where seeding alone is not successful, fertilization and scarification treatments will be considered, where feasible. 7.7 For re-vegetation, Plan Holders will use Common No. 1 Forage Mixture (according to Canada's Seeds Regulations), or better. Roadside Brushing 7.8</p>	Common Name	Scientific Name	High Priority Invasive Plant Species on the Haida Gwaii?	Gorse	Ulex europaeus	Y	Scotch Broom	Cytisus scoparius	Y	Japanese Knotweed	Polygonum cuspidatum	Y	Yellow Flag Iris	Iris pseudacorus	Y	Common Tansy	Tanacetum vulgare	Y	Meadow Hawkweed	Hieracium pilosella	Y	Orange Hawkweed	Hieracium aurantiacum	Y	Marsh Plume Thistle	Cirsium palustre	Y	Tansy Ragwort	Senecio jacobaea	Y	Himalayan Knotweed	Polygonum polystachyum	Y	Spotted Hawkweed	Hieracium maculatum	Y	Canada Thistle	Cirsium arvense		Bull Thistle	Cirsium vulgare		Common Burdock	Arctium minus		Oxeye Daisy	Chrysanthemum leucanthemum	
Common Name	Scientific Name	High Priority Invasive Plant Species on the Haida Gwaii?																																															
Gorse	Ulex europaeus	Y																																															
Scotch Broom	Cytisus scoparius	Y																																															
Japanese Knotweed	Polygonum cuspidatum	Y																																															
Yellow Flag Iris	Iris pseudacorus	Y																																															
Common Tansy	Tanacetum vulgare	Y																																															
Meadow Hawkweed	Hieracium pilosella	Y																																															
Orange Hawkweed	Hieracium aurantiacum	Y																																															
Marsh Plume Thistle	Cirsium palustre	Y																																															
Tansy Ragwort	Senecio jacobaea	Y																																															
Himalayan Knotweed	Polygonum polystachyum	Y																																															
Spotted Hawkweed	Hieracium maculatum	Y																																															
Canada Thistle	Cirsium arvense																																																
Bull Thistle	Cirsium vulgare																																																
Common Burdock	Arctium minus																																																
Oxeye Daisy	Chrysanthemum leucanthemum																																																
Applies:	YES																																																
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	<p>The Invasive Alien Plant Program (IAPP) Map Display tool was used to identify invasive plant sites in the general area of this development on December 11, 2015. There were no invasive plant occurrences noted within a half kilometer using the IAPP Database. However, Bull thistle (BT) and Sowthistle (SO) were noted at the Bonanza creek bridge area 1.7 km by road from BON101. BT and SO could potentially be transported to HAN600 by attachment to vehicles. Bull Thistle is an invasive plant listed in the Forest Stewardship Plan, but not as a species of high priority for Haida Gwaii. Sowthistle is an invasive species not on the list in the FSP.</p> <p>Field crews will assess for the presence of any known or new invasive plant species during block planning activities. No occurrences of invasive species were identified during field work activities. Harvesting and road building crews should be aware of and be able to identify invasive alien plants and should follow the management practices for harvesting and road building outlined by the Invasive Plant Council of B.C. in their publication T.I.P.S (Targeted Invasive Plant Solutions) for forestry operations, July 2007 (see web site: www.invasiveplantcouncilbc.ca). Survey crews should be particularly aware of the species identified as occurring locally during the course of future silviculture surveys and report any new occurrences through the "Report-a-Weed" tool on the IAPP web site.</p> <p>As well as the preventive measures outlined in T.I.P.S., the Licensee/Permittee will seed all contiguous areas of exposed mineral soil disturbed by a forest practice activity, that are not to be reforested (including ditch lines), with ecologically suited grass and legumes within one year of disturbance. The licensee/permittee should refer to current BCTS-Chinook Invasive Plant Best Management Practices for additional advice and recommended seed mix. BCTS must monitor any seeded areas over the year following seeding to ensure they are revegetated. Sites not revegetated will be re-seeded and further monitored. The site will be managed for late seral species, i.e. restocked with tree species within 3 years and managed for a closed-canopy stand. Management towards a free-growing stand includes monitoring and brushing treatment(s). This will also mitigate the risk of establishment of invasive plant species and thereby protect the integrity of the natural plant ecosystems in the development area.</p>																																																

Recreation Resources	
Result or Strategy Description	Prior to proposing timber harvest or road construction in an area adjacent to a designated recreation site or trail with established objectives, the Plan Holder will consult with the government agency responsible for the recreation site or trail, to ensure that the proposed activity will be conducted in accordance with the established objectives applicable to the area.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Timber Harvesting supports recreation objectives to maintain road access to Rennell Sound recreation sites. This development does not impact a trail or a recreation site.
Result or Strategy Description	Where "non-motorized access" is the applicable established objective for the designated recreation site or trail, and proposed new road construction will provide motorized access to the recreation resource, the Plan Holder will: a) deactivate the road, within one year following completion of primary forest activities, to a condition which re-establishes the degree of motorized access similar to that which existed prior to harvest operations; or b) obtain written approval from the government agency responsible for the recreation site or trail, to maintain access for further operations or activities, and the access will be established as per the approval.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Recreation sites in Rennell Sound are accessed by vehicle, non-motorized does not apply.
Recruitment in No-harvest Zones, Mgmt Zones and Stand Level Retention	
Result or Strategy Description	Where some or all of the no-harvest zones, management zones or stand level retention areas established under the applicable LUO objectives (refer to Table 9, attached) have been previously altered or harvested, the Plan Holders will provide for recruitment of mature and old forest(functional riparian forest for Sections 6.17, 6.18, 6.20) in the no-harvest zone, management zone or stand level retention area, as applicable, through natural processes (passive recruitment) and may promote recruitment through voluntary interventions (active recruitment). For the management zones associated with Cultural Cedar Stands, CMTs and Monumental Cedar, the Plan Holders will maintain or recruit, in the shortest possible timeframe, at least90% of the forest as mature and old forest, through natural processes (passive) and may promote recruitment through voluntary interventions (active). Where the recruitment strategy is to use natural processes(passive), Plan Holders will not harvest any of the existing mature or old forest in the management zone until the90% threshold has been attained.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Recruitment is not applicable since all the WTRA is old forest.
Resource Features	
Result or Strategy Description	Where karst Resource Features are encountered during primary forest activities, they will be managed as per Section 6.6 above. Regardless of the outcome of the inter-governmental process, karst Resource Features will not be damaged or rendered ineffective, consistent with FPPR s. 70 (1).
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no karst features in this development.
Riparian Management	
Result or Strategy Description	For Type I fish habitat, Type II fish habitat, upland streams, and wetlands and lakes that do not meet the definition of Type I or II fish habitat, as defined in the LUO; Plan Holders adopt the FPPR requirements in relation to restrictions within a riparian management area.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	BC Timber Sales accepts that any FPPR riparian restrictions apply to all riparian management areas in the development.
Result or Strategy Description	Retention of trees within riparian management zones will be as follows: a) For Type I and Type II fish habitat, the retention of trees within riparian management zones is detailed in Sections 6.17 and 6.18, above, respectively. b) For Upland Streams, the retention of trees within riparian management zones, measured in basal area, will range from 0-100%, as deemed appropriate by the signing Forester and documented within the Site Plan. Additional factors for riparian retention for Upland Streams are detailed in Section 6.27 and 6.28, above. c) For wetlands and lakes that do not meet the definition of Type I or II fish habitat, as defined in the LUO, with respect to FPPR s. 12(3), unless specific wildlife and/ or biodiversity values are identified in the riparian management area of a wetland or lake, retention of trees within the RMZ will be based on consideration of the likelihood of damages to the riparian feature or RRZ caused by windthrow. Basal area retention will range from 0-100%, as deemed appropriate by the signing Forester and documented within the Site Plan.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The no-harvest and management zones under the HGLUOO for Type I and Type II streams retain all trees unaltered. Sec 6.63 of the FSP stipulates that a 30m RMZ for upland streams be utilized to apply FPPR restrictions or management requirements. For the upland streams in this development no timber retention is necessary. A seven meter machine free zone is required to protect stream banks to satisfy FSP s.6.27 since there is scant shrub and no herb vegetation in the old forest riparian management zones of upland streams in this development. Under comments on FSP s.6.28 I have discussed how the hypermaritime climate maintains sufficient humidity for riparian vegetation. It is overpopulation of deer that exerts pressure on riparian vegetation to the point of eliminating herbs and reducing brush species cover to less than1-5% on most upland streams. There are no wetlands or lakes within this development.
Result or Strategy Description	For wetlands and lakes that do not meet the definition of Type I or II fish habitat, as defined in the LUO, Plan Holders adopt the FPPR requirements in relation to restrictions within a riparian reserve zone.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no wetlands or lakes associated with this development.
Result or Strategy Description	Where a lake meets the definition of Type I or II fish habitat, as defined in the LUO, then the lake is classed as Type I or II Fish habitat and managed accordingly, otherwise Plan Holders adopt the FPPR requirements in relation to lake riparian classes and minimum zone widths.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There is no lake in this development.

Result or Strategy Description	Where a wetland meets the definition of Type I or II Fish Habitat, as defined in the LUO, then the wetland is classed as Type I or II Fish habitat and managed accordingly, otherwise, Plan Holders adopt the FPPR requirements in relation to wetland riparian classes and minimum zone widths.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no wetlands associated with this development.
Soil Objectives	
Result or Strategy Description	The Plan Holders undertake (FPPRs.12.1(1)) to comply with the legislated requirements setting limits for soil disturbance and for permanent access structures as outlined in FPPR s. 35 and 36.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Permanent access structure (PAS) limits for this development have been set in accordance with FPPR s.36. Soil disturbance limits for this development have been set in accordance with FPPR s.35.
Visual Objectives	
Result or Strategy Description	The Plan Holders will conduct road construction or timber harvesting activities within Scenic Areas such that they conform to the established VQOs, unless it is for the following exceptional circumstances beyond the control of the Plan Holders: a) it is to recover timber damaged from natural causes and the action must be completed expeditiously; or b) the activities are otherwise required by government. If harvesting and/ or road building occurs and the VQO is exceeded, as per subsections a), or b) above, then the Plan Holder will ensure that good design principles are followed and the VQO is exceeded to the minimum amount required.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	HAN600 is non-visual and not in a scenic area with the following exception noted, thus FSP s.6.77 does not apply. A very small portion of HAN600 (0.015ha) is in visual sensitivity unit (VSU) #356 Partial Retention. Given only a few hundredths of a hectare of the block are within this VSU and the presence of natural screening on the landforms above Rennell Sound, HAN600 is expected to be visually non-evident from all three viewpoints selected for the Visual Impact Assessment of HAN601 and HAN605 across Hangover creek valley.
Wildlife & Biodiversity - Landscape Level	
Result or Strategy Description	The Plan Holders undertake (FPPR s.12.1(3)) to comply with the legislated requirements in relation to harvesting adjacent to another cutblock (FPPR s. 65), subject to Section 6.73, below.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	HAN600 is adjacent to HAN103 situated downslope toward Hangover creek. HAN600 is 9.6 ha; HAN103 is 14.5 ha. Under FPPR s.65 (2b) the sum of these openings is well under 40ha, thus compliant with FSP s.6.72.
Result or Strategy Description	The Plan Holders undertake (FPPRs.12.1(3)) to comply with the legislated requirements in relation to maximum cutblock size (FPPR s. 64).
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The net area to be reforested of HAN600 is 9.6 ha. This is less than 40 ha, and thus complies with FPPR s.64 (1a).
Result or Strategy Description	As per FPPR sec.12.4(2), the Plan Holders will adhere to FPPR s.65 for all areas within FDU A, with the following exceptions, which will only apply to the Plan Area within the Eden Lake Landscape Unit, as shown on LUO Schedule 1: a) Section 65 (3)(a) is replaced with: at least 75% of the net area to be reforested of the existing cutblock is stocked such that the average height of the well-spaced trees is a minimum of the free growing height as specified in the approved Stocking Standards, located in Appendix C; and b) Section 65 (3)(b)(ii) is stocked such that the average height of the well-spaced trees is a minimum of the free growing height as specified in the approved Stocking Standards, located in Appendix C.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development complies with FPPR s.65 and is not in the Eden Lake LU.
Wildlife & Biodiversity - Stand Level	
Result or Strategy Description	The Plan Holders undertake (FPPR s.12.1(4)) to comply with the legislated requirements in relation to wildlife tree retention (FPPR. s. 66) and restriction on harvesting in a wildlife tree retention area (FPPR. s. 67). In regards to the FPPR requirements for wildlife tree retention, each Plan Holder is individually responsible for meeting the requirements and tracking their wildlife tree retention areas.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	FPPR s.66 requires a minimum area of Wildlife Tree Retention Areas(WTRA). This development retains much in excess of that minimum. BC Timber Sales tracks location and area of WTRA under its tenure thus complying with FSP s.6.74.
Wildlife Habitat Areas and General Wildlife Measures	
Result or Strategy Description	In respect of the WHAs, the Plan Holders will comply with the applicable GWMs, as per FPPR s.69.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development complies with the applicable General Wildlife Measures. No portion of this development is within a Marbled Murrelet WHA or a Goshawk WHA.
Result or Strategy Description	In respect of the WHAs, the Plan Holders will comply with the applicable GWMs, as per FPPR s.69.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development complies with the applicable General Wildlife Measures. No portion of this development is within a Marbled Murrelet WHA or a Goshawk WHA.

Wildlife Objectives	
Result or Strategy Description	Despite Section 6.44 above, alteration or removal of trees within the management zone may occur, outside of the winter hibernation season, consistent with any of the following: a) the alteration and/ or removal is required to accommodate operational requirements for road or bridge construction and no practicable alternative exists; or b) for any existing road under active tenure, the alteration and/ or removal is required to accommodate: road maintenance, deactivation, the removal of danger trees, brushing and clearing within a right-of-way, for safety purposes; or c) the alteration and/ or removal is required to mitigate the impact of windthrow.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There were no black bear dens identified in this development, thus there is no black bear den management zone.
Result or Strategy Description	Despite Sections 6.50 and 6.51above, Northern Goshawk reserves (LUOSch.12) and no-harvest zones may be reduced, provided that: a) the reduction is consistent with the outcome of a completed intergovernmental process; and b) the reduction is required for road access, where no practicable alternative exists, or to address a safety concern; and c) the reduction does not occur during Northern Goshawk breeding season; and d) there is no net loss to the Northern Goshawk reserve area.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	If, following confirmation of a Northern Goshawk nest, BCTS demonstrates that road access is necessary, or there is no practical alternative other than completion of timber harvesting, and it is not breeding season, development may proceed according to the result of an intergovernmental process.
Result or Strategy Description	For each LU, and where development areas are proposed by a Plan Holder, the applicable Plan Holders will do the following, prior to development activities within the applicable LU: a) a Marbled Murrelet nesting habitat retention inventory will be completed; and b) Applicable Plan Holders will form an agreement that documents how the required Marbled Murrelet nesting habitat retention will be allocated and who is responsible for tracking the nesting habitat retention within the LU, as indicated in Section 6.48c), above.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Of a total 7037 ha of Marbled Murrelet (MAMU) habitat identified in the Rennell LU, LUO Schedule 9, 5278 ha are the indicated target. Thus 1759 ha of MAMU habitat is in excess of the target. There is no MAMU habitat as per Schedule 11 of the LUO mapped in or around HAN600. It is understood that BCTS tracks harvest and retention of MAMU habitat by means of a group ledger maintained by Zimmfor. Chartwell has analyzed this ledger and reported that BCTS should put into retention 6.5 ha of MAMU habitat in the Rennell LU.
Result or Strategy Description	For the purposes of recruiting future Black Bear den sites, where practicable: a) suitable western redcedar or yellow-cedar will be retained within the management zone identified in Section 6.44 above; and b) trees, snags, stumps and logs >80cm in diameter will be retained within stand level retention associated with the development area.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There is a significant proportion of cedar (Cw+Yc) greater than 80cm in diameter in HAN600 WTRA. This satisfies FSP s.6.46 to provide potential for future bear den sites.
Result or Strategy Description	Plan Holders will retain all Northern Goshawk reserves as shown on LUO Schedule 12.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There is no LUO Schedule 12 Northern Goshawk reserve near this development.
Result or Strategy Description	Plan Holders will retain all Northern Saw-whet Owl reserves, as shown on LUO Schedule 12
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	On the LUO Schedule 12 map there are about ten Northern Saw-whet Owl (NOSO) reserves. The most southwesterly reserve is in Rennell Sound on Riley creek. HAN600 is about 4 km northwest of the Riley creek NOSO Reserve. Harvesting in HAN600 retains all LUO Schedule 12 reserves as per FSP s.6.55.
Result or Strategy Description	Where a Plan Holder discovers a new potential Northern Saw-whet Owl nest that is outside of the LUO Schedule 12 reserves, the Plan Holder will: a) cease harvesting and road-building activities within a 180m radius of the potential nest immediately and report the location of the potential nest to the Council of the Haida Nation and the Province of BC as soon as practicable; and b) have the nest and surrounding area assessed by a qualified professional; and c) where the qualified professional determines the nest to be a Northern Saw-whet Owl nest, a no- harvest zone will be established around the nest site that is a minimum of10ha and centred on the nest; and d) the location of the confirmed nest will be reported to the Council of the Haida Nation and the Province of BC as soon as practicable.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No Northern Saw-whet Owl (NOSO) nests are known near the development area. A search of B.C. species at risk database reveals that R.J. Cannings detected presence of NOSO during his 1997 survey up the Hangover Creek Road. The northern boundary of HAN600 is a half kilometer from the approximate site where Cannings heard the owl call in 1997. Preferred nesting habitat for the owl is gentle sloping old forest near riparian areas such as that adjacent to and east of Hangover creek. No restrictions on road construction and harvesting are planned for HAN600.

Result or Strategy Description	Where a Plan Holder discovers a potential Northern Goshawk nest that outside of the LUO Schedule12 reserves, the Plan Holder will do all of the following: a) cease harvesting and road-building activities within 800m of the potential nest immediately and report the location of the potential nest to the Council of the Haida Nation and the Province of BC as soon as practicable; and b) have the nest and surrounding area assessed by a qualified professional; and c) where the qualified professional determines the nest to be a Northern Goshawk nest, a no-harvest zone will be established around the nest site, that is a minimum of 200ha and that maximizes the best available nesting and foraging habitat available, to protect the integrity of the nest site, consistent with the assessment and recommendations of a qualified professional; and d) the location of the confirmed nest will be reported to the Council of the Haida Nation and the Province of BC as soon as practicable; and e) unless the nest is confirmed by a qualified professional to be inactive during the Northern Goshawk breeding season (reconfirmed annually), a restricted activity zone will be maintained during the breeding season, with a minimum radius of 800m around the nest site.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	If a Northern Goshawk nest is seen or suspected to be present, stop all harvesting and road building activity. A qualified professional must be brought to the site. If confirmed to be a Northern Goshawk nest BCTS should immediately plan how to shut down all operations in this development to comply with FSP s.6.51.
Result or Strategy Description	Where practicable, Northern Saw-whet Owl core nesting areas will be identified and retained within stand level retention and other no-harvest or management zone areas and distributed across the landscape, with a target maximum inter-patch spacing of 1,400m.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No Northern Saw-whet Owl (NOSO) nesting area has been identified in the Hangover creek area. However there is significant forest stand retention in the vicinity of the development of HAN600, 601, and 605. The reserve zone of Hangover creek is 110m wide and a spruce hemlock old forest is conserved in this riparian reserve zone. Associated with HAN600, HAN601, and HAN605 are WTRAs which conserve old forest, though mostly on slopes too steep for NOSO preferred forest habitat. With this development proposal is a proposal to create Forest Reserve adjacent to the east side of Hangover creek, which overlaps some potential NOSO habitat. Thus habitat is conserved by measures related to this development.
Result or Strategy Description	Within each Landscape Unit ,and where development areas are proposed by a Plan Holder, prior to development activities, the Plan Holders will: a) retain an amount of Marbled Murrelet nesting habitat within each LU greater than or equal to the LU target area listed in LUO Schedule 9; and b) ensure the nesting habitat referred to in Sub-section a) above, is within the areas shown in LUO Schedule 11; or may be a different area than identified in LUO Schedule 11, provided the nesting habitat is Class 1 or 2, as identified by a qualified professional; and c) maintain a group ledger, updated annually at a minimum, which tracks the depletions and additions to the Marbled Murrelet nesting habitat retention inventory, by LU.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Of a total 7037 ha of Marbled Murrelet (MAMU) habitat identified in the Rennell LU, LUO Schedule 9, 5278 ha are the indicated target. Thus 1759 ha of MAMU habitat is in excess of the target. There is no MAMU habitat as per Schedule 11 of the LUO mapped in or around HAN600. It is understood that BCTS tracks harvest and retention of MAMU habitat by means of a group ledger maintained by Zimmfor. Chartwell has analyzed this ledger and reported that BCTS should put into retention 6.5 ha of MAMU habitat in the Rennell LU.
Result or Strategy Description	Despite Section 6.44 above, alteration or removal of a Black Bear den or its no-harvest zone, or both may occur, provided that: a) the alteration and, or removal is consistent with the outcome of a completed intergovernmental process; and b) the alteration and/ or removal is required for road access or to address a safety concern; and c) the alteration or removal does not occur during the winter hibernation season.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No black bear dens have been identified in this development.
Result or Strategy Description	Where a Plan Holder discovers a new potential Great Blue Heron nest site, the Plan Holder will: a) cease harvesting and road-building activities within a 350m radius of the potential nest immediately and report the location of the potential nest to the Council of the Haida Nation and the Province of BC as soon as practicable; and b) have the nest and surrounding area assessed by a qualified professional; and c) where the qualified professional determines the nest to be a Great Blue Heron nest, a no-harvest zone will be established consistent with 6.53 above; and d) the location of the confirmed nest will be reported to the Council of the Haida Nation and the Province of BC as soon as practicable; and e) unless confirmed by a qualified professional to be inactive three consecutive years during the Great Blue Heron Breeding season (reconfirmed annually), a restricted activity zone will be maintained during the breeding season, with a minimum radius of 150m measured from the edge of the no- harvest zone.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No Great Blue Heron nest sites were identified near this development.
Result or Strategy Description	With reference to individual development areas, where Black Bear dens occur,they will be retained and a 20m (minimum width) no-harvest zone will be maintained to protect the den. The no-harvest zone will be protected by establishing a 1.0 tree-length (average width) management zone, measured from the outer edge of the reserve zone.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No black bear dens have been identified in this development.
Result or Strategy Description	With reference to individual development areas, where Great Blue Heron nest sites occur they will be retained and a 350m (minimum width) no-harvest zone, measured from the edge of the nest site, will be maintained to protect the nest site. Additionally, the no-harvest zone will be >= 45ha in size.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	No Great Blue Heron nest sites were identified near this development.

STOCKING REQUIREMENTS

SU	NAR	STANDARDS ID #	OTHER PERFORMANCE STANDARDS
1	9.6	1039598	MITD for Dr is 1.5m. Sitka Spruce: On marginal sites: CWHvh2 01 where Ss is accepted, it will only be accepted to a maximum of 50% of the minimum stocking density. Furthermore, on these sites, Ss will be limited in terms of its acceptance at regen and Free-Growing to microsites that are medium or better, in terms of productivity (Soil Nutrient Regimes C-E). Sitka spruce will be targeted on elevated and productive microsites. In terms of elevation, Ss will be focused on lower elevation sites and planted within the applicable elevation range for the stock.yNatural red alder ingress will be defaulted to a preferred species on all sites within 3 metres of any stream banks where harvesting is permissible.
COMMENTS	<p>In the FSP sec. 6.11 requires regeneration to meet the minimum cedar composition described in FSP Table8. The preharvest old forest has 336.2 live sph (Cw+Yc). FSP s.6.11 says the preharvest stand composition is obtained from the cruise compilation: percent of cedar (Cw+Yc) live stems per hectare, for HAN600 this is 65.5%. FSP s.6.11 Table 8 describes a minimum postharvest free growing standard for cedar: 250 sph measured at free growing.</p> <p>The LUO sec. 7 (3) states regenerate the area to establish a composition of western red cedar and yellow-cedar that are equivalent to the preharvest composition. The target stocking at free growing is 900 well spaced stems per ha. Thus the required cedar composition at free growing (Cw+Yc) under LUO sec. 7 (3) is 65.5% of the free growing target: 590 well-spaced stems per ha. To guard against plantation losses from less than perfect planted seedling microsite selection, planting stock handling, and browse guard maintenance, an additional 60 sph Cw+Yc should be planted.</p> <p>Plant 800 stems per ha. Cw 450/ha, Yc 200/ha, Hw150/ha. Cw and Yc should be distributed throughout HAN601 SU1. Planted Hw should be focused on thick humus microsites derived from rotted wood.</p> <p>Natural Hw regeneration should fill in and supply the remaining free growing stems to reach the free growing target900 per ha.</p> <p>For stock type, a PSB412A provides good root development and yet is economical. Fertilizer at time of planting is beneficial on this zonal medium soil nutrient site, but optional since there is no salal competition. Browse guards are necessary for all the Cw and Yc.</p>		

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2016 03 12	YES

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
David Bain	
DATE SIGNED	
2016/03/12	
I certify that the work described herein fulfils standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work.	

Map attached forms an integral part of the site plan.

SUPPORT DOCUMENT

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A93737	-	HAN600	BB3XN		A		53 25 41 / 132 31 51

ASSESSMENTS

VISUAL IMPACT ASSESSMENT INFORMATION
HAN600 is non-visual and not in a scenic area with the following exception noted: A very small portion of HAN600 (0.015ha) is in visual sensitivity unit (VSU) #356 Partial Retention. Given only a few hundredths of a hectare of the block are within this VSU and the presence of natural screening on the landforms above Rennell Sound, HAN600 is expected to be visually non-evident from all three viewpoints selected for the Visual Impact Assessment of HAN601 and HAN605 across Hangover creek valley.
PEST INCIDENCE SURVEY INFORMATION
Pest Specific Comments
Forest Health Comments
SU: 1 Pest Code: AD Common Name: Deer Browse Damage Percent Stand(s) Infected within the Block: Pre harvest shrub and herbaceous layer is heavily browsed. Deer sign is evident throughout the proposed cutblock. Post-harvest Actions Prescribed: Protect cedar and cypress seedlings from deer browse. Four foot high plastic cones have been used effectively, as long as stakes are inserted into soil at least a foot and cones are visually checked for need of maintenance after the winter, before spring shoot growth. Pest Code: NWT Windfirm boundary analysis: A windthrow assessment was completed for HAN600. It reports on dominant storm winds from the southeast. In addition storm winds come from the west. HAN600 is sheltered somewhat by the ridge from west winds. There is a moderate expectation of windthrow between FC4-6 due to fetch for southeasterly storm winds. The timber type from the cruise between FC4 to FC6 is 79% of live stems cedars, 21% hemlock. Given the high cedars content it is likely potential windthrow would be limited to individual hemlock trees, and thus there would be lower risk of inducing slope instability. Consideration was given to boundary segment FC1-1 to FC3. The stream banks of G-1 and A-1 do not seem to be susceptible to destabilizing windthrow at this location. All trees are cut in the adjacent block on the windward bank of stream A-1. Stream G-1 is small and adjacent timber is open, spike topped, and stunted. Further consideration was given to timber between RC3, RC4, RC5. There is limited fetch for any storm winds and high cedar content of this steep slope forest stand suggests windthrow risk is low. There are no further actions planned for windthrow management. Pest Code: DMH Common Name: Hemlock Dwarf Mistletoe Percent Stand(s) Infected within the Block - Pre-harvest: Significant presence of mistletoe in the forest stand. Post-harvest Actions Prescribed: Hemlock species comprise a third of the adjacent timber along the block boundaries. Accept Hw regeneration as well spaced, only at more than 15 meters from the block boundary.
ARCHAEOLOGICAL IMPACT ASSESSMENT INFORMATION
A Cultural Features Identification Survey was conducted in July 2015. The report dated January 27, 2016 and signed by Council of the Haida Nation certified surveyor J Jay Nichol TFT states that an Archaeological Impact Assessment is not required.
TERRAIN STABILITY FIELD AND GULLY ASSESSMENTS INFORMATION
Terrain Stability Comments
Terrain within Block HAN600 has a very low to low hazard for clearcut harvesting with reserves and with a combination of ground-based yarding in low-gradient terrain, restricted ground-based yarding in much of the block, and cable yarding for the steepest part of the block. Harvesting within the block must prevent downslope drainage diversion or drainage concentration. Measures to prevent this include falling and yarding away from streams, using full suspension if cable yarding across streams, using puncheon along machine trails, and using designated crossing points and temporary drainage structures where machine trails cross streams. Outside the block to the north are slopes with high terrain stability hazard. Outside the block to the east is area with very high terrain stability hazard including three previous recent landslides. The road right-of-way from 0+877 to 1+435 HAN7497 is upslope of this area of very high terrain stability hazard. Hydrological retention is critical in this upslope area and thus timber outside of the right of way is retained standing outside the block. This retention level will not result in significant increase of the downslope terrain stability hazard.
Gully Comments
There are three gullies in HAN600. Streams B-1 and G-1 below the road at 0+786 and 0+821 flow in gullies. The TSFA states both streams are variably incised, with sidewalls that range from about 4 m to almost 20 m high (but that average about 6 m to 8 m high) and sidewall gradients of 60% to 80%. Management of these gullies during harvest: Fall away from streams and yard away from streams. Do not yard up or down streams. Around these gullies the TSFA says there is low terrain stability hazard for proposed clearcut harvest with restricted ground-based yarding (hand falling into lead for machinery operating from roads). The third gully is along stream A-1. Harvest is planned for outside and northwest of the gully sidewall. Harvest west and above the gully headwall is restricted to road right of way. There was a landslide within the last 20 years at the head of the gully A-1. The TSFA states that the hydrological impact of right of way harvest will not significantly increase the likelihood of additional landslides downslope.
VEGETATION
During site plan field work May 26, 2015 few shrub and herb layer plants were seen. Scant false azalea and huckleberry and Alaska blueberry individuals were noted: usually more than 1.5m tall. Few salmonberry plants 15cm high were seen. Salal was not noted as present. Feathermosses were dominant. Competitive herbs were not seen except some grass Elymus glaucus on poorly drained sites. Therefore vegetation management need only be passive. That is, during silviculture surveys competitive brush and herb species should be noted. No other measures are planned for brush management.

RIPARIAN ASSESSMENTS					
Management Strategies					

Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
G-1 S6	RMZ		30.0		Fell timber away from stream G-1. Yard away from G-1, or use full suspension if yarding across the stream. Do not yard up or down this stream. One designated crossing point has been mapped; use temporary drainage structures for this machine trail stream crossing location. Otherwise observe a 7 meter machine free zone on each side of the stream. Downstream of the road crossing G-1 at 0+821, hand fall into lead for machinery operating from roads. See Gully Management comments.
H-1 S6	RMZ		30.0		Fell timber away from stream H-1. Yard away from H-1, or use full suspension if yarding across the stream. Do not yard up or down this stream. Two designated crossing points have been mapped; use temporary drainage structures for these machine trail stream crossing locations. Otherwise observe a 7 meter machine free zone on each side of the stream.
B-1 S6	RMZ		30.0		Fell timber away from stream B-1. Cable yard away from B-1, or use full suspension if yarding across the stream. Do not yard up or down this stream. Near the road crossing B-1 at 1+435, observe a 7 m machine free zone when forwarding timber. Downstream of the road crossing B-1 at 0+786, hand fall into lead for machinery operating from roads. See Gully Management comments.
E-1 S6	RMZ		30.0		There is a pre-existing slide scarp downslope of stream E-1 outside HAN600. Management of the upslope area which stream E-1 flows through limits harvest to road right of way timber only.
A-1 S6	RMZ		30.0		Where road right of way harvest occurs, fall away yard away. Harvest is planned for outside and northwest of the gully sidewall. Otherwise no harvest is planned along stream A-1. See Gully Management comments.
L-1 S6	RMZ		30.0		Observe 7 meter machine free zone.

SOIL ASSESSMENT							
HAZARD RATINGS				SOIL CHARACTERISTICS			
SU	Soil Comp	Soil Erosion	Soil Disp	Depth To Unfavourable Subsoil		Type of Unfavourable Subsoil	Sediment Delivery Risk (Community Watersheds)
				Min(cm)	Max(cm)		
1	VH	VH	H	60.0	66.0	C	

COMMENTS
Permanent Access Structures have been designed following recommendations of the Terrain Stability Field Assessment summarized in the list below: HAN7497 Full bench construction, no sidecast 0+695 to 0+710 HAN7497 Full bench construction, no sidecast 0+786 to 0+796 HAN7497 Full bench construction no sidecast, with some throughcut, and full fill over a drainage structure in the channel 0+808 to 0+832 HAN7497 Full bench construction, no sidecast 0+832 to 0+865 HAN7497 Add outslope to the road running surface 0+865 to 0+903 HAN7497 Full bench construction, no sidecast; ensure that all of full bench cut is in solid bedrock 0+903 to 0+999 HAN7497 Coarse rock placed fill keyed into slope on existing 2 m to 3 m wide microbenches 0+999 to 1+064 HAN7497 Full bench construction, no sidecast 1+309 to 1+329 HAN7497 Full bench construction, no sidecast 1+441 to 1+486 HAN7497 Overland construction with puncheon 1+500 to 1+584 From 0+865 to 1+486 only half road widths were used for PAS calculation since timber adjacent to this section of road was constrained by terrain stability issues. Full bench construction above reduces fill slope width. Thus the PAS % is lower than might be expected for a small harvest area on a steep slope.

RESERVE / RETENTION INFORMATION

WTRA / WTP (INSIDE OR ATTRIBUTED TO THE BLOCK)		
I.D.#	Area	Description
WTRA	9.9	The WTRA for HAN600 has four polygons. Overall it is Site Index (SI) 16 and canopy closure (CC) 70%. The following discussion starts at the downslope polygon on entering the block and ends at the furthest back polygon to the north. The first polygon 0.93 ha with the monumental is SI 18 based on leading species and site series. The second polygon 1.2 ha between the switchback is also SI 18. Both polygons have 80% CC. The third polygon 0.18 ha protects the yellow pond lily and is 40% (CC) with SI 9. The fourth polygon is 7.6 ha. The larger portion upslope from the break near the hoe road is SI 14 and CC 65%. The smaller portion downslope which includes the devils club is SI 18 and CC 70%.

GROUP WTRA / WTP AND SITE DEG. CALCULATION (to be retained on the first block of the Permit only)						
Block	Gross Cutblock Area	WTRA / WTP	%	BEC	Perm Access	%
BON101	13.3	7.8	58.6	CWH/vh/2	0.6	4.2
BON525	15.4	7.0	45.5	CWH/vh/2	0.6	3.9
BON531	0.0	0.0	0.0		0.0	0.0
HAN600	20.7	9.9	48.0	CWH/vh/2	1.2	5.7
HAN601	21.0	9.8	46.9	CWH/vh/2	1.0	4.8
HAN605	23.9	5.1	21.1	CWH/vh/2	1.6	6.6
Total # of Blocks: 6	94.3	39.6	42.0		4.9	5.2

SUPPORTING INFORMATION

HLP/FSP CONSIDERATIONS
Wildlife/Endangered Species Comments
Wildlife objectives set out in higher level plans have been enunciated in the Forest Stewardship Plan(FSP). Wildlife is provided for in a substantial Wildlife Tree Retention Area.
Range Comments
Fisheries Comments
Significant fisheries values are present in Hangover creek. A Terrain Stability Field Assessment analyzes in detail how to minimize road construction and harvesting activity impact on fish habitat. Machine Free Zones are planned for upland streams.
Watersheds/Hydro Assessments Comments
Hydrological recovery of affected watersheds is analyzed and rates of cut calculated. This development is well within guidelines.
Sensitive Areas Comments
Recreation Comments
No recreation sites or trails exist on or directly adjacent to this development.
Cultural Heritage Comments
Cultural Objectives have significant impact on this development. Monumental cedar are mapped and managed for. Cedar retention is provided as per the LUO. Haida Traditional Forest Features are identified and managed for. In HAN600 yew occurs and is managed for.
Biodiversity Emphasis/L.U. Comments
Wildlife Tree Retention Areas provide biodiversity. Ecological Representation is analyzed and reported on.
Other Resources Comments
ADDITIONAL COMMENTS:

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2016 03 12	YES

HARVEST PLAN

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A93737	-	HAN600	BB3XN		A		53 25 41 / 132 31 51

SILVICULTURE SYSTEMS

SU	SYSTEM	VARIANT	PHASE	RESERVE	Min BA (m2/ha)	Min Residual Density (sph)
1	CCRES		REMOV			
Current Stand Structure/Site Conditions			Net merchantable volume for HAN600 is 364 m3 per ha. Cw is 46%, Yc 31%, Hw 21% and PI 2%. The steep slope cable yard portion has more Cw and Yc and more volume (395 m3 per ha) than the average. Two hectares off the end of HAN7497 have fifty per cent hemlock but less volume. The average is found on the ground based harvest area in the block middle and up spur HAN7498.			
Silviculture Systems SU Comments						
Min. Characteristics of Leave Trees (Form, Health, Vigour)			There is no plan for leave trees in the harvest area. The WTRA contains old forest retained in four polygons as described under Reserve/Retention information in the Support Document.			

Additional Comments

--	--

SOIL ASSESSMENT

SU	HAZARD RATINGS			SOIL DISTURBANCE				SOIL CHARACTERISTICS			
	Soil Comp.	Soil Erosion	Soil Disp.	Max Allow Soil Dist %	Max Allow Max Amount TAS may exceed MASD prior	Max Allow Perm Access Structures %	MASD for Roadside work areas %	Depth to Unfavorable Subsoil		Type of Unfavorable Subsoil	Sediment Delivery Risk (Comm. Watershed)
								Min (cm)	Max (cm)		
1	VH	VH	H	5.0	5.0	5.7	25.0	60.0	66.0	Compacted Materials	
SU	Critical site conditions that affect the timing of operations and how they affect the timing										
1	<p>Although the mor humus is matted and thick (15-30+cm), soils will require protection from rutting and gouging by feller bunchers and machine forwarders during ground based harvest. Puncheon must be utilized to protect soil from compaction and displacement. The humus should be kept intact to protect underlying mineral soils from erosion. Rehabilitate hoe trails by opening up woody puncheon, loosen and mix any compacted soils to provide spots for planted trees to grow.</p> <p>Harvesting within the block must prevent downslope drainage diversion or drainage concentration. Measures to prevent this include falling and yarding away from streams, using full suspension if cable yarding across streams, using puncheon along machine trails, and using designated crossing points and temporary drainage structures where machine trails cross streams.</p> <p>Wet Zone (NOT: Very-Wet-Zone) shutdown procedures must be observed in HAN600 as required by the Terrain Stability Field Assessment: Shift End 45mm 24hr : 80mm 48hr: 130mm 72 hr: 170mm Road building and harvest crews must maintain weather instrumentation on site and record data as per BCTS Chinook Wet Weather Safety Shutdown Guidelines.</p>										

SU MANAGEMENT COMMENTS

SU	SU Description
1	This SU is a cedar leading stand with cypress and hemlock average height22m and closed canopy (75%). Timber is shorter on this side of Hangover creek valley related to medium to poor soil nutrients, also mountain hemlock is a minor timber component, also scattered pine. Scant shrub and herbs are present. For example a 2 m stem of false azalea or Alaskan blueberry grows above deer browse; a 10cm salmonberry shoot emerges in the spring. Widely scattered individual twayblade, false lily of the valley, deer fern are present early spring but soon browsed. The feathermosses are dominant, some leafy moss, some liverwort, and occasional club moss cover the forest floor. The silty loam soils vary from deeper (and mottled) over till to shallower (and gleyed) over bedrock. The mor humus also is variable in depth (15-30+cm) depending on how much rotten wood has accumulated.

SOIL MANAGEMENT COMMENTS
Soil Conservation
<p>Permanent Access Structures have been designed following recommendations of the Terrain Stability Field Assessment summarized in the list below:</p> <p>HAN7497 Full bench construction, no sidecast 0+695 to 0+710 HAN7497 Full bench construction, no sidecast 0+786 to 0+796 HAN7497 Full bench construction no sidecast, with some throughcut, and full fill over a drainage structure in the channel 0+808 to 0+832 HAN7497 Full bench construction, no sidecast 0+832 to 0+865 HAN7497 Add outslope to the road running surface 0+865 to 0+903 HAN7497 Full bench construction, no sidecast; ensure that all of full bench cut is in solid bedrock 0+903 to 0+999 HAN7497 Coarse rock placed fill keyed into slope on existing 2 m to 3 m wide microbenches 0+999 to 1+064 HAN7497 Full bench construction, no sidecast 1+309 to 1+329 HAN7497 Full bench construction, no sidecast 1+441 to 1+486 HAN7497 Overland construction with puncheon 1+500 to 1+584</p> <p>From 0+865 to 1+486 only half road widths were used for PAS calculation since timber adjacent to this section of road was constrained by terrain stability issues. Full bench construction above reduces fill slope width. Thus the PAS % is lower than might be expected for a small harvest area on a steep slope.</p>
Temporary Access
Slope Instability
<p>Terrain within Block HAN600 has a very low to low hazard for clearcut harvesting with reserves and with a combination of ground-based yarding in low-gradient terrain, restricted ground-based yarding in much of the block, and cable yarding for the steepest part of the block. Harvesting within the block must prevent downslope drainage diversion or drainage concentration. Measures to prevent this include falling and yarding away from streams, using full suspension if cable yarding across streams, using puncheon along machine trails, and using designated crossing points and temporary drainage structures where machine trails cross streams.</p> <p>Outside the block to the north are slopes with high terrain stability hazard.</p> <p>Outside the block to the east is area with very high terrain stability hazard including three previous recent landslides. The road right-of-way from 0+877 to 1+435 HAN7497 is upslope of this area of very high terrain stability hazard. Hydrological retention is critical in this upslope area and thus timber outside of the right of way is retained standing outside the block. This retention level will not result in significant increase of the downslope terrain stability hazard.</p>

RIPARIAN ASSESSMENTS					
Management Strategies					
Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
G-1 S6	RMZ		30.0		Fell timber away from stream G-1. Yard away from G-1, or use full suspension if yarding across the stream. Do not yard up or down this stream. One designated crossing point has been mapped; use temporary drainage structures for this machine trail stream crossing location. Otherwise observe a 7 meter machine free zone on each side of the stream. Downstream of the road crossing G-1 at 0+821, hand fall into lead for machinery operating from roads. See Gully Management comments.
H-1 S6	RMZ		30.0		Fell timber away from stream H-1. Yard away from H-1, or use full suspension if yarding across the stream. Do not yard up or down this stream. Two designated crossing points have been mapped; use temporary drainage structures for these machine trail stream crossing locations. Otherwise observe a 7 meter machine free zone on each side of the stream.
B-1 S6	RMZ		30.0		Fell timber away from stream B-1. Cable yard away from B-1, or use full suspension if yarding across the stream. Do not yard up or down this stream. Near the road crossing B-1 at 1+435, observe a 7 m machine free zone when forwarding timber. Downstream of the road crossing B-1 at 0+786, hand fall into lead for machinery operating from roads. See Gully Management comments.
E-1 S6	RMZ		30.0		There is a pre-existing slide scarp downslope of stream E-1 outside HAN600. Management of the upslope area which stream E-1 flows through limits harvest to road right of way timber only.
A-1 S6	RMZ		30.0		Where road right of way harvest occurs, fall away yard away. Harvest is planned for outside and northwest of the gully sidewall. Otherwise no harvest is planned along stream A-1. See Gully Management comments.
L-1 S6	RMZ		30.0		Observe 7 meter machine free zone.

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION		
The minimum coarse woody debris standard per FPPR sec68 (1a) is 4 logs per hectare, each being a minimum of 5 m in length and 30 cm in diameter at one end. It is expected in this climatic climax old cedar stand that no management action will be necessary regarding coarse woody debris. However the timber sale licence holder must ensure that this standard is achieved after harvest.		
Performance Std. (%) :	Block Target (%):	Coarse Woody Debris (m3/ha):

DEFINITIONS

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2016 03 12	YES

Print off the PAS/TAS table located as an attachment on the Block Details Screen and attach to this prescription.

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
David Bain	
DATE SIGNED	
2016/03/12	
I certify that the work described herein fulfils standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work.	

SILVICULTURE PLAN

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A93737	-	HAN600	BB3XN		A		53 25 41 / 132 31 51

ECOLOGICAL INFORMATION

SU	Ecology Unit	Area	Zone	Subzone	Variant / Phase	Site Series (series - %)	Elevation Avg (m)	Slope Avg (%)	Aspect	Slope Position	Rooting Depth (cm)	Soil Texture
1	A	9.6	CWH	vh	2	01-70 11-30	157	45	NE	Middle Slope	65	

STOCKING REQUIREMENTS				
ASSESSMENT DATES				
Standard Unit	Standards ID	Regen Delay (yrs)	Freegrow Early (yrs)	Freegrow Late (yrs)
1	1039598	6		20
Min/Max Elevation Regime: 75 / 240				

SU : 1											REGENERATION LAYER				
PREFRERRED SPECIES					ACCEPTABLE SPECIES					POST SPACING DENSITY(sph)				MAX CONIFEROUS (sph)	
Species		Min Ht. (m)	Footnotes	Species		Min Ht. (m)	Footnotes	Min		Max					
Hw Western Hemlock		2.0						WELL SPACED TREES (sph)					Min Horizontal Dist. Pref/Acc (m)		
Plc Lodgepole Pine - Coastal		1.3						Target Pref/Acc		Minimum Pref/Acc		Minimum Pref			
Dr Red Alder		4.0						900		500				2.0	
Yc Yellow Cedar		1.5											Height Relative to Competition (%)		
Cw Western Red Cedar		1.2											150		
Ss Sitka Spruce		3.0													

OTHER REQUIRED STOCKING INFORMATION
In the FSP sec. 6.11 requires regeneration to meet the minimum cedar composition described in FSP Table8. The preharvest old forest has 336.2 live sph (Cw+Yc). FSP s.6.11 says the preharvest stand composition is obtained from the cruise compilation: percent of cedar (Cw+Yc) live stems per hectare, for HAN600 this is 65.5%. FSP s.6.11 Table 8 describes a minimum postharvest free growing standard for cedar: 250 sph measured at free growing. The LUO sec. 7 (3) states regenerate the area to establish a composition of western red cedar and yellow-cedar that are equivalent to the preharvest composition. The target stocking at free growing is 900 well spaced stems per ha. Thus the required cedar composition at free growing (Cw+Yc) under LUO sec. 7 (3) is 65.5% of the free growing target: 590 well-spaced stems per ha. To guard against plantation losses from less than perfect planted seedling microsite selection, planting stock handling, and browse guard maintenance, an additional60 sph Cw+Yc should be planted. Plant 800 stems per ha. Cw 450/ha, Yc 200/ha, Hw150/ha. Cw and Yc should be distributed throughout HAN601 SU1. Planted Hw should be focused on thick humus microsites derived from rotted wood. Natural Hw regeneration should fill in and supply the remaining free growing stems to reach the free growing target900 per ha. For stock type, a PSB412A provides good root development and yet is economical. Fertilizer at time of planting is beneficial on this zonal medium soil nutrient site, but optional since there is no salal competition. Browse guards are necessary for all the Cw and Yc.

ACTIVITIES

PLANTING						
Planting(Container - QCI) 2019/03/01 SEASON:						
AREA	PLANTING UNIT	UNIT AREA	SPECIES	COMMENTS	STEMS / HA	TOTAL STEMS
9.6	1	9.6	Western Hemlock		150	1439
			Western Red Cedar		450	4316
			Yellow Cedar		200	1918
	LIMITING FACTORS / COMMENTS					
	Plant 800 stems per ha. Cw 450/ha, Yc 200/ha, Hw150/ha. Cw and Yc should be distributed throughout HAN600 SU1. Planted Hw should be focused on thick humus microsites derived from rotted wood.					
Natural Hw regeneration should fill in and supply the remaining free growing stems to reach the free growing target900 per ha. For stock type, a PSB412A provides good root development and yet is economical. Fertilizer at time of planting is beneficial on this zonal medium soil nutrient site, but optional since there is no salal competition. Browse guards are necessary for all the Cw and Yc.						
Refer to site plan stocking requirements for rationale on planting density and species composition.						

SILVICULTURE ACTIVITY COMMENTS	
ACTIVITY	COMMENT

MANAGEMENT STRATEGY

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION		
The minimum coarse woody debris standard per FPPR sec68 (1a) is 4 logs per hectare, each being a minimum of5 m in length and 30 cm in diameter at one end. It is expected in this climatic climax old cedar stand that no management action will be necessary regarding coarse woody debris. However the timber sale licence holder must ensure that this standard is achieved after harvest.		
Performance Std. (%):	Block Target (%):	Coarse Woody Debris (m3/ha):

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2016 03 12	YES

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
David Bain	
DATE SIGNED	
2016/03/12	
I certify that the work described herein fulfils standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work.	