

Public Sumamry of HCV Management by Bornion Timber Sdn Bhd. / FMU 11

Natural Forest

1. Background and Overview

Bornion Timber Sdn Bhd. has been entrusted by the state Government to manage the Licensed Area (FMU NO. 11), comprising a total area of 99, 158.27 ha. The license Area has been subdivided into two parts or sub-management units for forest plantation development and natural management respectively.

The company management has determined to have its FMU certified under the Malaysian Criteria and Indicators (MC&I) Natural Forest. Operated by the Malaysian Timber Certification Scheme (MTCS). The total area certified are **40,645.50 ha**. According to the MC&I for natural and forest plantation, the company is required to make available a public summary of its management prescriptions for areas containing High Conservation Values (HCV). These include standards under MC&I Principle 9 which require to identified, maintain or enhance HCV areas within the Licensed Area. MC&I Criterion 9.3 require these measures to be specifically included in the summary of a public available management plan.

For general overview, the figure on the following page shows the identified conservation and protection areas at compartment level under natural forest management regime, together with the relevant HCV category.

Additional areas at micro-scale would be identified during the process of Comprehensive Harvest Planning (CHP).

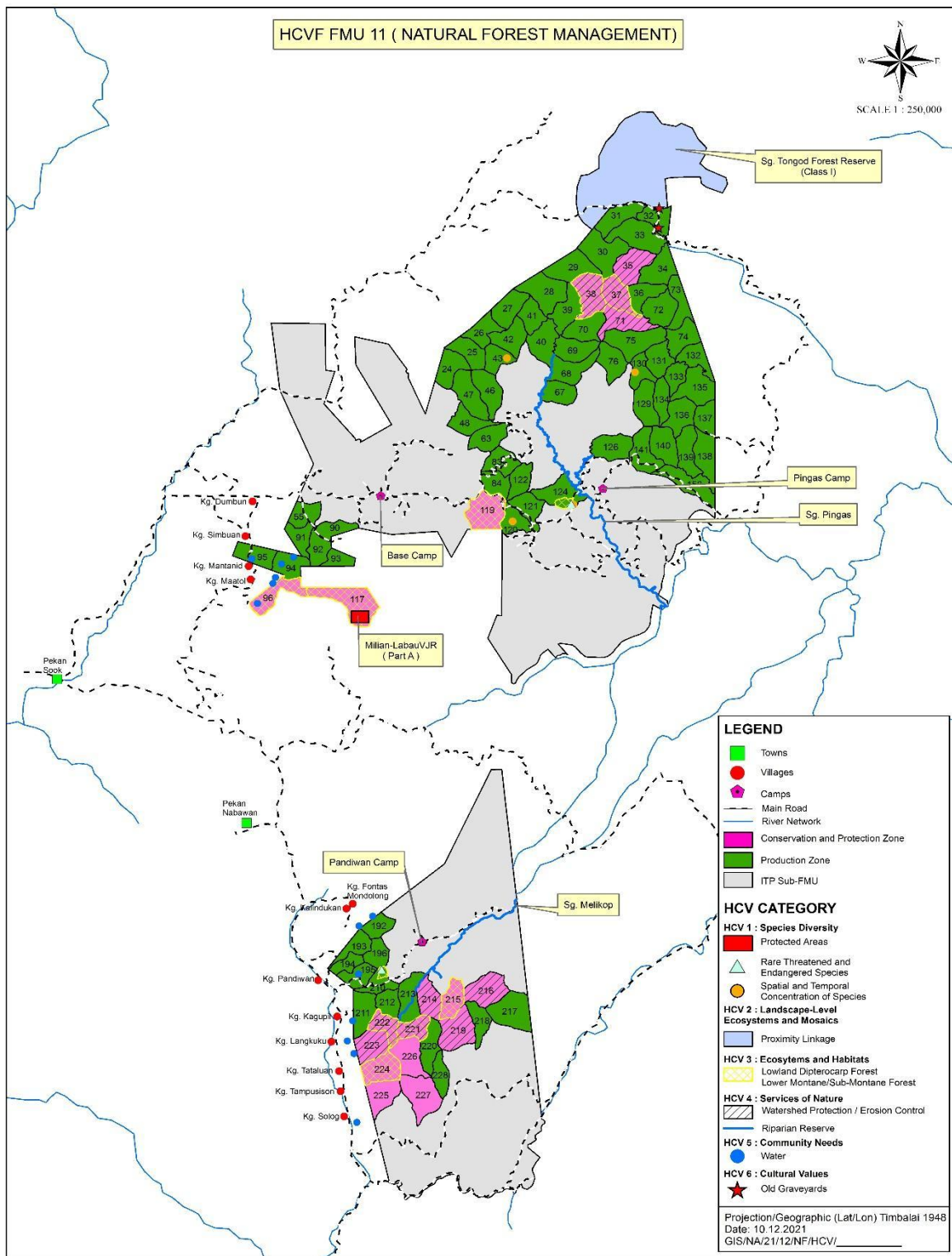


Figure: High Conservation Value in FMU 11 – Natural Forest Management

2. HCV Area Summary

The following table summarizes the identifies area included in the six HCV categories as described on the High Conservation Value Forest (HCVF) Toolkit for Malaysia (2009) and were updated as in the new High Conservation Value (HCV) Toolkit (2018).

HCV Category	Description
HCV 1: Species Diversity	
Protected Areas	Millian – Labau VJR (Part A) – Cpt. 117 (117.0 ha)
Rare Threatened and Endangered species	Belian Trees - Cpt. 124
	Rafflesia – Cpt. 210
Spatial and Temporal Concentration of species	Pond area for feeding and nesting- Cpt. 124
	Saltlick area- Cpt. 43,120 and 130
HCV 2: Landscape-level Ecosystem and Mosaics	
Proximity Linkage	The licensed area is linked with: 1. Class I: Sg. Tongod Forest Reserve
HCV 3: Ecosystem and Habitats	
Lowland Mixed Dipterocarp Forest	Cpt. 96, 117, 119 and 124 (Portion)
Lower Montane/ Sub-montane Forest	Cpt. 37, 38, 210 (portion), 215, 221, 222 and 224
HCV 4: Services of Nature	
Watershed Protection	Cpt. 35, 37, 38, 71, 214, 216, 219, 221, 222 and 223
Erosion Control	Riparian reserve area: Sg. Pingas and Sg. Melikop (30 m Buffer)
	Areas with slopes > 25° (Steep areas): Cpt. 35, 37, 38, 71, 214, 216, 219, 221, 222 and 223
HCV 5: Community Needs	
Water	Cpt. 94, 95, 96, 192, 193, 195, 211, 222, 223, and 225
HCV 6: Cultural Values	
Old Graveyards	Cpt. 32 and 33

Additional HCV areas may be added upon identification during research and operational activities. The HCV area summary will be updated an annual interval.

3. Management Prescription for HCV Areas

The management prescriptions for areas with the identified High Conservation Value within the Licensed Area of Bornion Timber Sdn Bhd. are summarized in the table below:

HC V	Attribute	Management prescription
1	Species Diversity	
	Protected Areas	<ul style="list-style-type: none"> • Mark the boundary of the area. • Undertake ground patrolling to ensure integrity.
	Rare, Threatened and Endangered species	<ul style="list-style-type: none"> • Carry out awareness campaigns and ground patrolling to prevent illegal hunting. • Set up transect in selected areas to monitor any changes in species composition and abundance.
	Spatial and Temporal Concentration of species	<ul style="list-style-type: none"> • Establish buffer zone. • Ground patrolling to prevent illegal hunting.
2	Landscape-level Ecosystem and Mosaics	
	Proximity Linkage	<ul style="list-style-type: none"> • Establish wildlife corridors to provide linkages of protected areas, where feasible and practical • Undertake ground patrolling and aerial survey to prevent poaching and encroachment.
3	Ecosystem and Habitats	
	Lowland Mixed Dipterocarp Forest	<ul style="list-style-type: none"> • Mark the boundary of the area which is accessible. • Undertake ground patrolling and aerial survey to prevent poaching and encroachment.
	Lower Montane/Sub-Montane Forest	
		<ul style="list-style-type: none"> • Erection of HCV Signboard at strategic access points.
4	Ecosystem Services	
	Watershed protection	<ul style="list-style-type: none"> • Tree marking along buffer boundary at intervals of 20 m. • Erection of HCV signboards at strategic access points. • Carry out ground patrolling to ensure integrity. • Carry out aerial survey in inaccessible areas.
	Erosion control	<ul style="list-style-type: none"> • Establish buffer zones of 30 m width to both sides of riparian reserves. • Erection of signboards demarcating buffer zone boundaries at strategic locations. • Ground patrolling to ensure no encroachment takes place. • Carry out aerial survey in inaccessible areas. • Tree marking along boundary of steep areas at intervals of 10 – 15 m. • Erection of signboards to mark steep areas. • Ground patrolling during timber harvesting operations.

HCV	Attribute	Management prescription
5	Community Needs	
Water		<ul style="list-style-type: none"> • Protect watershed areas through clear demarcation. • Ground patrolling of water catchment boundaries. • Carry out aerial survey in inaccessible areas.
6	Cultural Values	
Old Graveyards		<ul style="list-style-type: none"> • Buffer zone establishment: 10 m around market graveyard boundary. • Tree marking along graveyard boundary at intervals of 10 m. • Ground patrolling to ensure there is no disturbance.

These HCV management prescriptions shall be reviewed at annual intervals to include any new HCV categories, areas and management requirements that support and ensure the protection of these important sites. Updates of this public summary will be regularly published on the company website.

4. Enhancement Measures for HCV Areas

The following table describes the measures to be undertaken to enhance the integrity, quality and functionality of areas containing High Conservation Value that have been or might be affected to some degree of disturbance or degradation.

ITEM	DESCRIPTION
Enhancement Measures	
1	Re-brushing of unclear boundaries and maintenance of HCV signboards for HCV areas
2	Restoration of HCV areas by planting fruit or indigenous species according to original forest type (where applicable)
3	Ensure integrity (i.e. no disturbance) through intensification of regular patrolling and reporting activities
4	Carry out species sampling (flora, fauna) to determine species composition and verify representative (as part of R&D and forest monitoring)
5	Enhance forest ecosystems where they have been disturbed/degraded or otherwise affected negatively through replanting the species typically occurring in the affected ecosystem and/forest type.
6	Provide buffers around representative forest ecosystem areas not to be disturbed.
7	Erect signage and provide fencing for graveyard areas (if agreed by local community) and others areas with high disturbance risk.
8	Conduct HCV training and SMART monitoring by collaboration with WWF
9	Conduct HCV awareness programme for staff and local communities
10	Conduct road blocks and enforcement measures in cooperation with Sabah Wildlife Department
11	Prevent vehicle entry into inactive forest areas by erecting physical barriers
12	Aerial survey to monitor any inaccessible area
13	Set up camera trapping to determine fauna species that present at HCVs area.

5. Annual Monitoring to Assess the Effectiveness of the Measures in the management of the High Conservation Value (HCV)

The following tables assess the effectiveness of the measures in the management of HCV through annual monitoring and future improvement to enhance the effectiveness of the measures.

HCV Category	Management prescription	Effectiveness of the Measures	Future Improvement
HCV 1: Species Diversity			
Protected Areas	<ul style="list-style-type: none">● Mark the boundary of the area.● Carry out ground patrolling.	<ul style="list-style-type: none">● Effective but need to improve.● Boundary of the area was marked● No physical disturbance reported	<ul style="list-style-type: none">● Aerial monitoring to monitor
Rare, Threatened and Endangered Species	<ul style="list-style-type: none">● Set up transects to monitor any changes.● Carry out ground patrolling.● Conduct tree marking (if any)	<ul style="list-style-type: none">● Effective● No physical disturbance reported● Wildlife sightings are stable or increase over time.	<ul style="list-style-type: none">● None
Spatial and Temporal Concentration of Species	<ul style="list-style-type: none">● Establish buffer zone.● Carry out ground patrolling to prevent illegal hunting.		<ul style="list-style-type: none">● None
HCV 2: Landscape-level Ecosystem and Mosaic			
Proximity Linkage	<ul style="list-style-type: none">● Establish buffer zone.	<ul style="list-style-type: none">● Effective but need to improve● Buffer zone was established where practical for wildlife movements.● No physical disturbance reported	<ul style="list-style-type: none">● Aerial survey to monitor any inaccessible area
	<ul style="list-style-type: none">● Carry out ground patrolling.		

HCV Category	Management prescription	Effectiveness of the Measures	Future Improvement
HCV 3: Ecosystems and Habitats			
Lowland Mixed Dipterocarp Forest	<ul style="list-style-type: none"> Mark the boundary of the area. 	<ul style="list-style-type: none"> Effective but need to improve 	<ul style="list-style-type: none"> Joint operation with Sabah Forestry Department.
Lower Montane / Sub-montane Forest	<ul style="list-style-type: none"> Carry out ground patrolling. Erection of HCV signboard at strategic access points. 	<ul style="list-style-type: none"> HCV signboard was erected 	<ul style="list-style-type: none"> Increase frequency of patrolling Aerial survey to monitor any inaccessible area
HCV 4: Ecosystem services			
Watershed Protection	<ul style="list-style-type: none"> Carry out tree marking along boundary. Erect HCV signboard at strategic access points. Carry out ground patrolling. 	<ul style="list-style-type: none"> Effective but need to improve No physical disturbance reported HCV signboard was erected 	<ul style="list-style-type: none"> Analysis of water quality Aerial survey to monitor any inaccessible area
Erosion Control	<ul style="list-style-type: none"> Establish 30 m riparian reserve. Carry out tree marking along boundary of steep areas. Erect signboards at strategic locations. Carry out ground patrolling to ensure no encroachment. 	<ul style="list-style-type: none"> Effective No physical disturbance reported All accessible riparian reserve and steep areas were established, marked and erected with signboard Water quality according to NWQSM standards within permitted range 	<ul style="list-style-type: none"> Aerial survey to monitor any inaccessible area

HCV Category	Management prescription	Effectiveness of the Measures	Future Improvement
HCV 5: Community Needs			
Water	<ul style="list-style-type: none"> • Protect watershed areas. • Carry out ground patrolling. 	<ul style="list-style-type: none"> • Effective but need to improve • No physical disturbance reported • Water quality according to NWQSM standards within permitted range 	<ul style="list-style-type: none"> • Analysis of water quality • Aerial survey to monitor any inaccessible area
HCV 6: Cultural Values			
Old Graveyards	<ul style="list-style-type: none"> • Establish buffer zone of 10 m around marked boundary. • Conduct tree marking along boundary at intervals of 10m. • Carry out ground patrolling. 	<ul style="list-style-type: none"> • Effective but need to improve • No physical disturbance reported • No complaints received from local communities 	<ul style="list-style-type: none"> • Aerial survey to monitor any inaccessible area

6. Available of Results from Monitoring Activities in Areas with High Conservation Value (HCV)

HCV Category	Results of Monitoring
HCV 1: Species Diversity	
Protected Areas	<ul style="list-style-type: none"> ▪ The protected areas are still in good condition and no physical disturbance had been reported. ▪ The area boundary was marked and a signboard for HCV 1 was erected on site. ▪ Ground patrolling had been conducted regularly.
Rare, Threatened and Endangered (RTE) Species	<ul style="list-style-type: none"> ▪ There are 14 threatened and prohibited flora species recorded in FMU 11 ▪ There are 33 mammals and 58 birds listed as threatened and endangered species observed throughout year 2014 to 2022 wildlife surveys. ▪ Fauna species can be observed during HCV monitoring through direct sighting, foot prints, claw marks, nest, camera trap, dung, vocalization and feeding sign. ▪ Cpt 210 with Rafflesia sp. were still active with new buds of Rafflesia and there are two (2) species of wildlife were recorded present at the Cpt 210 (Sambar deer and Bearded pig). ▪ No physical disturbance had been reported. ▪ In conclusion, wildlife sightings are stable or increase over time.

The results from monitoring activities in HCV areas in 2022 are as follow:

HCV Category	Results of Monitoring
HCV 1: Species Diversity	
Spatial and Temporal Concentration of Species	<ul style="list-style-type: none"> There are 2 locations of spatial and temporal concentration of species use which were observed: a freshwater pond at Cpt. 124 and a saltlick area at Cpt. 120. An additional two saltlick areas were found in Cpt. 43 and 130. There was no sign of physical disturbance or changes in these HCV areas. There are seven (7) species of Birds and two (2) species of mammals were recorded present in Cpt 124. The species of birds are Rhinoceros Hornbill, Banded Pitta, Banded Kingfisher, Blue Eared Kingfisher, Green Broadbill, Great Argus, and Gold Whiskered Barbet. The species of mammals were Sunbear through scratches sign and Bearded pig through Feeding sign. Four (4) mammal's species were identified present at Cpt 120 through the sign of footprints. The species are Bearded pig, Sambar deer, Muntjac and Sunbear (Scrathes sign). Saltlick area actively visited by wildlife. As in 2022, saltlick area at Cpt 43 unable to be monitored due to inaccessible road. However there is no sign of poaching and encroachment as there is no access road to the saltlick area. There is no monitoring was done at Cpt 130 due to inaccessible road. There is no sign of poaching and encroachment as there is no access road to the saltlick area. Monitoring will be done once there is access road.
HCV 2: Landscape-level Ecosystem and Mosaics	
Proximity Linkage	<ul style="list-style-type: none"> There was no physical disturbance observed.
HCV 3: Ecosystems and Habitats	
Lowland Mixed Dipterocarp Forest	<ul style="list-style-type: none"> The boundary of the area was marked. HCV signboard was erected at a strategic location. There were 85 plant species in Cpt. 119 and 113 plant species in Cpt. 124 which have been identified for future references.
Lower Montane / Submontane Forest	<ul style="list-style-type: none"> There was no physical disturbance reported in the lower montane / sub-montane forest. The boundary of the accessible area was marked. HCV signboard was erected at strategic point.

HCV Category	Results of Monitoring
HCV 4: Ecosystem Services	
Watershed Protection	<ul style="list-style-type: none">▪ The boundary was marked and HCV signboard was erected.▪ Ground patrolling was carried out and no physical disturbance was reported.
Erosion Control	<ul style="list-style-type: none">▪ 30 m riparian buffers were established at accessible sections of main rivers.▪ The boundaries of steep areas that can be accessed was marked.▪ Signboard was erected at strategic locations.▪ Regularly ground patrolling was conducted where no physical disturbance reported.▪ Water quality according to NWQSM standards mostly within permitted range.
HCV 5: Community Needs	
Water	<ul style="list-style-type: none">▪ There was no physical disturbance of water catchment areas reported by local communities.▪ One additional water gravity dam was found in Cpt. 96 for Kg. Sasagahan Sook. The whole compartment is for conservation function.▪ It was found that the water gravity dam at Cpt. 194 was no longer used by Kg. Pandiwan A.
HCV 6: Cultural Values	
Old Graveyards	<ul style="list-style-type: none">▪ A Buffer zone of 10 m was established around the old graveyard.▪ Ground patrolling was carried out and no physical disturbance was reported.▪ No complaints were received from local communities.

Compiled by: ANIS PINITA ANDREW

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