

New Planting Procedures

Genting Jambongan Estate, Sabah

Assessment Summaries and Management Plans

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1. Overview and Background of New Development

Genting Jambongan Estate (GJBE) is located on Jambongan Island which is the second largest island on the north eastern coast of Sabah, in the District of Beluran. GJBE is a landholding under Genting SDC Sdn Bhd which is 100% owned by Genting Plantations Berhad. The estate is only accessible by sea. The boat ride takes approximately 45 minutes from Kg Kanibongan, Pitas to an existing jetty located at Sg Bahanan.

The estate covers an area of approximately 4127.96 hectares (inclusive of new development area) with about 3,406.78 hectares already planted with oil palm. The new planting area (Blocks A, B, C, D and E) which measures approximately 496.56 hectares is located on 104 parcels of Native Title land. Blocks A,B and C are in close vicinity of the existing planted areas and accessible by estate field roads. However, blocks D and E are only accessible by boat from Sg.Bahanan to Kg.Limau-Limau which is located 0.3km north of Block D.

In September 2014, the company commissioned a 20 tonne/hr palm oil mill to ensure prompt and efficient evacuation and processing of fresh fruit bunches (FFBs) produced by GJBE. This palm oil mill has adopted the latest available green innovations, process automation and energy efficiency features that are beneficial to the environment. These include the Zero Dilution milling process that significantly reduces the volume of POME generated, and the Zero Discharge technology which eliminates any discharge of waste to the water course. Under the Zero Discharge system, no waste is discharged as all biomass and liquid are re-processed in a covered composting plant to produce organic fertilizer.

GJBE had commissioned several studies to comply with the legal and RSPO requirements prior to the land clearing of these new areas. The studies are Proposal of Mitigation Measures (PMM), High Conservation Value (HCV) Assessment and Social and Environmental Impact (SEI) Assessment. The PMM report was prepared by Messrs Chemsain Konsultant Sdn Bhd and written approval was obtained from the Environmental Protection Department Sabah on 22 December 2015. The HCV and SEIA assessments were carried out by S.K Yap Forestry and

Landscape Advisory Services who is an RSPO approved assessor and ALS licensed assessor. Based on the assessors report, the new planting areas are not within any of the land claimed by the local communities or alienated land owned by outsiders. There is no primary forest and peat land within the new land parcels.

The results of the HCV study showed that there is only one type of HCV i.e HCV 4.1 (watershed protection). It is a stream utilized by the villagers at Kg Limau Limau which flows from Block E and Sg Ginday in Block D. Riparian buffer belts along these streams shall be established and demarcated on the ground as well as in the estate maps.

During the SEIA, separate consultations were held with the villagers and headmen of four villages in their respective villages during the study. A separate stakeholders meeting was also held with the other members of the remaining villages in the office of Genting Jambongan Estate together with its senior management.

The headmen and members of the Development and Safety Committee of the villages consulted were generally supportive of the proposed new plantings. They are keen to see development activities in their respective villages especially on the road connectivity and water supply. The consultations and meetings with the stakeholders in all four villagers indicated that they were not aware of the proposed expansion project of Genting Jambongan estate as the management had yet to confirm the status of the land. As the majority of the communities are not aware of the proposed project extension and the land to be developed especially at or near the boundary between the proposed sites and the lands owned by communities, further consultations shall be conducted with the communities. This is crucial as some of the younger members of the communities had perceived that they were not involved in the consultative process.

Following the SEIA recommendations, further consultations on Free, Prior and Informed Consent (FPIC) were carried out with the affected villages in accordance with the company's

SOP on New Planting Procedures (NPP), where the estate and mill management team communicated on the expansion plans as well as mill operations to the respective villagers. Concerns and feedback from the stakeholders were noted and management and mitigation plans were discussed. Boundary surveys were conducted and the villagers were invited to observe the surveys to ensure no encroachment into the community land. Moving forward, the management will consider the concerns from stakeholders in any development plans and continue to engage with them more regularly.

The PMM report identified soil erosion, sedimentation and water pollution as the significant environmental impacts. Mitigation and monitoring programmes were recommended to be carried out during the project implementation. Other impacts identified were ecological and socio-economic impacts.

1.1 Area for new planting and development plan

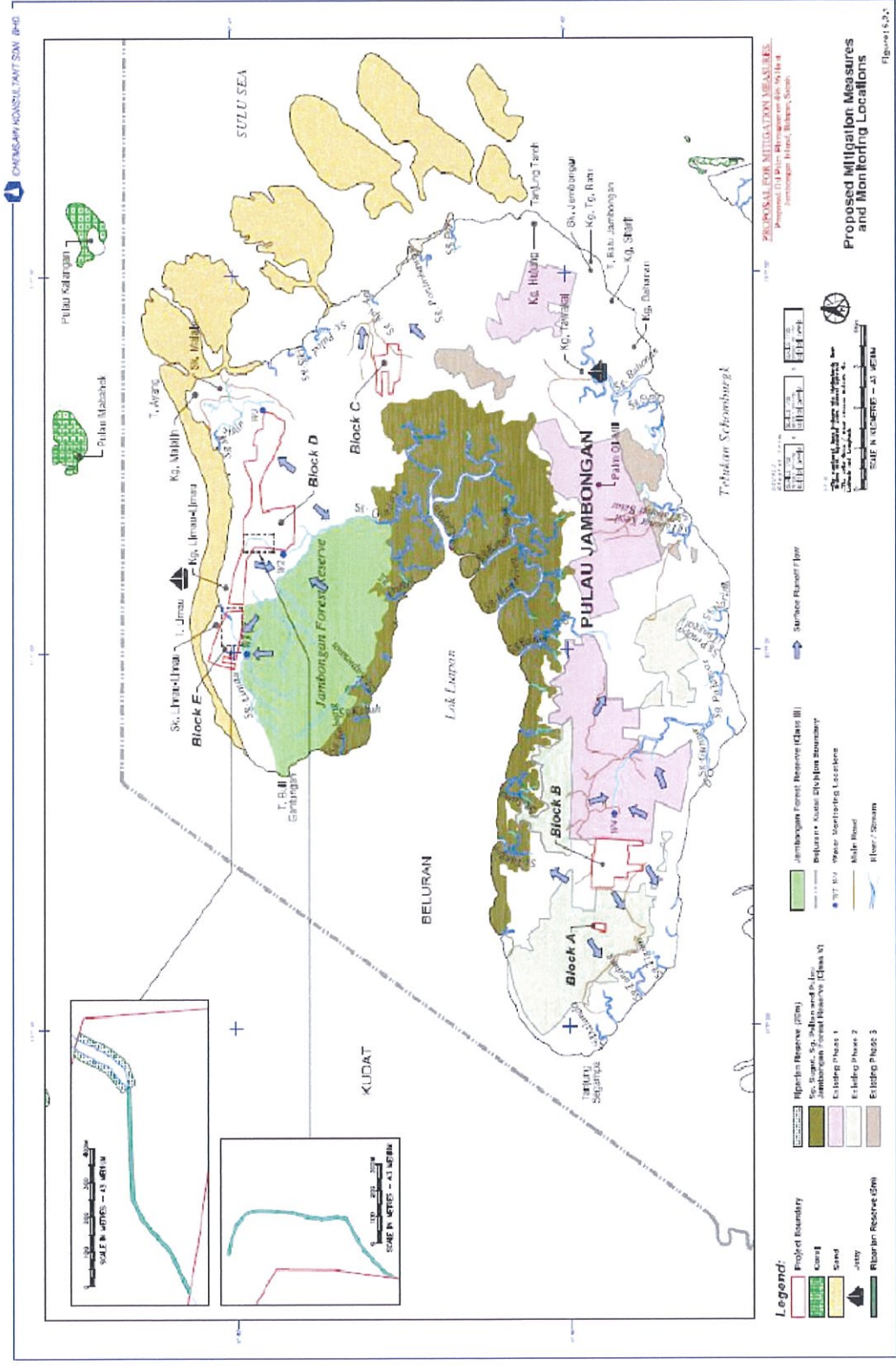
The proposed new planting area is in the unplanted areas and newly acquired land parcels. The GJBE development plan has incorporated the recommendations from the HCV and SEIA assessments and the PMM report. As part of FPIC procedures, consultations with the local stakeholders were carried out to provide opportunities for communication and the sharing of information and concerns between the estate and affected local stakeholders.

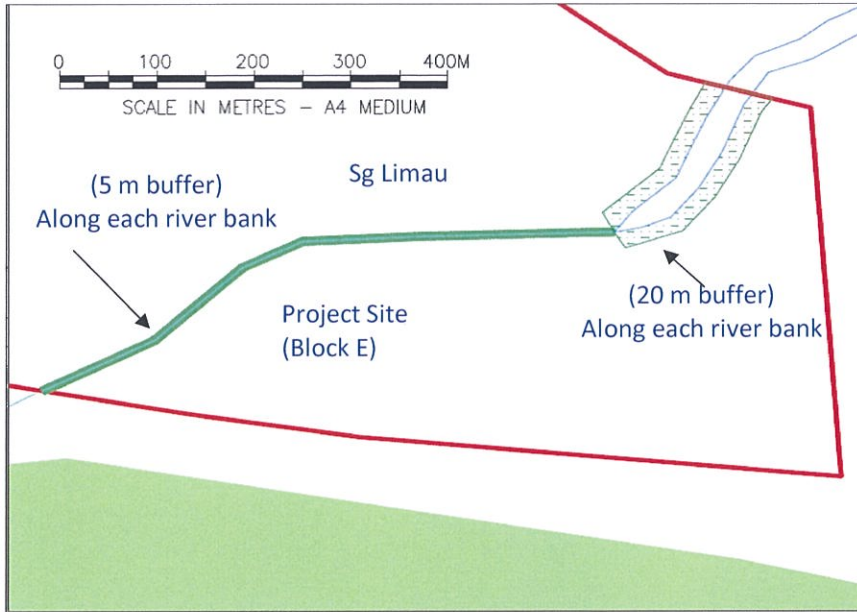
The total area for this new planting is 496.56 hectares. It will be planted in stages.

The proposed development schedule for the new plantings is as follows:

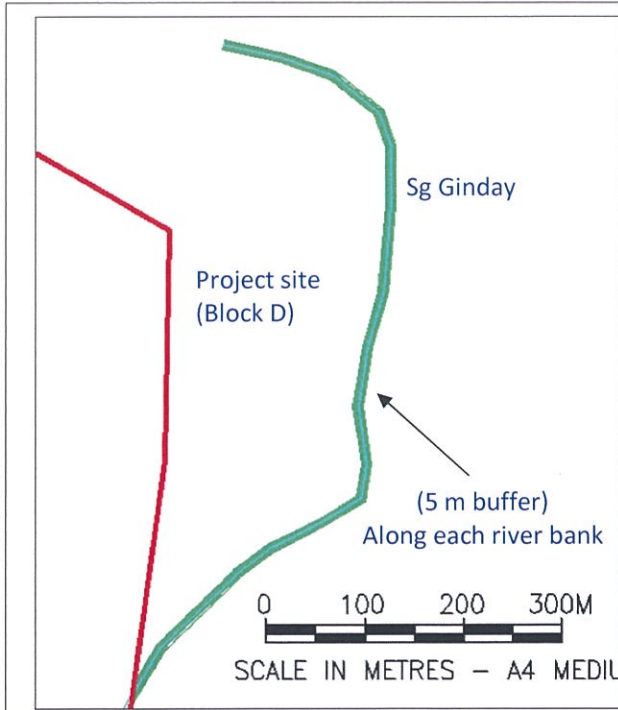
Block	Area (ha)	HCV Area (ha)	Proposed timeline for development
A	17.15	0	2Q 2016
B	106.77	0	2Q 2016
C	94.41	0	3Q 2016
D	161.06	0.93	3Q 2016
E	117.17	1.55	3Q 2016

1.3 HCV Map

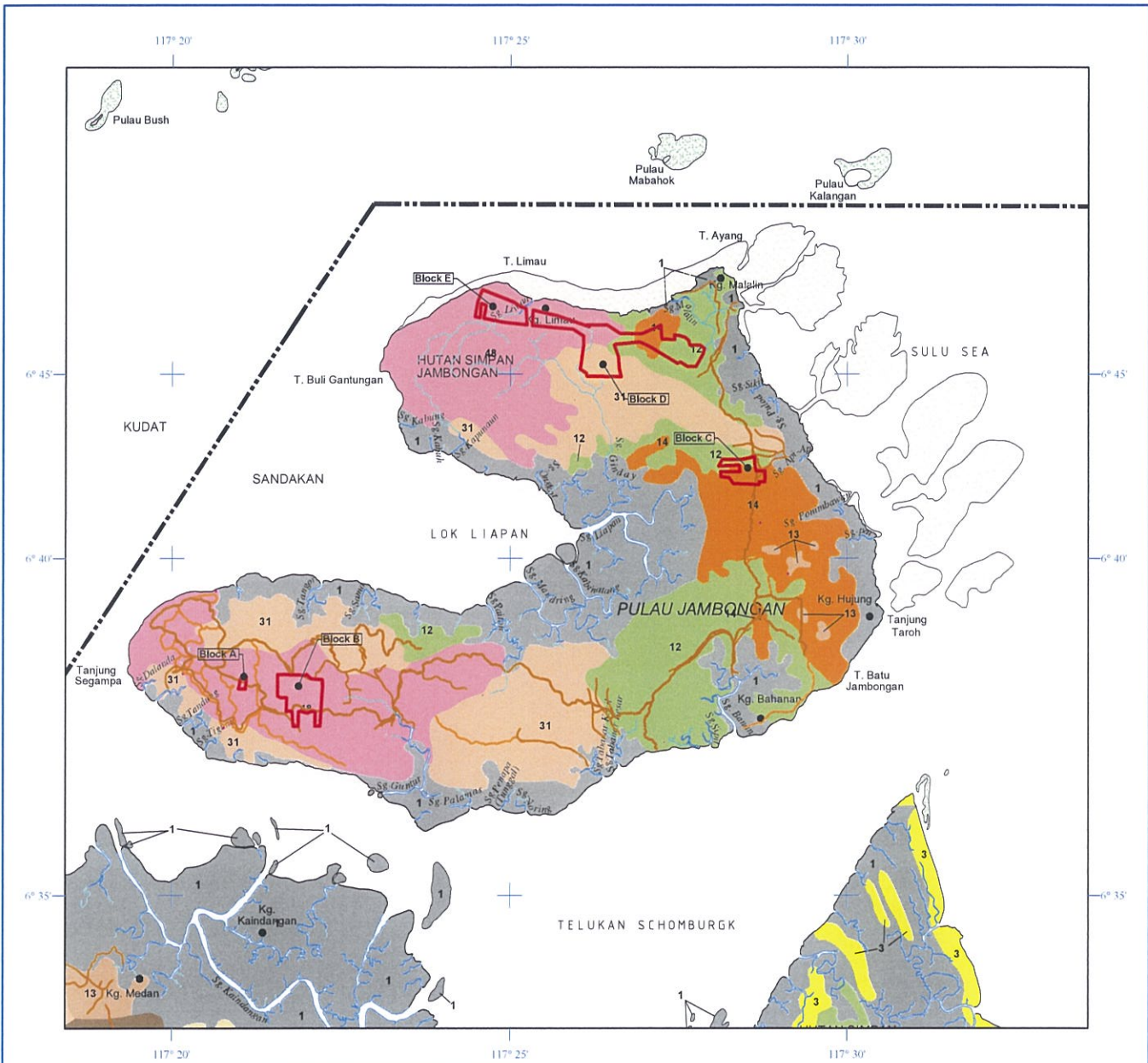




1.3.1 Riparian buffer zone (HCV 4.1) at Sg Limau-Limau in Block E



1.3.2 Riparian buffer zone (HCV 4.1) at Sg Ginday in Block D



KEY	ASSOCIATION	LANDFORM	PARENT MATERIALS	MAIN SOIL UNITS
1	Weston	Tidal swamps	Sulphidic alluvium, sulphidic peat and alluvium	Thionic Fluvisol; Dystric Histosol; Thionic Gleysol
3	Tanjung Aru	Beaches	Alluvium	Dystric and Eutric Regosols; Humic Dystric and Eutric Gleysols; Gleyic Podzol
4	Tuaran	Meander belts	Alluvium	Eutric Fluvisol; Gleyic, Dystric and Eutric Cambisols; Humic, Dystric and Eutric Gleysols
5	Kinabatangan	Floodplains	Alluvium	Gleyic Acrisol; Gleyic Luvisol; Humic, Dystric and Eutric Gleysols
12	Branlian	Terraces	Alluvium	Orthic, Ferric and Gleyic Acrisols; Gleyic Podzol
13	Kepayan	Terraces	Alluvium	Gleyic Podzol; Gley Acrisol
14	Sook	Terraces	Alluvium	Gleyic and Orthic Acrisols; Gleyic Podzol; Dystric Gleysol
31	Dalit	Moderate hills and minor valley floors slopes 0-20°	Sandstone, mudstone and alluvium	Orthic, Ferric and Gleyic Acrisols
39	Lokan	Vary high hills: slopes > 25°	Sandstone and mudstone	Orthic Acrisol; Dystric Cambisol
48	Mallau	Mountains cuestas	Sandstone and mudstone	Orthic Acrisol; Dystric cambisol; Gleyic Podzol; Humic Gleysol; Lithosol

PROPOSAL FOR MITIGATION MEASURE
Proposed Oil Palm Plantation on 496.56 Ha at
Jambongan Island, Beluran, Sabah

Legend:

- Project Boundary
- Coral
- Sand
- Sea
- Main Road
- Access Road
- River / Stream
- Beluran - Kudat Division Boundary



GRID
 -The numbered lines indicate the Netherlands East Indies Grid, Equatorial Zone, Basal Spheroid
 -The outer ticks / inner crosses indicate the Latitude and Longitude
 0 1 2 3 4 5 6 7Km
SCALE IN KILOMETRES (1:170,000) - A4 MEDIUM

SOURCE:
 Adapted from

SERIES T735 SHEET 6/1172 EDITION 2-PPNM & SERIES T735 SHEET 6/1176 EDITION 2-PPNM & SERIES T735 SHEET 6/1177 EDITION 2-PPNM & THE SOILS OF SABAH SYIT TANAHTANI - SUGUT SOILS SHEET - NB-50-7

Soil Classification
of the Project Area

Figure: 3.9.3



CHEMSAIN KONSULTANT SDN. BHD.

KEY	ASSOCIATION	LANDFORM	PARENT MATERIALS	MAIN SOIL UNITS
1	Weston	Tidal swamps	Sulphidic alluvium, sulphidic peat and alluvium	Thionic Fluvisol; Dystric Histosol; Thionic Gleysol
3	Tanjong Aru	Beaches	Alluvium	Dystric and Eutric Regosols; Humic Dystric and Eutric Gleysols; Gleyic Podzol
4	Tuaran	Meander belts	Alluvium	Eutric Fluvisol; Gleyic, Dystric and Eutric Cambisols; Humic, Dystric and Eutric Gleysols
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48	Maliau	Mountains cuestas	Sandstone and mudstone	Orthic Acrisol; Dystric cambisol; Gleyic Podzol; Humic Gleysol; Lithosol

SOURCE

1.4.1 Description of soil classification of the area. No peat soil present.

2. Assessment Process and Methods

2.1 Social and Environmental Assessments Methods

2.1.1 Assessor's Credentials

- Dr Yap Son Kheong (Team Leader, Ecologist)
- Angelica Suimin (Team Member, Social/Local Communities Specialist)
- Roslina bt Ragai (Team Member, Faunal Specialist)

For the community investigation, consultations were conducted with the community leaders of the village nearest to the proposed site by the social assessor partly assisted by the Team Leader. The consultation process was conducted through open house discussions and focus group discussions with the village administration and formal stakeholders meeting. Relevant stakeholders that were engaged during the consultation process included affected local communities, and Government representatives (PKR, Native Chiefs), all of whom provided valuable information regarding the nature and extent of potential environmental and social impacts associated with or resulting from the proposed project.

The specific objectives pursued during the stakeholder consultation were:

- provision of information to stakeholders;
- gathering of information on various environmental and social aspects;
- stakeholders' inputs on the planned project, including its scale, timing, ways to reduce its potential negative impacts and ways to enhance its potential positive impacts.

2.1.2 Consultative Process

As part of the social impact study consultation with the local communities and other stakeholders was conducted.

Table 2.1.2.1: Consultation of Stakeholders

Date	Place	Stakeholders Concerned
August 5, 2014	Meeting with communities from Kg. Limau- Limau	Local community representatives and headman
	Meeting with Communities at Kg. Hujung	Local community representatives and JKKK
August 6, 2014	Meeting with Communities at kg.	Headman and representatives of the

	Malalin Meeting with Communities from Kg. Bahanan	communities Local community representatives and chiefs
August 7,2014	Formal meeting with the local communities of Jambongan island at GJBE office	Native Chief, Government officer, headmen and representatives of the communities and management and Staff of GJBE

2.2 Proposal for Mitigation Measures (PMM)

2.2.1 Assessment of Environmental Impacts

The potential environmental impacts arising from this proposed project development are summarised in the following tables.

Table 2.2.1.1 Waste Generation and Management

Waste Generation and Management	
Zone of Impact Description	<p>During site preparation, clearing of existing secondary vegetation onsite i.e trees, bushes and grasses will be involved to enable earthworks for the preparation of road networks and drainage works to commence. This will generate a large amount of biomass. Improper management of zero-burning technique may lead to problems such as breeding nests for pests, hideaway for disease carrying vectors and fire hazards especially during dry and hot season.</p> <p>Other wastes including domestic waste and sewage generated from the new site office and workers' quarters for Blocks D and E as well as scheduled waste i.e oil and grease from the maintenance of machinery and equipment at the workshop. These need to be properly managed and disposed of to ensure minimal water pollution downstream i.e tributary streams of Sg Limau, Sg Ginday and Sg Malalin which traverses through Blocks D and E, respectively. If not properly managed, it will affect the health of workers onsite or neighboring estate's workers when they came in contact with the water.</p>
Aim of Mitigation	To ensure that the waste generated is managed and disposed of properly.
Assessment Methodology	<p>On site observation with reference to the site layout plan.</p> <ul style="list-style-type: none"> • Discussion with Project Proponent on proposed waste management plan (if any). • Identification of type and estimation amount of waste generated

	(vegetative, sewage and solid waste). <ul style="list-style-type: none"> • Conducting baseline water sampling at downstream tributary of Sg Limau.
References	<ul style="list-style-type: none"> • Environmental Quality (Sewage) Regulations 2009. • National Water Quality Standards for Malaysia (NWQSM). • Environmental Quality (Scheduled Waste) Regulations 2005.
Data/Information Required	<ul style="list-style-type: none"> • Baseline water quality results. • Visual inspection and photographs of the site conditions. • Proposed waste management plan (if any).

Table 2.2.1.2 Water Pollution and Soil Erosion

Water Pollution and Soil Erosion	
Zone of Impact Description	<p>During site preparation stage, clearing of vegetation onsite mainly to establish road network and drainage system is inevitable. Clearing of vegetation onsite will leave the topsoil exposed to erosion agent such as rainfall which leads to soil erosion and accumulation of sediments in the tributary streams of Sg Limau-Limau and Sg Ginday. This will increase the Total Suspended Solids (TSS) content and turbidity in the aforementioned tributary streams.</p> <p>Introduction of agro-chemicals in the form of fertilizers and pesticides without proper management will pose detrimental impacts i.e contamination of phosphate and ammonium in the nearby waterways. i.e tributary streams of Sg Limau-Limau and Sg Ginday which traverses through Blocks D and E, respectively. This may cause harm to human health i.e diarrhoea among the common result. Generation of scheduled waste i.e oil and grease from maintenance of machinery and equipment can pollute the waterways i.e tributary streams of Sg Limau-Limau and Sg Ginday if it is not managed properly.</p>
Aim of Mitigation	To ensure that the existing water quality from the proposed project is within the permitted levels of the National Water Quality Standard for Malaysia (NWQSM) or at least maintained at the existing water quality condition and to minimize soil erosion impacts towards the surrounding land use and waterways.
Assessment Methodology	<ul style="list-style-type: none"> • Review of topographical survey plan. • Identification of receiving waterways. • Conduct baseline water quality sampling at downstream tributary of Sg Limau-Limau to establish the present water quality.
References	<p>Guidelines and criteria accepted by the Environment Protection Department (EPD), Department of Environment (DOE) and Department of Irrigation and Drainage (DID).</p> <ul style="list-style-type: none"> • National Water Quality Standards for Malaysia (NWQSM).

	<ul style="list-style-type: none"> • Water Quality Index (WQI).
Data/Information Required	<p>Photographs of site conditions and surrounding areas.</p> <ul style="list-style-type: none"> • Baseline water quality result. • Project information – planting phasing, types of agro-chemicals will be applied, application schedule, etc.

Table 2.2.1.3 Ecological Impact

Ecological Impact	
Zone of Impact Description	<p>Removal of existing vegetation onsite during site preparation will result in loss of natural terrestrial habitats and cause certain degree of disturbance or ecological imbalances, depending on the existing ecological state of the affected area. However, during the preliminary site visit there is no endangered or protected flora and fauna species encountered within the proposed site</p> <p>Jambongan Forest Reserve (Class III) and Sg. Sugut, Sg. Paitan and P. Jambongan Forest Reserve (Class V) are located 0.07 km south of Block D and 0.24 km west of Block C, respectively. The concern would be the “edge effect” of the project activities towards the forest reserves. As informed by the Project Proponent, animals such as deer, wild board, snake and iguana are common in the island. It is foreseen that, the site clearing stage will potentially affect the shelter and food sources for these aforementioned animals. The ecological impact towards Block A and B is deemed minimal as it is surrounded by existing oil palm plantations and located relatively a distance away, approximately 7 km from the forest reserves.</p>
Aim of Mitigation	To minimise the ecological impact from project activities particularly during site clearing stage.
Assessment Methodology	<p>Onsite observation with reference to the site layout plan.</p> <ul style="list-style-type: none"> • Information of endangered flora and fauna in Jambongan Island. • Consultation with Sabah Forestry Department and Sabah Wildlife Department.
References	Relevant local authority guidelines.
Data/Information Required	<p>Ecological survey (if any).</p> <p>Photographs of site conditions and surrounding areas.</p> <ul style="list-style-type: none"> • Literature on endangered terrestrial species in the Island. • Secondary data from Sabah Forestry Department, Sabah Wildlife Department and other sources (if any).

Table 2.2.1.4 Socio – Economic Impact

Socio – Economic Impact	
Zone of Impact Description	<p>The development of the Project will mainly generate positive socioeconomic impacts, by creating employment and business opportunities where possible to the local communities at Jambongan Island.</p> <p>Adverse socio-economic impacts anticipated will include the</p>

	<p>following:</p> <ul style="list-style-type: none"> • Water pollution – usage of fertilizer and pesticides may pollute the existing natural waterway i.e tributary Sg Limau-Limau and Sg Ginday. Polluted water may affect the health of the workers and villagers at Jambongan Island that comes in contact with the water. • Presence of foreign workers – foreign workers are usually associated with social issues like vandalism, theft, etc. Aside from that, local settlements of the villages will have to compete for job employment.
Aim of Mitigation	To minimise adverse socio-economic impacts on the local settlements
Assessment Methodology	<p>Face to face interview with the village head of the nearest settlement to the project site i.e Kg Limau – Limau 0.29 km north of Block E.</p> <ul style="list-style-type: none"> • Consultation with local authorities on the project development activities. • Conducting baseline water sampling at downstream tributary of Sg Limau-Limau
References	Social economic survey results
Data/Information Required	<p>Completed social survey forms.</p> <ul style="list-style-type: none"> • Baseline water sampling results. • Photographs of the surrounding area, settlement, land use, etc. • Land use map.

2.3 HCV Assessment Methods

2.3.1 Assessor's Credentials

- Dr Yap Son Kheong (Team Leader, Ecologist)
- Angelica Suimin (Team Member, Social/Local Communities Specialist)
- Roslina bt Ragai (Team Member, Faunal Specialist)

Preliminary assessment of the presence of HCV sites within the sites proposed for new planting was done by reviewing published information and discussion with the estate management. Published data of protected sites, endangered, rare and threatened species and the various enactments were used wherever appropriate. Documentation review on the planted areas including the previous HCV study, forest reserve and the villages on the island was done prior to the field study. The previous HCV report of the Genting Jambongan Estate formed the baseline data for this present study. The field investigation was conducted from 4 to 8 August 2014 by a

3 member assessment team consisting of Team Leader/ecologist, faunal specialist and social specialist.

The high conservation attributes originally initiated under Forest Stewardship Council have now been elaborated into 6 high conservation values by *Global HCVF Toolkit (2003)* and had been adopted by the *High Conservation Value Forest (HCVF) Toolkit of Malaysia (2009)*. The latter had divided the attributes into specific elements to further define specifically high conservation values (Table 3).

Table 2.3.1: HCV Conservation Elements

HCV	Element
1.0	Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values
1.1	Protection areas
1.2	Threatened and endangered species
1.3	Endemic species
1.4	Critical temporal use
2.0	Globally, regionally or nationally significant large landscape-level forests
3.0	Forest areas that in or contain rare, threatened or endangered ecosystems
4.0	Forest areas that provide basic services of nature in critical situations
4.1	Forests critical to water catchments
4.2	Forests critical to erosion control
4.3	Forests providing barriers to destructive fire
5.0	Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health)
6.0	Forest areas critical to local communities' traditional cultural identity

The study consisted of investigating the biological resources together with physical features of each block and also social impact consultation with the local communities on the island to determine whether there were any features that are related to the elements stated.

Documentation review

HCV 1 Biodiversity Values

The presence of areas with globally, regionally or nationally significant biodiversity values (e.g. endemism, endangered species and sites of critical temporal use).

HCV 1.1 Protected Areas

All areas within the country that have been legally gazetted as Protected Areas under the country legislation are available in *The Forest Enactment 1968 (Class I to Class VII)*, *Land Ordinance 1930 (Sabah Cap 68)*, *Wildlife Conservation Enactment 1997*, *The Master List of Protected Areas in Malaysia – A Tool for National Conservation Management and Planning* which is in preparation by the Ministry of Natural Resources & Environment. These include Class I forest, National Parks, Sabah Parks, Wildlife Sanctuaries and gazetted water catchment areas.

HCV 1.2 Threatened and Endangered Species

These species could be obtained from the IUCN Red List of Threatened Species (www.iucnredlist.org); Malaysian Red data Book which is in preparation by FRIM. The first on Dipterocarpaceae trees had been published. A list of threatened and endangered mammals species listed in IUCN for the country is presented in Appendix III, Appendix I of CITES (www.cites.org/eng/resources/species.html), Schedule I and II of the *Wildlife Conservation Enactment 1997*.

HCV 1.3 Endemism

Any forest containing endemic species as identified by FRIM, MNS and Forestry Departments and published literature. These include *Tree Flora of Sabah and Sarawak* 8 volumes, *Francis A Field guide to the Mammals of South East Asia* and *MNS Checklist of Birds of Malaysia*.

HCV 1.4 Critical Temporal Use

Any forest areas which are important to wildlife for feeding, nesting, roosting, migration or contain saltlicks can be considered under this HCV category. MNS Important Bird Areas (Appendix IV), published guides, reports and consultations with local communities. Wildlife survey data from NGOs e.g. WCS and WWF would also be consulted.

HCV 2 Landscape-level Forest

Forest area that contains or is part of a globally regionally or nationally significant large landscape level forest where significant populations of most if not all naturally occurring wildlife species exist in natural patterns of distribution and abundance. In the Malaysian Toolkit, any forest area that forms or is part of a linkage between larger forest complexes and can thus provide connectivity between fragments or act as a wildlife corridor for the movement of animals from one complex to another is considered as HCV 2. This is not important in the plantation industry as this complex forest system does not exist.

HCV 3 Ecosystems

Any forest area that contains an ecosystem/habitat type identified as a priority for protection by the National Conservation Strategy, reports of Sabah Forestry Department, FRIM or confirmed by expert opinion is HCV3.

HCV 4 Services of Nature

Forest area that provides basic services of nature in critical situations.

HCV 4.1 Watershed Protection

This class of HCV includes dam catchment areas and any forest area legally gazetted as a Protection Forest for water catchment under the Sabah Water Resources Enactment 1998 or Class 1 Protection Forest Reserve under the Sabah Forest Enactment 1968 or under any other state or federal legislation.

HCV 4.2 Erosion Control

This includes forest areas that have been legally gazetted for soil protection or conservation under federal or state laws. Examples are forest areas which lie on slopes over 25 degrees and riparian areas covered under the DID guidelines.

HCV 4.3 Barriers to destructive Fire

Any specific area that can act as barriers to provide protection of forests especially forests with high conservation values from fire.

HCV 5 Basic Needs of Local Communities

An area that contains or is adjacent to settlements which depend on produce from the forest for basic subsistence or health needs. Lists of villages adjacent to the plantation areas determined.

HCV 6 Cultural Identity of Local Communities

An area that is important for a local community's cultural, ecological or religious activities. The community may be living either in or adjacent to the plantation area. Examples are burial grounds or sacred areas.

Ground assessment on biological resources

A large part of the island originally consisted of coastal heath forest with very low diversity of flora and emergent trees. These habitats consisted of organic white sand podsoles with relatively poor nutrients. The flora is distinctive with perhaps fewer than one half of species also occurring in the Mixed Dipterocarp Forest. The project sites had been extensively cleared of

the original vegetation owing to human activities. This was compounded by several fires that had been reported in the area owing to the very dry habitat with droughts that could extend to 3 months according to the local communities consulted. The most severe fire incident was the big fires in 1997/98 during the extreme drought associated with El Nino, which had resulted in a very barren condition with few trees and the land covered by Bracken fern throughout the island.

The assessment was done by walking through the whole of the smaller blocks while transects were used in the larger blocks. The existing vegetation was documented by visual identification. A rapid wildlife assessment was done mainly by recording the footprints and droppings observed during the reconnaissance walk.

Stakeholders consulted from 4th – 7th August, 2014 for SEI and HCV assessments

1. KAN Zakaria SH Attar -Kg. Bahanan
2. PKR Hj.Mhd Najar Hj Abdul Razak –Kg. Hujung
3. Encik Zainal Bin Muntong & Wife - Headman of Kg. Limau –Limau
4. Encik Hassan Bin Kasui – Headmaster of Sekolah Kebangsaan Malalin
5. Haji Nalin Nalin Abdullah – Headman of Kg. Malalin
6. Encik Etit Haji Nalin – Son of Headman Kg. Malalin
7. Encik Ag. Asmal Majid –Community member of Kg. Malalin
8. Encik Rosli SH Attar –JKKK of Kg. Bahanan
9. Encik Barhajun Hijah- JKKK of Kg Hujung
10. Encik Jalil Apong – Headman of Kg Bahanan

3. Summary of Findings

3.1 SEI Assessment

The consultations and meetings with stakeholders in all four villagers indicated that they were not aware of the proposed expansion project of GJBE as the management of GJBE had yet to confirm the status of the land. As the majority of the communities are not aware of the proposed project extension and where the land to be developed is located, further consultations with all levels of the communities shall be conducted especially on boundary between the proposed sites and the lands owned by the communities.

Although, GJBE has established good relationship with the communities surrounding its oil palm plantation, this has been deemed by some community members only as a relationship between

GJBE and community leaders, with little participation of the grass root communities. With such a condition existing, the relationship may not be sustainable.

There is the potential risk of emergence of social dynamics with de facto groups within communities thus complicating any consensus building in the future. The stakeholder’s consultations shall therefore include all levels of each community. The younger groups perceived the oil palm operations in different perspective especially on the concerns on potential environmental pollution resulting in loss of livelihood. Perceived negative impacts on the environment due to GJBE operation of both plantations and mill on the fish stock and pollution of water courses were explained by the respective management representatives.

Positive impacts of GJBE operation on road access and utility provision to villages directly affected by its operation and employment opportunities were highlighted. Availabilities of road access, inbound and outbound transportation to the island and power supply to communities are other major concerns of the village leadership. Possible joint venture cooperation with communities to be facilitated in transparent manner through consensus building approach was brought up in the consultation.

3.1.1 List of legal documents, regulatory permits related to the new planting area

1	Company Registration Number	Genting Plantations Berhad 34993-X
2	MPOB Licence	509406-502000
3	Approval for Proposal of Mitigation Measures (PMm)	JPAS/PP/02/600- 1/11/1/229(20) 22 December 2015

3.2 HCV Assessment

HCV 1

The many fragmented small parcels of land within the first block could not support any elements that could be related to the HCV. The shrub vegetation with few standing trees did not contribute any HCV features. The floristic composition consisted mainly of residual trees of the secondary forest with the ground completely covered by Bracken fern making natural regeneration extremely difficult.

The large animals detected were Sambar Deer and Wild Boars. Both are abundant throughout the island. These animals are protected under Schedule 3 of the Sabah Wildlife Enactment 1997 which allows hunting with permits. Both of these animals are placed in IUCN Red List Least Concern but vulnerable. There were no endemic, rare or threatened species in these blocks.

HCV 2

The proposed new planting sites are small and not considered to be classified under HCV2.

HCV 3

There are no ecosystems or habitats that are rare or threatened within the blocks.

HCV 4

Block E next to Kg. Limau-Limau has a stream flowing through and is utilized by the villagers. Block D also has a stream called Sg Ginday. Riparian buffer belts along these streams shall be established and demarcated on the ground as well as on maps under HCV 4.1. It must be noted that the source of Sg Limau-Limau is from the Acacia plantation established by the private company and cooperative effort for protection will be desirable.

HCV 5

The communities on the island depended on the sea for their livelihoods. Fishing and government aided sea cucumber processing are the main stays for the villagers. Planting of fruit trees was the main activity observed on land.

HCV 6

From the consultations conducted with the local communities there were no sites within the proposed project sites that fall under HCV 6.

3.3 Land Use Change Analysis

In September 2014, Genting Plantations engaged PT Earthline to provide satellite imagery for year 2005 and year 2009 and analyse landcover mapping of their existing Jambongan estate (3,510 ha) in Sabah, Malaysia. This exercise was to comply with the RSPO Remediation and Compensation Procedures. The new land parcels for new plantings were acquired by the company in late 2014 and early 2015. The land use change analysis for the new parcels was conducted by in-house GIS mapping experts.

Digital landcover classification and mapping was based on 10 m SPOT5 satellite imagery collected in April 2006 and 15m Landsat7 imagery collected in October 2010. It is intended that this information will allow an independent and indisputable measurement of the landcover in this area.

In 2006, most of the Jambongan estate consisted of cleared areas, with old and young shrubs mostly in the West and grassland mainly in the East. No secondary forest could be identified in this imagery.

In 2010, most of the estate was covered with young shrubs, with some old shrubs. In the West and South East, cleared areas are visible. No secondary forest or grassland could be identified in this imagery. The Jambongan estate is entirely grouped under coefficient 0.0 in 2006 and in 2010.

In 2015, most of the new parcels consisted of shrubs and open area. The new areas are grouped under coefficient 0.0 in 2015.

3.3.1 Land cover statistics 2006

ESTATE NAME	COEFFICIENT	CLASS NAME	SIZE (HA)	PERCENTAGE
GENTING JAMBONGAN	0.0	Cleared Area	1,880.82	53.58%
		Grassland	475.10	13.53%
		Young Shrub	493.86	14.07%
		Old Shrub	305.27	8.70%
	-	Cloud	351.77	10.02%
		Water	3.57	0.10%
			Total	3,510.39

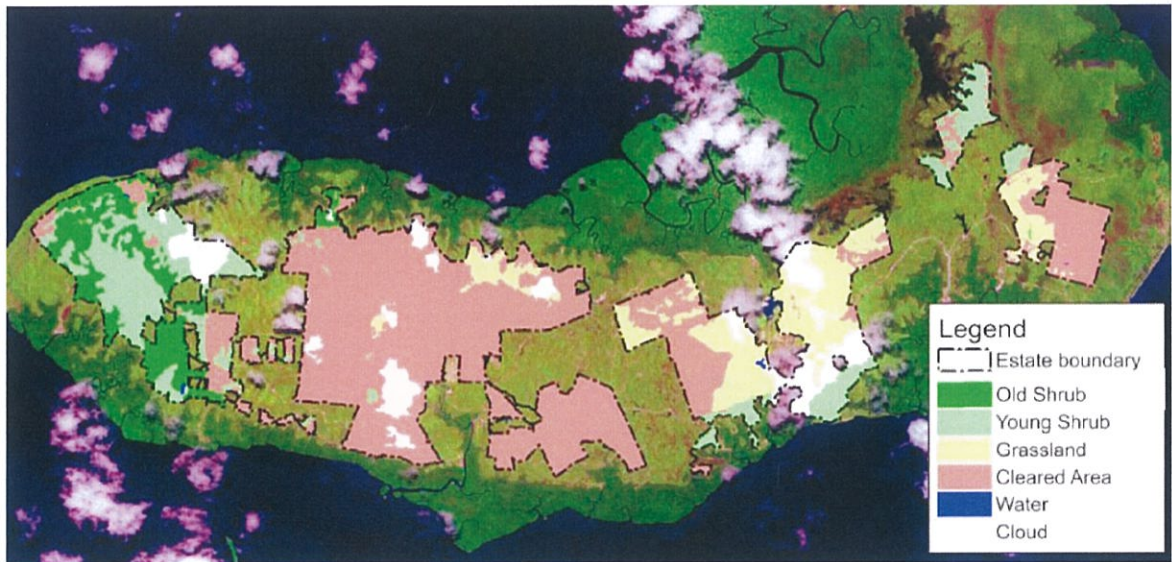


Figure 3.3.1 Land cover map 2006.

3.3.2 Land cover statistics 2010

COMPANY NAME	ESTATE NAME	COEFFICIENT	CLASS NAME	SIZE (HA)	PERCENTAGE
GENTING PLANTATION	GENTING JAMBONGAN	0.0	Cleared Area	707.26	20.15%
			Young Shrub	1,941.51	55.31%
			Old Shrub	56.39	1.61%
		-	Cloud	165.04	4.70%
			No Data	640.20	18.24%
			Total		3,510.40

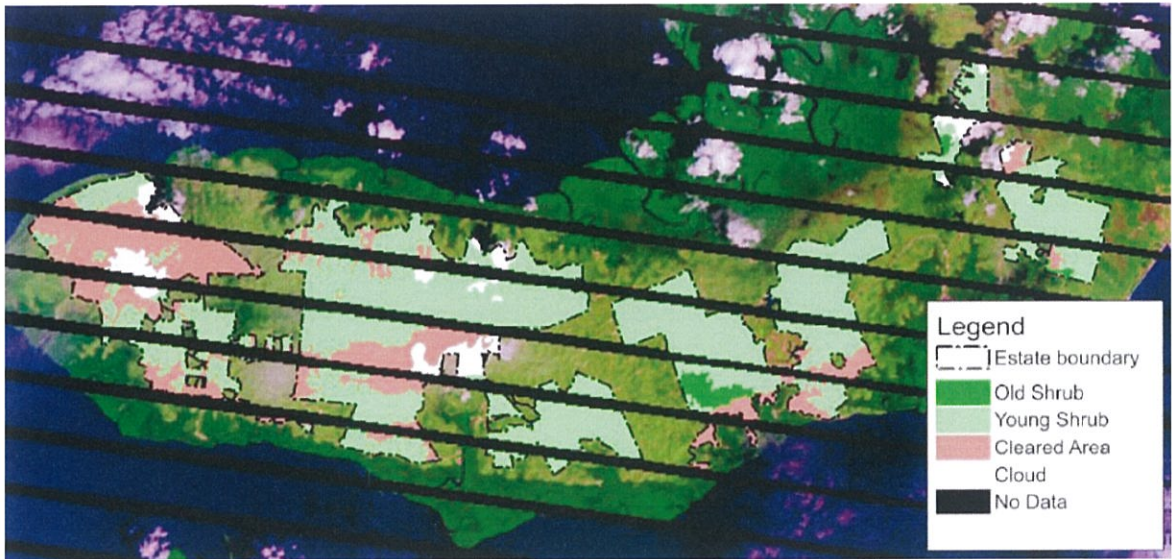


Figure 3.3.2 Land cover map 2010

3.3.3 Land cover statistics 2015

Class Name	Size (Ha)	Percentage
Disturbed Mangrove	25.26	0.61
Disturbed Swamp	5.43	0.13
Oil Palm	3406.78	82.53
Open area	160.19	3.88
Sand Beach	0.97	0.02
Water bodies	10	0.24
Shrubs	519.34	12.58
Total	4127.96	100%

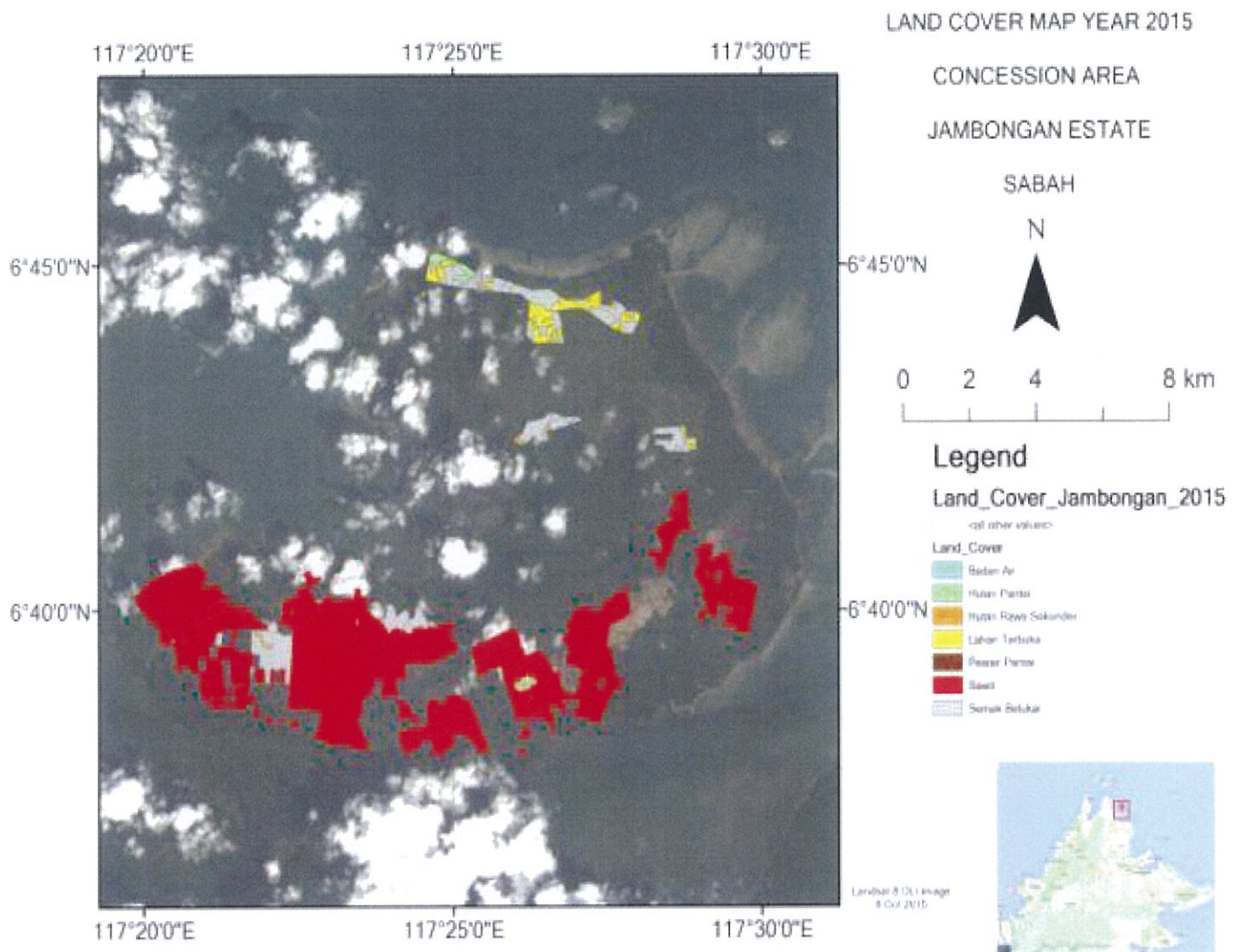


Figure 3.3.3 Land cover map 2015

3.4 Free, Prior and Informed Consent (FPIC) Process

Subsequent to the recommendations in the SEIA report, the management of Genting Jambongan Estate together with the representatives from Genting Jambongan Oil Mill conducted a series of meetings with the affected villages on the island. The stakeholders invited are the village chiefs and the villagers as identified by the SEIA report. Other stakeholders such as the government departments, contractors, suppliers will also be involved at a later stage.

The meeting was held to discuss and present the development plans of Genting Jambongan Estate and Genting Jambongan Oil Mill to the local community. The meetings were held at the community halls at the respective villages and at the village head's house.

The meetings were held on the following dates:

Date	Village	Attendees
26.11.14	Kg. Hujung	38 adults, 9 children
27.11.14	Kg. Malalin	67 adults, 1 child
27.11.14	Kg. Bahanan	50 adults, 20 children
28.11.14	Kg.Limau-Limau	25 adults, 2 children

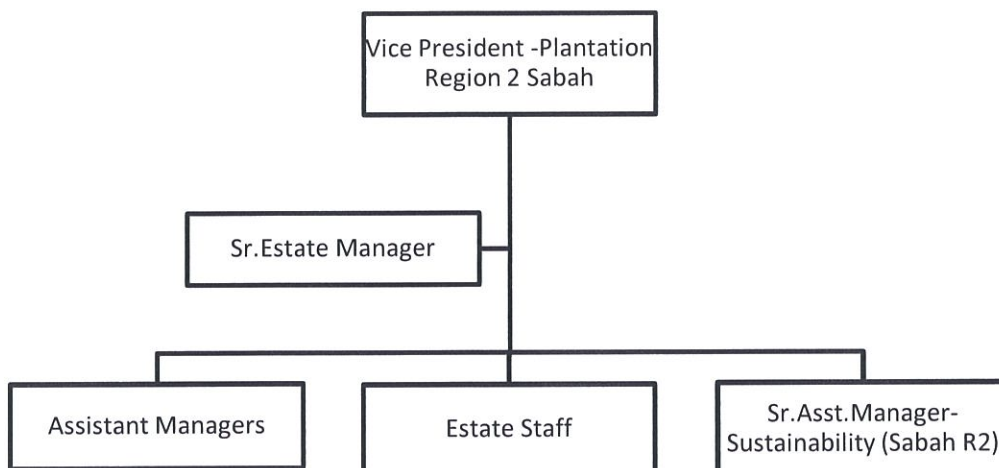
The topics discussed during the meetings were:

- Introduction and Background of Project
- Location of Project Area
- Proposed development plan
- Sustainability Programmes
- Oil Mill Operations
- Corporate and Social Responsibility Programmes

4. Summary of Management Plans

4.1 Team Responsible for developing management plans

Personnel directly involved in the implementation of HCV and SEIA management plans are the Vice President Plantation Sabah Region 2, Senior Estate Manager and Assistant Managers, supported by the Senior Assistant Manager-Sustainability (Sabah R2).



4.2 Management plan for SEI

Results of the SEIA study and also the FPIC meetings concluded that there are potential and existing social and environmental impacts on local villagers due to the proposed development of the new plantings at GJBE. The potential impacts and the areas of concerns highlighted and the management and mitigation plans are summarized in the table below.

4.2.1 Management and mitigation plan for social and environmental impacts

No	Potential Impact/Impact areas	Concerns	Management & Mitigation Plan	Timing	Person-in-Charge
1	Boundary encroachment	Lack of awareness of the proposed expansion plans by GJBE	1. FPIC session conducted by the estate and mill management teams in November 2014.	Before land clearing	Sr Estate Manager Assistant Managers Sustainability Team
2	Communication	Engagement and interaction at village level is lacking	1. To provide information on development plans. Regular stakeholders meetings to be held at village level.	Ongoing	Sr Estate Manager Assistant Managers Sustainability Team
3	Pollution	Environmental pollution from estate and mill operations	1. Environmental Aspect and Impact assessment to identify all sources of pollution 2. Estate and Mill to comply with Sustainability Management Procedures Manual specifically on environmental requirements. 3. Ensure compliance to DOE requirements 4. Ensure compliance to the PMM requirements	Ongoing	Sr Estate Manager Assistant Managers Sustainability Team
4	Unemployment	Employment opportunities	1. To provide capacity building and employment opportunities to the local villagers.	Ongoing	Sr Estate Manager Mill Manager
5	Welfare	CSR 1. Request for provision of clean water during drought season 2. Request for electricity supply 3. Improve road access	1. Consultation with other stakeholders operating on the island (e.g. Acacia plantation) to jointly provide CSR to the local community. 2. To provide each village with one 5000 gallons water tank. Clean water supply to be sent once the villages are accessible	Progressive	Sr Estate Manager Mill Manager

			<p>by road.</p> <p>3. Due to high cost of providing electricity, the management is unable to provide for all the villages. Excess energy from the mill is being used for the compost plant and the facilities around the mill.</p> <p>4. The management will assess/study the road access. However, improvements and construction of roads will be done progressively.</p>		
6	Boundary Encroachment/ Land Use Rights	Identification of legal boundaries between the new parcels and community land prior to the land clearing	<p>1. Stakeholders were invited to participate as observers during the land surveys via a letter in January 2015.</p> <p>2. A licensed surveyor was engaged by Genting Plantations to carry out the boundary surveys.</p> <p>3. The survey commenced in March 2015 until June 2015.</p> <p>Representatives from Genting Plantations accompanied the surveyors during the survey at:</p> <ul style="list-style-type: none"> -Parcel beside Division 3 by Supervisor En. Jamil and -Parcel towards Kg Malalin by Supervisor, En. Yazid <p>Representatives from the local villages present during the survey:</p> <ul style="list-style-type: none"> Parcel towards Kg Malalin and Limau-Limau jointly by En. Rosli and En. Murduhan. Parcel beside Div 3 – no representatives from the local villages as the land is not bordering the community's land 	Prior to land clearing	Sr Estate Manager Estate Management Team

4.2.2 Management and Mitigation Measures for Environmental Impacts (PMM)

No	Impact	Source of Impact	Mitigation and Control Measures	Timing
1	Soil erosion	Land clearing	-Re-vegetation or planting of cover crops should be carried out in tandem with the field establishment works. This is to avoid prolonged and unnecessary exposure of bare ground to heavy	During land clearing

			<p>rains.</p> <p>-Road networks within the site should be constructed with good drainage system.</p>	
2	Water pollution	Land clearing and construction of road access	<p>-Riparian reserves should be provided on all rivers and streams onsite in accordance to the requirement of the Department of Irrigation and Drainage (DID) under "Garis panduan JPS Bil.1 Tahun 2000" as well as "Seksyen 40 – Enakmen Sumber Air Negeri Sabah 1998"</p> <p>-All riparian reserves must be clearly marked on the ground with sign posts prior to the commencement of planting activities.</p> <p>-Regular water quality monitoring should be conducted once in every six (6) months throughout the project development at the tributary streams.</p> <p>-Use of agro-chemicals should strictly adhere to the rules and regulations as stipulated under the Pesticides Act 1974.</p>	Throughout the project
3	Waste generation	Throughout project	<p>-Strictly comply with the Zero burning policy throughout the project activities.</p> <p>-Biomass waste should be properly stacked and left to decompose naturally onsite.</p> <p>-Dumping of biomass waste into the waterways is strictly prohibited.</p> <p>-No discharge of raw sewage is permitted into the existing waterways.</p> <p>-All solid waste generated onsite should be disposed off at the designated disposal site within the plantation. Recyclable items to be sent to the segregation centre.</p> <p>-All scheduled waste must be stored and disposed as per requirements of the Environmental Quality (Scheduled Waste) Regulations 2005 and its subsequent amendment, 2007.</p>	Throughout the project
4	Ecological impact	Planting and maintenance	<p>-Application of agro-chemicals should be prohibited and controlled within 100 m distance from the forest reserves boundary.</p>	After planting
5	Socio-economic impact	Welfare and Employment	<p>-Employment priority will be given to competent and eligible locals.</p> <p>-Employment of foreign workers should be through proper documentation and in compliance with regulations.</p> <p>-All new workers should be health screened prior to employment.</p> <p>-All complaints from the local communities regarding socio-economic impacts should be recorded and investigated/resolved according to company procedures.</p>	Throughout project

4.3 Management Plan for HCV

The monitoring of the identified HCV sites shall be conducted every 2 months to prevent any damage to these sites and to avoid degradation of the conservation attributes. During monitoring, any damages shall be reported to management and remedial measures shall be implemented accordingly.

4.3.1 Management and Mitigation of HCV areas

HCV	Sub-HCV	Description	Possible threats	Management & Mitigation Action	Timing	Benchmark indicators	Monitoring	Person responsible
4	4.1 Watershed Protection	Sg Limau Sg Ginday	1.Stream bank erosion and sedimentation	<p>1. Establish buffer zone as per Sabah Water Resource Enactment 1998. With the proposed riparian reserve of 5 m and 20 m width along each river bank. Sg Limau, the approx. total area is <u>1.55 hectares</u>. Sg Ginday, the approx total area is <u>0.93 hectares</u>.</p> <p>2.To map important water resource areas, and to place signboards, to provide protection/buffer to the location.</p> <p>3.To inform stakeholders on importance of watershed protection.</p> <p>4.To install poles in red and white paint to show distance of buffer zone.</p> <p>5. To include the buffer zone and potential erosion area in the map</p> <p>6. Land or vegetation cover in the high potential erosion area should be well maintained, or should be improved if necessary.</p> <p>7. To avoid any weeding or manuring activities on palms within the buffer zone.</p> <p>8.To place signages informing stakeholders on HCV area</p>	Before any land clearing	<p>- Good vegetation cover at the buffer zones</p> <p>-HCV information available on notice boards</p> <p>-All sprayers and general workers understand on the HCV requirement.</p> <p>-Socialization activity documented.</p>	<p>-Compare documents to actual condition at site</p> <p>- Interviews with stakeholders</p>	Estate management team

				9. To socialize the importance of conservation of buffer zone to sprayers and general workers.				
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6. Internal Responsibility

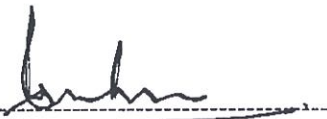
We hereby sign off the above summary of HCV assessment and SEIA of Genting Jambongan new plantings. The development of the new planting areas will be guided by the assessment reports and in accordance with RSPO Principles and Criteria.

S.K Yap Forestry and Landscape Services



Dr. Yap Son Kheong
Principal Consultant/ALS Licensed Assessor

Management of Genting Plantations Berhad



Mr Tang Hong Piau
Vice-President Plantations Sabah Region 2

6.1 Organisational information and contact person

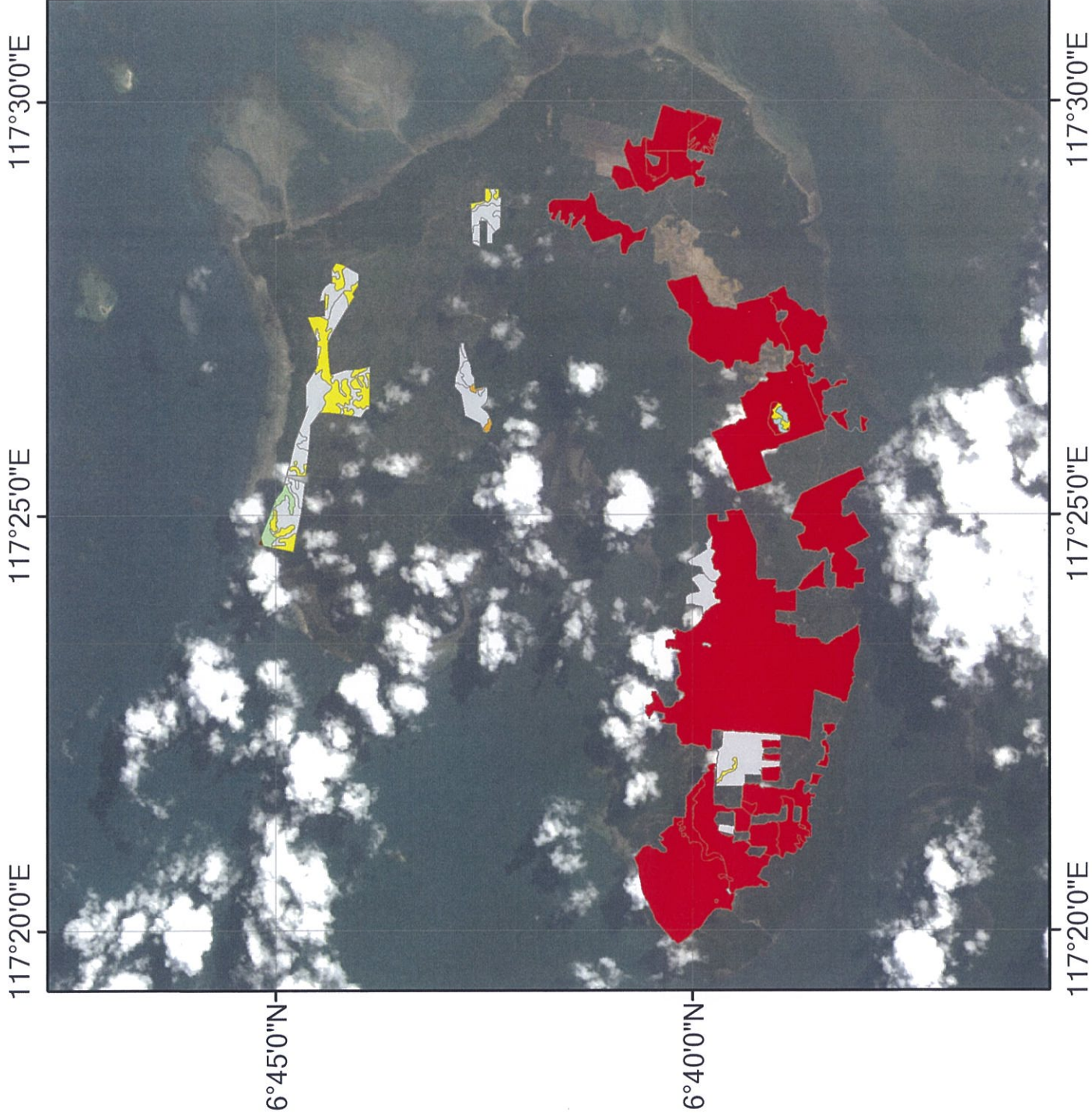
Company Name	Genting Plantations Berhad (Genting Jambongan Estate)
Address	Genting Plantations Office Sabah, Wisma Genting Plantations, KM12, Labuk Road, 90000 Sandakan, Sabah
Tel/Fax	+6089-673811.+6089-673 976
Contact Person	Mr Tang Hong Piau
Designation	Vice President – Plantation Sabah Region 2
Email Address	hongpiau.tang@genting.com
Geographical Location	Latitude: 6° 39' 1.6848" Longitude: 117° 26' 42.6438"

LAND COVER MAP YEAR 2015

CONCESSION AREA

JAMBONGAN ESTATE

SABAH



Legend

Land_Cover_Jambongan_2015

- <all other values>
- Land_Cover
 - Badan Air
 - Hutan Pantai
 - Hutan Rawa Sekunder
 - Lahan Terbuka
 - Pesisir Pantai
 - Sawit
 - Semak Belukar



Landsat 8 OLI image
8 Oct 2015