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ACCREDITED
FSC-ACC-004

Forest Management
Certification Assessment
Report for:

Ecoplanet Bamboo Group, LLC
In
Kowie Bamboo Farm, South Africa

Report Finalized:	12 October 2015
Audit Dates:	29 June - 1 July 2015
Audit Team:	Severinus Jembe Jeanette Clarke
Certificate code:	RA-FM-007293
Certificate issued:	13/10/2015
Certificate expiration:	12/10/2020
Organization Contact:	Troy Wiseman, CEO, EcoPlanet Bamboo Group
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TABLE OF CONTENTS

INTRODUCTION

This report presents the findings of an independent certification assessment conducted by a team of specialists representing the Rainforest Alliance The purpose of the assessment was to evaluate the ecological, economic and social performance of EcoPlanet Bamboo, LLC (Kowie Bamboo Farm) forest management as defined by the Principles and Criteria established by the Forest Stewardship Council™ (FSC®).

The Rainforest Alliance founded its previous SmartWood program in 1989 to certify responsible forestry practices and has grown to provide a variety of auditing services. Rainforest Alliance certification and auditing services are managed and implemented within its RA-Cert Division. All related personnel responsible for audit design, evaluation, and certification/verification/validation decisions are under the purview of the RA-Cert Division, hereafter referred to as Rainforest Alliance or RA.

This report contains four main sections of information and findings and several appendices. Sections 1 through 4 of the report plus appendix I will become public information about the forest management operation and comprise a public summary of the full report that may be distributed by Rainforest Alliance or the FSC to interested parties. The remainder of the appendices are confidential, to be reviewed only by authorized Rainforest Alliance and FSC personnel bound by confidentiality agreements. A copy of the public summary of this report can be obtained on the FSC website at http://info.fsc.org/.

A key purpose of the Rainforest Alliance auditing is to recognize conscientious land stewardship through independent evaluation and certification of forestry practices. Forestry operations that attain FSC certification may use Rainforest Alliance and FSC trademarks for public marketing and advertising.

1. SCOPE OF THE CERTIFICATE

The Farm was acquired in two stages. The first was the acquisition of Rosslyn Farm. The total area of this farm, comprised of four land titles, is 324.89 ha. The second was the acquisition of Waldon Farm, which is 157.31 ha and is comprised of one land title. In total, Kowie Bamboo Farm is a total of 482.2 ha, comprising of five private land titles. EcoPlanet Bamboo SA I, LLC was the initial owner of these properties. In December 2013, EcoPlanet Bamboo SA I, LLC transferred 322.7 ha of Farm 173 portion 0 (157.3 ha); Farm 170 portion 0 (155.4 ha); and Farm 169 portion 1 (9.99 ha) to EcoPlanet Bamboo SAII, LLC, which is a subsidiary of EcoPlanet Bamboo IOM. This 322.7 ha has been incorporated into the EcoResources Fund. The 159.5 ha of Farm 5 Portion 46 (67.2 ha) and Farm 174 Portion 0 (92.3 ha) remains owned by EcoPlanet Bamboo SA I, LLC.

Kowie Bamboo Farm is located in the Ndlambe Municipality, approximately 39 km outside Port Alfred or 32 km outside Grahamstown on the DR02016 off the R67. Bordering to the North is the municipality of Makana, to the South is Port Alfred in the Ndlambe Municipality and the Indian Ocean coastline, to the East the municipality of Ngqushwa, and to the West the municipality of Sunday's River Valley.

The eastern boundary of the farm is at 27°13'15'', western boundary of 27°16'15'', a northern boundary of 33°23'30'', and a southern boundary of 33°25'25'' using the World Geodetic System (WGS) 1984 coordinate system. The farm makes up a total of 482.2 hectares within the boundary and is cordoned off from surrounding agriculture and game farms by roads, fence lines, and tree lanes. Figure 4 shows the planting map of the farm.

Kowie Bamboo farm is managed as a single FMU with a clearly defined forest area with mapped boundaries managed by Eco Planet Bamboo SA a subsidiary of Eco planet Bamboo, LLC with the objectives of:

1. Ensuring that its lessees and investors receive an anticipated return
2. Bringing positive socio-economic impacts in the areas surrounding its Kowie Bamboo Farm.
3. Enhancing the environment on and around Kowie Bamboo Farm, as well as contributing to international climate goals.

On Kowie Bamboo Farm, there are 9 households (53 people in total) residing on the farm, all of which have a head of the household. There are 15 adult males, 17 adult females, and 21 children. EPBSA has full ownership of the farm. EPBSA provides rent-free houses to this community and ensures that their electricity and infrastructure is operating properly on officially established homes. However the community is accountable for buying their own electricity cards. EPBSA has prioritized employment for the residents of Kowie Bamboo Farm with 9 residents employed – 6 being females and 3 males. The nine households living on the property have tenure and use rights in terms of the Extension of Security of Tenure Act (ESTA). The nine households living in the farm are allowed to keep a limited number of livestock and set up vegetable gardens for food security.

1.1. Scope of the certificate

Forest management enterprise (FME) information:			
FME legal name:	Eco Planet Bamboo Group		
FME legal jurisdiction:	South Africa		
Type of legal entity	LLC		
Contact person (public):	Troy Wiseman		
Address:	3303 E. Main St., Suite 205 Barrington, IL 60010		
Tel/FAX/email:	+18473873609		
Website:	www.ecoplanetbamboo.com		
Reporting period:	Previous 12 month period	**Dates**	

A. Scope of Forest Area			
Type of certificate: single FMU	SLIMF Certificate Small SLIMF		
Group or Multiple FMU	Number of group members (if applicable):		
	Total number of Forest Management Units FMUs: (if applicable, list each below):		
	FMU size classification within the scope:		
		# of FMUs	total forest area of FMU's
	< 100 ha		ha
	100 – 1000 ha		ha
	1000 – 10 000 ha		ha
	> 10 000 ha		ha
	SLIMF FMUs		ha

Group Certificate: List of FMUs included in the certificate scope provided in **Appendix IV-a**:

Single/Multi-FMU Certificate: List of each FMU included in the certificate scope:

FMU Name/Description	Area	Forest Type	Location Latitude/Longitude[1]
Kowie Bamboo Farm	485 ha	Plantation	Latitude S98 Degrees Longitude E28 Degrees
	ha		
	ha		

B. FSC Product categories included in the FM/CoC scope ***(FSC-STD-40-004a)***

☒	Level 1	Level 2	Species
☒	W1 Rough Wood	W1.1 Roundwood (logs)	Bambusa balcoa
☒	W1 Rough Wood	W1.1 Roundwood (logs)	Oxytenanthera abyssinica
☐	W2 Wood charcoal		
☐	W3 Wood in chips or particles	W3.1 Wood chips	
☐	W4 Impregnated/treated wood	W4.1 Impregnated roundwood	
☐	W5 Solid wood (sawn, chipped, sliced or peeled)	W5.1 Flitches and boules	
☐	Non Wood Forest Products	[enter from FSC-STD-40-004a v2-0]	
☐	other		

[1] The center point of a contiguous FMU or group of dispersed properties that together comprise a FMU in latitude and longitude decimal degrees with a maximum of 5 decimals.

C. Species and Sustainable Rate of Harvest (AAC) This is yet to be determined since the plantation has not reached commercial maturity and no harvesting has occurred.				
Latin name	Common trade name	Annual allowable cut	Actual harvest (2011)	Projected harvest for next year
Bambusa balcoa	Clump bamboo	m3	m3	m3
Oxytenanthera abyssinica	African Bamboo	m3	m3	m3
		m3	m3	m3
		m3	m3	m3
Total AAC		m3	m3	m3

Total annual estimated log production:	m3
Total annual estimates production of certified NTFP:	m3
(list all certified NTFP by product type):	m3 m3 m3

D. FMU Info	
Forest zone	Temperate
Certified Area under Forest Type	
• Natural	147.2 ha
• Plantation	330 ha
Stream sides and water bodies	5 ha

E. Forest Area Classification			
Total certified area (land base)			482.2 ha
1. Total forest area			330 ha
a. Total production forest area		330 ha	
b. Total non-productive forest area (no harvesting)		147.2 ha	
• Protected forest area (strict reserves)	147.2 ha		
• Areas protected from timber harvesting and managed only for NTFPs or services	ha		
• Remaining non-productive forest	ha		
2. Total non-forest area (*e.g., water bodies, wetlands, fields, rocky outcrops, etc.)*			5 ha

F. Ownership/Management Classification		
Ownership Tenure		Private owners
Management Tenure *(list primary tenure type for group certificates)*		
Certified area that is: Privately managed	482.2 ha	
State/Public managed	ha	
Community managed	ha	

G. Forest Regeneration	
Area or share of the total production forest area regenerated naturally	ha
Area or share of the total production forest area regenerated by planting or seeding	330 ha
Area or share of the total production forest are regenerated by other or mixed methods (describe)	ha

H. High Conservation Values identified via formal HCV assessment by the FME and respective areas

Code	HCV TYPES[2]	Description:	Area
HCV1	Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).		ha
HCV2	Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.		ha
HCV3	Forest areas that are in or contain rare, threatened or endangered ecosystems.		ha
HCV4	Forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).	The High Biodiversity Thicket occurs in isolated patches along the valleys and watercourses. From a total of 4 relevés of this community type, 48 species were recorded. Thicket is typically impenetrable and is characterized by thorny, shrub species that are between 2-3m in height. Dominant species include Rhus pallens, Aloe ferox, Capparis sepiara, Diospyros dichrophylla and Euphorbia tetragona.	100 ha
HCV5	Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).		ha
HCV6	Forest areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).	Burial sites and cultural heritage sites found in the farm are clearly marked and delineated with barbed wire and communities are able to access these areas for burials and rituals by notifying the farm management in advance.	47.2 ha
Number of sites significant to indigenous people and/or local communities			

I. Pesticide Use		
☐ FME does not use pesticides. (delete rows below)		
FME has a valid FSC derogation for use of a highly hazardous pesticide		☒ YES ☐ NO
FSC highly hazardous pesticides used in last calendar year		
Name	Quantity	# of Hectares Treated
		ha
		ha
		ha
Non FSC highly hazardous pesticides used in last calendar year		
Name	Quantity	# of Hectares Treated
Folicur	10lts	For Nursery use only

[2] The HCV classification and numbering follows the ProForest HCVF toolkit. The toolkit also provides additional explanation regarding the categories. Toolkit is available at http://hcvnetwork.org/library/global-hcv-toolkits.

Rovral(Iprodione)	15lts	50ha
Pramitol(Prometon)	20lts	100ha
Roundup(Glyphoset)	10lts	30ha
Browser(Picloram)	15lts	For Nursery use only
Vantex(Gamma Cyhalothrin)	5lts	For Nursery use only

1.2. Exclusion and/or Excision of areas from the scope of certificate

X	Applicability of FSC partial certification and excision policy
☒	All forest land owned or managed by the FME is included in the scope of this evaluation.
☐	FME owns and/or has management involvement in other forest land/properties (forest management units) not being evaluated. **If yes, complete sections A & D below.**
☐	Is any portion of the forest management unit (s) under evaluation for certification being excised from the scope of the evaluation? **If yes, complete sections B, C & D below. Conformance with FSC-POL-20-003 *The Excision of Areas from the Scope of Certification* shall be documented below.**

2. ASSESSMENT PROCESS

2.1. Certification Standard Used

Forest Stewardship standard Used for assessment:	FM-32-Rainforest Alliance Interim Standard for Assessing Forest Management in Southern Africa, Version 03-15, March 2015.The standard can be found in the Rainforest Alliance Website below: http://www.rainforest-alliance.org/ and on the following link: https://ra.secure.force.com/SWPubDocs/PublicFiles?folder=Interim_Standards
Local Adaptation: (if applicable)	The stakeholder consultation process started 100days prior to assessment with comments from 1Accademician, 1environmental consultant, 1 South Africa FSC SDG member, 1 Certification body, 1 Forestry Company and 1 International Conservation NGO

2.2. Assessment team and qualifications

Auditor Name	Severinus Jembe	Auditor role	Lead Auditor
Qualifications:	Severinus Jembe – RA-Cert Associate Regional Manager, Africa is a development practitioner with 20 years' experience in managing community Natural resource projects in Eastern Africa. He is an FSC Forest Management and Chain of custody Lead Auditor. Severinus holds a B.A. in Development studies from Kimmage Development Studies Centre, Ireland. He holds a number of International Certificates among them Forest Certification by SIDA/SSC – Forestry, Watershed Management by SIDA/Sweden and Plant Conservation Techniques course by Kew Botanic Gardens/Darwin Initiative with 15years, experience in Forest certification and auditing in Africa and Europe. He once worked as a group scheme manager for an FSC certified Scheme in Kenya. He previously worked as an FSC lead Auditor for Soil Association Wood mark in East Africa and Conservation Manager at the National Museums of Kenya's Coastal Biodiversity Programs		
Auditor Name	Jeanette Clarke	Auditor role	Auditor and local specialist, responsible for all social aspects of the checklist
Qualifications:	South African permanent resident, M.Sc degree in Tropical Resource Ecology from University of Zimbabwe (1983). Social forestry research and consultancy experience over 30 years and has worked as a social specialist on FSC audits in South Africa for the past 20 years.		

2.3. Assessment schedule (including pre-assessment and stakeholder consultation)

Date	Location /main sites	Main activities
29th June 2015	EPB- SA Office	Opening meeting, interviews with staff, field site logistics and document collection and review. Introductory facility walk.
30th June 2015	Various field locations	Field visits. interviews with workers and local community
1st July 2015	Various field locations and EPBG SA Office	Field visits, Public meeting, document collection and review, closing meeting.

Total number of person days used for the assessment:13.5 = number of auditors participating **2 X** average number of days spent in preparation, on site and post site visit follow-up including stakeholder consultation**13.5.**		

2.4. Evaluation strategy

The audit team selected locations and sites they wanted to visit during the main assessment and identified possible issues. These included:

- How EPB manages its contractors with operators and safety Standards.
- How the local community interests were considered while setting up the enterprise.
- As a first commercial plantation of Bamboo in South Africa assessors wanted to examine the commitment to forest values in the farm.
- The assessors also examined the commitment to the long-term for the Bamboo Farm.
- The assessors were also interested to see how the forestry operations both in the nursery and in the whole plantation are organized and implemented and as such field sites were selected for inspection.
- Assessors examined how HCVs were taken care of in the farm as well as any identified endangered species.

The audit team also interviewed workers to understand how the workers' rights and working conditions are provided for in the organization.

The audit team also reviewed all management documents in the farm offices to understand how the farm operations are organized.

2.5.1 List of FMUs selected for evaluation

FMU Name	Rationale for Selection
Block A (Field 1,4& 6),	Ongoing plastic mulching for bamboo, Conservation areas, Recently planted areas
Block B (Field 10 & 8)	Recently Plastic Mulched bamboo plants and ongoing mulching
Block C (Field 19)	Grass mowing operations using tractors
Block D (Field 33, 26 & 29)	Burial sites and conservation areas, Road Maintenance

2.5.2 List of management aspects reviewed by assessment team:

Type of site	Sites visited	Type of site	Sites visited
Road construction	2	Illegal settlement	
Soil drainage	4	Bridges/stream crossing	3
Workshop		Chemical storage	1
Tree nursery	1	Wetland	2
Planned Harvest site		Steep slope/erosion	
Ongoing Harvest site		Riparian zone	3
Completed logging		Planting	1

Soil scarification		Direct seeding	
Planting site	4	Weed control	4
Felling by harvester		Natural regeneration	
Felling by forest worker		Endangered species	3
Skidding/Forwarding		Wildlife management	2
Clearfelling/Clearcut		Nature Reserve	
Shelterwood management		Key Biotope	2
Selective felling		Special management area	2
Sanitation cutting		Historical site	
Pre-commercial thinning		Recreational site	
Commercial thinning		Buffer zone	
Logging camp		Local community	2

2.5. Stakeholder consultation process

The purpose of the stakeholder consultation strategy for this assessment was threefold:

1) To ensure that the public is aware of and informed about the assessment process and its objectives;
2) To assist the field assessment team in identifying potential issues; and,
3) To provide diverse opportunities for the public to discuss and act upon the findings of the assessment.

This process is not just stakeholder notification, but wherever possible, detailed and meaningful stakeholder interaction. The process of stakeholder interaction does not stop after the field visits, or for that matter, after even a certification decision is made. Rainforest Alliance welcomes, at any time, comments on certified operations and such comments often provide a basis for field assessment.

In the case of {operation} prior to the actual assessment process, a public consultation stakeholder document was developed and distributed by email, FAX and mail. Through input from {list organizations or agencies, operation and assessment team members who contributed to the development of the stakeholder list} an initial list of stakeholders was developed and public announcements were distributed to them. This list also provided a basis for the assessment team to select people for interviews (in person or by telephone or through email). Public meetings were also held and written surveys were distributed to gather stakeholder input.

Stakeholder Type (NGO, government bodies, local inhabitant, contractor etc.)	Stakeholders Notified (#)	Stakeholders consulted directly or provided input (#)
National/International NGOs	10	2
Forest Industry		3
Local Community members		Kowie Bamboo Farm Forum members and Nolukhanyo Township community leaders
Govt Agency	6	6
Academia		3
FSC Conformance Assurance Body	1	1
Other interested parties		4

3. ASSESSMENT FINDINGS AND OBSERVATIONS

3.1. Stakeholder comments received

The stakeholder consultation activities were organized to give participants the opportunity to provide comments according to general categories of interest based upon the assessment criteria. The table below summarizes the issues identified by the assessment team with a brief discussion of each based upon specific interview and/or public meeting comments.

FSC Principle	Stakeholder comment	Rainforest Alliance response
P1: FSC Commitment and Legal Compliance	Staff are employed on a zero hour contract which does not give employees clarity on their employment status whether permanent or temporary.	As a result a NCR was raised against this requirement **See NCR 01/2015**
P2: Tenure & Use Rights & Responsibilities	Communities living on the Kowie farm acquired from previous farm owners did not have any negative concerns over ownership of the farm. They were happy that the new owner accepted to keep them in the farm and even give them priority during employment in the farm.	No response needed
P3 – Indigenous Peoples' Rights	No comment	
P4: Community Relations & Workers' Rights	The employment contracts for workers at Kowie Bamboo farm is not sufficiently sustained by the National labor laws	Assessors further reviewed the employment contracts for the farm workers to confirm this and found this to be Noncompliant See NCR 01/2015. *Note: Prior to finalization of the assessment report the FME provided Rainforest Alliance with evidence to successfully close NCR 01/15.
P5: Benefits from the Forest	No Comment	
P6: Environmental Impact	Some stakeholders felt this is the first time Bamboo species is developed in to a large plantation in South Africa with an undetermined invasive and water use potential. A stakeholder expressed concern for the welfare of the rivers of South Africa, which are most often abused by exotic plantations. The South African Department of Water Affairs wanted to declare bamboo plantations as a 'Stream Flow Reduction Activity', due to their excessive use of water, and its tendency to be an alien invasive plant (as are many of the forest plantation tree species used in South Africa). Perhaps you need to investigate this?	The frequency of irrigation is roughly every 6 weeks during the dry season in the first few years of the plants establishment and dependent on irrigation infrastructure capacity. Irrigation is only used to maintain the plants through the dry season and not designed to give ample amounts. Irrigation is prioritized for newly planted plants and stressed plants. Oxytenanthera abyssinica is a drought resistant species of bamboo that is indigenous to Africa. Balcooa has been naturalized in South Africa since first being introduced during the 1600s according to historical records, and has yet to be proven to produce viable seeds. This variety is known as a clump forming (monopodal) bamboo, which stands in

	Many parts of the Eastern Cape are water stressed, so my request to include in your study is: 1. What is the socio-economic and ecological impact of the bamboo plantations in Kowie on water resources at a catchment level? 2. How will the spread of 'escapee' bamboo plants out of the plantation be controlled? The poor ability of the South African plantation forestry industry to control the spread of plantation escapee alien plants (wattle, eucalyptus, and pine) has caused significant problems for water security in South Africa. We cannot have the same happening with bamboo plantations. Bambusa balcooa is not considered to be native to South Africa. It is from SE India, and has been listed as an alien nuisance invader in some National Parks e.g. Kruger National Park. Oxytenanthera abyssinica is endemic to Senegal, but its distribution could reach to northern Mpumalanga.	contrast to the running type (sympodal). These two species are not high water consumers. Studies have shown that bamboo plantations have been used successfully to rehabilitate degraded land back in to productive fully functioning ecological systems - advantageous for biodiversity in comparison to the baseline land use of pineapple farming in Kowie. The two Bamboo species in Kowie Bamboo farm have Sympodial rhizomes which are short and thick, and the culms above ground are close together in a compact clump, which expands evenly around its circumference. These are known as 'clumping' bamboo and the development of clumps around the core of the plant is predictable. Their natural habitat is tropical regions and they are not invasive. The clump size is self-limiting and will not continue to increase past a certain size, dependent on species and growing conditions. The plants can therefore be easily controlled.
P7: Management Plan	No Comment received	
P8: Monitoring & Assessment	No comment received	
P9: Maintenance of High Conservation Value Forest	The Bamboo plantation seem to be replacing a high Conservation Value grassland	The grassland on the Kowie farm is a result of the clearing that took place more than ten years ago by the previous owners of the farm who converted the natural forest to Pineapple and Cattle farming. Studies carried out have confirmed that the entire farm does not have HCV attributes except along the forested areas that were maintained by the previous owners and are still protected by EPB-SA.
P10 - Plantations	As stakeholder questioned how Bamboo can be certified under the FSC framework.	Plantation grown bamboo can be certified under the FSC system if the plantations occur within defined forest management areas (FMUs) that contain characteristics such that the applicant can demonstrate conformance with the applicable FSC FM standard.

3.2. Summary of Evaluation Findings for FSC Forest Criteria

PRINCIPLE 1: Compliance with law and FSC Principles					
Criterion 1.1 Respect for national and local laws and administrative requirements					
Conformance		Nonconformance	X	NCR #(s)	01/2015
Finding *(strength/weakness)*	The company makes use of professional legal and human resources management services to ensure company-operating practices are compliant with National laws and administrative requirements. An inspection of the workers contracts revealed that General workers are engaged under Zero Hour permanent employment contracts which is against the South African labor law**.** See NCR 01/2015				
Criterion 1.2 Payment of legally prescribed fees, royalties, taxes and other charges					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The Company has valid Letters of Good Standing and Tax Clearance Certificates showing that statutory taxes and levy payments are up to date including Injury on Duty, Unemployment Insurance and Taxes. In South Africa, forestry is classified as a stream flow reduction activity and requires a license in terms of the National Water Act. Bamboo is however not on the list of declared forestry species for which water use licenses are required in terms of the Act.				
Criterion 1.3 Respect for provisions of international agreements					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	South Africa is signatory to all ILO core labour conventions and these are incorporated into national labour legislation. EPB-SA human resource management policies and practices are based on South African law and conform to ILO core conventions. CITES and ITTA are not applicable in the context of plantation species. South Africa is Signatory to Convention on Biological Diversity and has in place a Biodiversity action plan				
Criterion 1.4 Conflicts between laws and regulations, and the FSC P&C					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	No conflicts between laws and regulations and the FSC P&Cs have been identified by forest managers or the audit team.				
Criterion 1.5 Protection of forests from illegal activities					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	Illegal activity on the properties includes hunting from nearby communities using snares and dogs, and property theft from criminal elements. The properties are fenced and buildings protected by an armed response security service. Illegal hunting is controlled through raising awareness in meetings with staff and local communities. Snares are removed whenever found on the property. Restrictions were introduced on dog ownership. Resident households may only keep one dog per household for security, and hunting using dogs is not permitted.				
Criterion 1.6 Demonstration of a long-term commitment to the FSC P&C					
Conformance	X	Nonconformance		NCR #(s)	

Finding *(strength/weakness)*	A statement of commitment to FSC signed by the Managing Director is prominently displayed in the main office building. EPB Group is the parent company for EPB-SA. EPBG also has bamboo operations in Nicaragua and West Africa. The Group subscribes to the Principles of FSC for all operations worldwide. The central American operations are already FSC certified, and the recently established West African operations will undergo an FSC main assessment in due course.				
PRINCIPLE 2: Tenure and use rights and responsibilities					
Criterion 2.1 Demonstration of land tenure and forest use rights					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	EPB-SA owns two properties that make up the bamboo farm operations in the Eastern Cape. Title Deeds: Rosyln Farm T10174/1899; Waldon Farm T10173/1899. There are no land restitution claims lodged on these properties. Maps are available that clearly show the boundaries of the property and the location of the bamboo growing compartments. Land use on the farm is dedicated to long-term production of bamboo.				
Criterion 2.2 Local communities' legal or customary tenure or use rights					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	There are nine households living on the property who have tenure and use rights in terms of the Extension of Security of Tenure Act (ESTA). The tenure rights of these resident households are acknowledged by EPB-SA in the Community Engagement Plan V1 June 2015. Rights and duties regarding livestock ownership are specified in a legal agreement signed by all household heads. A similar agreement is not yet in place specifying rights and duties of occupancy, although the intention is to do so. See Obs. 01/2015.				
Criterion 2.3 Disputes over tenure claims and use rights					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	In the transition period after the property was purchased from the previous owner, the population of livestock belonging to the tenant households increased substantially, and it was necessary for EPB-SA management to re-introduce controls and reduce the numbers of livestock on the property to within the limits of sustainable use. The company entered into negotiations with the affected households with support of an independent local mediator. After several meetings between Management and the Kowie Bamboo Farm Forum (KBFF) during 2013/14, those with excess livestock agreed to sell or otherwise dispose of their animals. The Forum continues to meet on a regular basis with management, and this provides a mechanism for raising and resolving disputes.				
PRINCIPLE 3: Indigenous peoples' rights					
Criterion 3.1 Indigenous peoples' control of forest management					
Conformance	N/A	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	Indigenous communities in South Africa comprise less than 1% of the population and are collectively known as the Khoe-San. There are no groups that claim Khoe-San identity in the vicinity of the farms owned and managed by EPB-SA. Descendants of indigenous peoples have become integrated into local Xhosa communities in this area.				
Criterion 3.2 Maintenance of indigenous peoples' resources or tenure rights					
Conformance	N/A	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	There are no groups that claim Khoe-San identity in the vicinity of the farms owned and managed by EPB-SA.				
Criterion 3.3 Protection of sites of special cultural, ecological, economic or religious significance					

to indigenous peoples					
Conformance	N/A	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	There are no groups that claim Khoe-San identity in the vicinity of the farms owned and managed by EPB-SA. There are a number of gravesites on the property, some of which are of significance to resident households. All gravesites identified on the property have been fenced, protected, and marked on maps. Resident households indicated in an interview that they are satisfied with the condition of the sites and conditions governing access to them. Tenant households were asked to identify rights of way on the farm, and these were marked on maps and are kept open during management activities.				
Criterion 3.4 Compensation of indigenous peoples for the application of their traditional knowledge					
Conformance	N/A	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	EPBG-SA does not make use of traditional knowledge derived from indigenous people in their business.				
PRINCIPLE 4: Community relations and workers rights					
Criterion 4.1 Employment, training, and other services for local communities					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The company provides preferential employment to people from households living on the farm, and to residents of the nearby Nolukhanyo township outside Bathurst. There are currently 65 workers employed, 6 from resident households and the remainder (excluding management staff) from a local township. A development plan has been put in place to upgrade the on-farm housing. A total budget of R134 000 has been allocated for phase 1 of the upgrade in 2015/16, most of which is allocated to ensuring safe electrical connections. Commitment to provision of equal opportunity employment and non-discrimination is evident in the EPB Social Impact Policy and Employment Equity Plan**.** EPBG-SA makes use of a single contractor for grass mowing. The contractor was able to demonstrate compliance with key provisions of labour law (signed contracts with his workers, payment at or above the Sectoral Determination minimum wage rates).				
Criterion 4.2 Compliance with health and safety regulations					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	Safe working procedures were developed for all operational tasks and form the basis for job training specifications. An annual training plan is in place to ensure that each worker is adequately trained to perform his or her duties safely and effectively. Health and safety training is a key aspect of induction training and of job specific training courses. PPE requirements for each task have been identified, and charts showing these are displayed in prominent places where workers gather. All workers in the fields assessed and the chemical warehouse were in proper and adequate PPEs. Incidents and accidents are reported using a standardized template that includes record of corrective action taken to prevent reoccurrences. Accident statistics are compiled and analyzed on an annual basis.				
Criterion 4.3 Workers' rights to organize and negotiate with employers					
Conformance	X	Nonconformance		NCR #(s)	

Finding *(strength/weakness)*	Rights of workers to freedom of association and collective bargaining are enshrined in South African labor law that in turn forms the foundation for the company's HR policies. A commitment to freedom of association is stated in the EPBG-SA Staff Induction Manual. The majority of employees were recruited by labour union FAWU a few years back but many have since resigned because the Union Organizer has not been in touch, or assisted them in any way since. Workers interviewed confirmed that management had in no way discouraged them from being union members, or tried to prevent them from joining unions.				
Criterion 4.4 Social impact evaluations and consultation					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(Strength/weakness)*	EPBG-SA Social Impact Policy commits the organization to socio-economic development of the local area through providing employment, training and education opportunities to local communities. Forest managers maintain regular communication with staff and with tenant communities through regular schedule of meetings and other channels.				
Criterion 4.5 Resolution of grievances and settlement of compensation claims					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The HR Manual outlines procedures for resolving staff grievances. An anonymous suggestions box system has also been put in place. The Kowie Bamboo Forum (KBF) provides a mechanism for resolving grievances and providing compensation to tenant households. A skilled independent local mediator provides ongoing support to the KBF to assist in resolving grievances or disputes between management and the tenant households. Grievances that arose from the decision to reduce and set limits on the number and type of livestock tenant households are permitted to keep were resolved through such efforts.				
PRINCIPLE 5: Benefits from the forest					
Criterion 5.1 Economic viability taking full environmental, social, and operational costs into account					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	EPBG has not started harvesting and selling any products. However the management plan has clearly shown in Section 2.6.1 that the 2 Bamboo species Bambusa balcoa and Oxytenanthera abyssinica are drought resistant species and It can be used for soil erosion control and the rehabilitation of degraded sites. Therefore planting of Bamboo in Kowie Bamboo Farm is rehabilitating the degraded former pineapple farms. EPBG has further committed through its Social Impact policy that through growing of Bamboo it will catalyze socio-economic development in its area of operation.				
Criterion 5.2 Optimal use and local processing of forest products					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	Culms may be processed and chipped in the fields or upon delivery to EcoPlanet Core Carbon, which is the company that will purchase the feedstock for processing into carbonized products like activated carbon. All materials sold to EcoPlanet Core Carbon or leaving the farm gate will be weighed and tallied, fulfilling internal accounting needs, as well as FSC standards. Specific harvesting and processing techniques are currently being researched by EPBG to determine the most environmentally and socially responsible as well as financially viable methods.				
Criterion 5.3 Waste minimization and avoidance of damage to forest resources					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakne*	No harvesting has started yet. Procedures will be developed prior to first harvesting.				

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Criterion 5.4 Forest management and the local economy					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	EPBG intends to provide sustainable livelihoods in the local area, both directly through employment opportunities and indirectly through secondary opportunities for economic development within the area. This will result in a decreased dependence upon the unsustainable harvesting of timber and non-timber forest products. A baseline survey carried out in the locality indicate that the project will improve the local economy.				
Criterion 5.5 Maintenance of the value of forest services and resources					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The EPBG management plan has clearly outlined the way watercourses, perennial humid areas, and riparian buffers within ten meters of all watercourses are protected as riparian corridor conservation areas. All large remnant pasture trees of ecological value are left to increase the project's overall forest cover and to enhance the carbon sequestration benefits of the plantations. All efforts will be made to assure increased habitat connectivity when site selections are being made for internal plantation roads and the location of infrastructure. Conservation areas have been identified and surveyed during the plantation establishment stages. Maps indicating conservation areas and species of concern locations are posted in the staff break area. Signs have been posted all over the farm to be concerned with the protection of the environment that state "Conservation Area: No Disturbance, No Hunting, No Fires". All staff interviewed during audit proved to be away of this policy and field inspections revealed that the company was compliant on this requirement. EPBG-SA has also developed a very elaborate Biodiversity Action Plan that outlines the Company's environmental commitments and plan for action.				
Criterion 5.6 Harvest levels					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	Harvest levels have not been determined yet since the plantation is still at its development stage. This anticipated to be in place before the first harvest due in 2018.				
PRINCIPLE 6: Environmental impact					
Criterion 6.1 Environmental impacts evaluation					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The managers are aware of the need to capture environmental impacts of the farm operations and as such EPBSA has undertaken individual assessments in the form of biodiversity baseline assessments, socio-economic baseline assessments, water testing, and soil testing, in line with the Company's objective to produce triple bottom line returns. However under the National Environmental Management Act (NEMA) Bamboo is not classified as forestry and the establishment of a bamboo plantation is not defined as "commercial tree, timber or wood production." Therefore an EIA would not be required for this activity. The Department of Economic Development, Environmental Affair and Tourism (DEDEAT) of South Africa acknowledges that bamboo plantations are not considered a "stream flow reduction" activity, and therefore do not require an EIA. A recommendation from Coastal Environmental Services (CES) confirmed that Kowie Bamboo Farm does not need to undergo an EIA as the result of bamboo not being considered a woody species and therefore not being classified as a commercial forestry species in South Africa. Assessors did review the studies and found they were sufficient for the farm.				
Criterion 6.2 Protection of rare, threatened and endangered species					

Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	All large remnant pasture trees of ecological value are left to increase the project's overall forest cover and to enhance the carbon sequestration benefits of the plantations. Also 3 species under CITES Appendix II Aloe barberae, Aloe ciliaris and Euphorbia tetragona have been identified in the conservation areas and marked in maps that are shared with all staff to make sure they are protected. This has been established through a baseline ecological study conducted by (CES) Coastal & Environmental Services in May 2012 in Kowie Bamboo Farm.				
Criterion 6.3 Maintenance of ecological functions and values					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	EPBSA has carried out a baseline ecological survey whose findings have guided the farm management to identify areas with the various ecological functions in the farm which were further delineated for conservation. The 4 ecological areas identified were High biodiversity and low biodiversity thickets, Open grasslands and Marshland.				
Criterion 6.4 Protection of representative samples of existing ecosystems					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	EPBG-SA has stated in the management plan that efforts will be made to assure increased habitat connectivity when site selections are being made for internal plantation roads and the location of infrastructure. Field inspections proved that the company was compliant. The company has also publicized maps indicating conservation areas and species of concern locations among staff.				
Criterion 6.5 Protection against damage to soils, residual forest and water resources during operations					
Conformance	X	Nonconformance	YES	NCR #(s)	02/15
Finding *(strength/weakness)*	Procedure 21- on road construction Maintenance and closure gives clear guidance on how to construct and maintain roads in the farm. However during field inspection a team of road maintenance were found to be filling a stream crossing with stones to make it passable this is against the requirement that culverts should be designed so that they do not obstruct the migration of fish, create fast water velocities or stream beds unsuitable for fish. See NCR 02/15				
Criterion 6.6 Chemical pest management					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The Company has an elaborate Integrated Pest management Strategy that gives clear guidance on reducing the use and need to use of Toxic chemicals and inputs in the plantations.				
Criterion 6.7 Use and disposal of chemicals, containers, liquid and solid non-organic wastes					
Conformance	X	Nonconformance	YES	NCR #(s)	03/15
Finding *(strength/weakness)*	Environmental, Health & Safety (EHS) Manual Section 2,3 has clearly outlined that guidelines for waste management. However during field inspection it was established that disused planting poly tubes were dumped in a conservation area closer to the edge of Field 3 in block A. See NCR 03/15				
Criterion 6.8 Use of biological control agents and genetically modified organisms					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakne*	There was no evidence of noncompliance. No GMOs are used on the farm.				

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Criterion 6.9 The use of exotic species					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The 2 Bamboo species used are naturalized in South Africa and thus not referred to as Exotic. The Company has made a commitment to remove any alien species that are invasive in the area.				
Criterion 6.10 Forest conversion to plantations or non-forest land uses					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	In Section 2.7.3 Environmental Objectives of the management plan the company has under taken to avoid the conversion of natural forests to monocultures of bamboo.				
PRINCIPLE 7: Management plan					
Criterion 7.1 Management plan requirements					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	EcoPlanet Bamboo Group (EPBG), the parent company of EcoPlanet Bamboo Southern Africa (EPBSA), has standard operating procedures (SOPs) for key Environmental, Health and Safety (EHS) standards. The EHS SOPs are a system of standards and reporting templates that all EPBG plantations follow. The EHS SOPs ensure that all EPBG subsidiaries are working towards the company's common objective of creating triple bottom line returns – that is environmental, social and financial returns.				
Criterion 7.2 Management plan revision					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	EPB SA has clearly stated in its policy of commitment to FSC that a management plan — appropriate to the scale and intensity of the operations shall be written, implemented, and kept up to date. During the assessment an up to date management was reviewed by the audit team.				
Criterion 7.3 Training and supervision of forest workers					
Conformance	YES	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	All workers are trained on their roles and all training requirements for each job type is recorded in an excel sheet also showing the specific training requirements. Interviews of workers in the fields revealed that they had been trained on their specific roles and health and safety. The Environmental, Health & Safety (EHS) Manual May 2015 has also clearly stated the training needs and procedures for workers. Workers interviewed during assessment proved to be knowledgeable in H&S. All the workers teams found in the various fields were working were led by supervisors per team who also doubled up as First aiders as well.				
Criterion 7.4 Public availability of the management plan elements					
Conformance	YES	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	An executive summary of the management plan is available on request from Kowie Bamboo Farm main office.				
PRINCIPLE 8: Monitoring and evaluation					
Criterion 8.1 Frequency, intensity and consistency of monitoring					
Conformance	X	Nonconformance		NCR #(s)	

Finding *(strength/weakness)*	The company has in place plant and growth monitoring procedures where by Plant monitoring is done in a weekly basis while growth monitoring is done bi-annually. The farm also has a habitat change monitoring going on.				
Criterion 8.2 Research and data collection for monitoring					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The Farms Management plan and monitoring procedures provide for Pest, disease, and species monitoring				
Criterion 8.3 Chain of custody					
Conformance	N/A	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	COC procedures will be developed prior to first harvest to ensure traceability.				
Criterion 8.4 Incorporation of monitoring results into the management plan					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The data generated from monitoring will be used to review the management plan which is updated annually.				
Criterion 8.5 Publicly available summary of monitoring					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	EPB corporate reports do include information on monitoring data.				
PRINCIPLE 9: High Conservation Value Forests					
Criterion 9.1 Evaluation to determine high conservation value attributes					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	EcoPlanet Bamboo utilizes the ProForest Toolkit, Part3,for the assessment of High Conservation Values within the company's commercial bamboo plantations. This Toolkit identifies 6 types of HCV: 1. HCV1: Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values 2. HCV2 – Globally, regionally or nationally significant large landscape level forests 3. HCV3 – Forest areas that are in or contain rare, threatened or endangered ecosystems 4. HCV4 – Forest areas that provide basic services of nature in critical Situations 5. HCV5 – Forest areas fundamental to meeting basic needs of local Communities 6. HCV6 – Forest areas critical to local communities traditional cultural Identity HCV element 1.2.2 is present within the FMU and the presence of rare species, endemics, and seasonal concentrations of species has been assessed and is monitored as outlined in the Biodiversity Action Plan.				

Criterion 9.2 Consultation process					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	There was evidence that independent sources such as Coastal Environmental services were consulted on the HCVF within the farm as well as NEMA. Local communities confirmed they were consulted on high conservation attributes of the farm by Kowie Bamboo farm management before the operation was set up in the area.				
Criterion 9.3 Measures to maintain and enhance high conservation value attributes					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	According to the management plan any areas of existing forest within the farm will be maintained, and areas not suitable for planting B. balcooa and O. abyssinica will be planted with native species to encourage habitat patches and biological corridors. Strands of invasive species that put pressure on water resources will be removed. Additionally, no invasive species are planted on the project site as B. balcooa has been naturalized in South Africa since the 1600s and O. abyssinica is indigenous to Africa. The farm also has a Biodiversity Action Plan in place to help maintain and enhance the HCV attributes.				
Criterion 9.4 Monitoring to assess effectiveness					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The HCVs are clearly designated on maps and a monitoring plan is place to ensure these areas are protected. The farm management has in place an awareness program for both staff and local communities so that these areas are kept safe. The likely threat to these areas is the invasive species in the farm but the management has put in place an action plan that ensures complete removal of alien species from the farm in the long run.				
PRINCIPLE 10:Plantations					
Criterion 10.1 Statement of objectives in the management plan					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	Based on “a triple-bottom-line” approach, the objectives of EPBG, and thus EPBSA, are threefold: • To develop sustainable and commercially viable plantations of bamboo; • To provide sustainable jobs and economic vitality in a region where more than three fifths of the population lives in poverty; • To help combat deforestation and climate change by reducing dependence on unsustainable tree species and by using one of the planet’s most effective forms of natural carbon sequestration.				
Criterion 10.2 Plantation design and layout					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The farm is bordered on two borders by currently active pineapple farms and by cattle grazing lands or game farms on the other borders. The fields of the farm that were earmarked for the development of bamboo were limited to open grasslands as identified by CES in the ecological baseline assessment. Detailed information on the conversion of lands for bamboo planting is available in the Biodiversity Action Plan. These plantable areas, totaling nearly 350 ha are well connected by service roads and are mostly clear of vegetation.				
Criterion 10.3 Diversity in composition					
Conformance	X	Nonconformance		NCR #(s)	

Finding *(strength/weakness)*	The vegetation on Kowie Bamboo Farm is mostly in a poor condition primarily due to grazing and the few alien invasive plant species on site. Alien species recorded from the study site included Acacia mearnsii (Schedule 2), Opuntia ficusindica (Schedule 1), Pinus halepensis (Schedule 2) and Verbena bonariensis (Schedule 1). These species are invaders and are required to be removed by law, as they are declared weeds. Several species of special concern were recorded from the site. One species (Sideroxylon inerme) is on the list of Protected Trees, the others are protected in terms of the provincial nature conservation ordinance, CITES, IUCN red data list and the South African red data list. Posters of species of concern have been made available to the staff. There is a lack of pristine terrestrial habitats in the area. In this case, the terrestrial fauna has been severely impacted upon by human activity. Vegetation clearing for cultivation is the primary impacts on the natural habitats of the region. Despite this, a few small and medium sized animals occur in the region. Reptile and amphibians occurring in the area include many species of frogs, tortoises and terrapins, lizards and snakes.

Criterion 10.4 Species selection

Conformance	X	Nonconformance		NCR #(s)	

Finding *(strength/weakness)*	While there are over 40 indigenous species of bamboo in Africa, only 5 species, including Oxytenanthera abyssinica, can be found on the mainland of the African continent. In addition to indigenous bamboo, there are also naturalized bamboo species such as Bambusa balcooa. EPBSA grows both Oxytenanthera abyssinica and Bambusa balcooa. Oxytenanthera abyssinica is a drought resistant species of bamboo that is indigenous to Africa. It is distributed at altitudes between 700-1,500 m with annual rainfall of 350 – 1000mm and a hardiness of 7˚C. The species is the most common lowland bamboo in East and Central Africa, with an area of potential occurrence of 7,117, 915 km2. Young shoots are bluish green with creamy yellow blades and it matures to be bright green in colour. The culms grow to 6-10 m tall and 6-10 cm in diameter. Flowering occurs gregariously over wide areas about every 70 years. It can be used for soil erosion control and the rehabilitation of degraded sites. It is also made into building material, handicrafts and charcoal. Bambusa balcooa is a clumping bamboo of Indian origin. It is popular with the Vietnamese as food, and can be used as a short life timber for temporary constructions. It can be found up to 700m altitude and grows in any soil type with a preference for heavy textured soil with good drainage. It can withstand temperatures down to -5˚C. Culms are 16 - 20m high and 7.5 - 15cm in diameter. Research conducted in the Eastern Cape on mostly forgotten 30 plus year old clumps located on old farms has shown naturalization of balcoa, as well as unique adaptation to the local climate. Average culm heights of 15m, culm diameters of 8-10cm and culm wall thicknesses of 32mm were recorded on several clumps. Shorter culms with greater culm wall thicknesses was found to be an adaptation to adverse climatic conditions, being strong and frequent wind, extended periods of drought and relatively low rainfall compared to more tropical climates that bamboo is thought to prefer. Balcooa has been naturalized in South Africa since first being introduced during the 1600s according to historical records, and has yet to be proven to produce viable seeds. This variety is known as a clump forming (monopodal) bamboo, which stands in contrast to the running type (sympodal). Their natural habitat is tropical regions and they are not invasive. The clump size is self-limiting and will not continue to increase past a certain size, dependent on species and growing conditions. The plants can therefore be easily controlled. Furthermore bamboo tolerates poor soils, which makes it useful for planting on degraded soils.

Criterion 10.5 Restoration of natural forest					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	Any areas of existing forest will be maintained, and areas not suitable for planting B. balcooa and O. abyssinica will be planted with native species to encourage habitat patches and biological corridors. Strands of invasive species that put pressure on water resources will be removed. Additionally no invasive species are planted on the project site as B. balcooa has been naturalised in South Africa since the 1600s and O. abyssinica is indigenous to Africa.				
Criterion 10.6 Impacts on soil and water					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	While EPBSA does not recommend conversion of natural forests to monocultures of bamboo, INBAR has carried out significant research to show that the use of bamboo plantations have been successful in rehabilitating degraded lands, and that allowing some undergrowth can have positive effects not only on bamboo productivity but on biodiversity. INBAR has shown that bamboo plantations have been used successfully to rehabilitate degraded land back in to productive fully functioning ecological systems - advantageous for biodiversity in comparison to the baseline land use of pineapple farming. Oxytenanthera abyssinica is a drought resistant species of bamboo that is indigenous to Africa. It is distributed at altitudes between 700-1,500 m with annual rainfall of 350 – 1000mm and a hardiness of 7˚C and Bambusa balcoa was found to be an adapted to adverse climatic conditions, being strong and frequent wind, extended periods of drought and relatively low rainfall compared to more tropical climates that bamboo is thought to prefer.				
Criterion 10.7 Pests and diseases					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	Bamboo has few known pests in South Africa. Nonetheless it is closely monitored for nematodes, viral, fungal or bacterial pathogens, as well as insects, rodents and herbivore damage.				
Criterion 10.8 Monitoring of impacts, species testing and tenure rights					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	All the land of Kowie Bamboo farm is owned by EPBG managed by its subsidiary EPBSA. Kowie Bamboo farm does both plant and growth monitoring of the Bamboo plants and in addition EPBG has an adaptive management policy, which commits to learning and adapting its operations and management to ensure that best practice techniques are employed and to minimize operational risks. The commercialization of bamboo is relatively new and little accurate information exists. As a result, EPBSA conducts research trials in order to improve on best practices that can be applied to bamboo cultivation.				
Criterion 10.9 Plantations established in areas converted from natural forests after November 1994					
Conformance	X	Nonconformance		NCR #(s)	
Finding *(strength/weakness)*	The area Kowie Bamboo farm stands was converted from natural forests more than 10years ago by the previous owners for establishment of pineapple plantations which degraded it to the current grass lands that EPBSA is out to rehabilitate by using Bamboo plantations. It is clearly evident EPBSA were not responsible for the initial deforestation of the area.				

3.3. Identified nonconformances and Nonconformity Reports (NCRs)

A nonconformance is a discrepancy or gap identified during the assessment between some aspect of the FME's management system and one or more of the requirements of the forest stewardship standard. Depending on the severity of the nonconformance the assessment team differentiates between major and minor nonconformances.

- **Major nonconformance** results where there is a fundamental failure to achieve the objective of the relevant FSC criterion. A number of minor nonconformances against one requirement may be considered to have a cumulative effect, and therefore be considered a major nonconformance.
- **Minor nonconformance** is a temporary, unusual or non-systematic nonconformance, for which the effects are limited.

Major nonconformances must be corrected **before** the certificate can be issued. While minor nonconformances do not prohibit issuing the certificate, they must be addressed within the given timeframe to maintain the certificate.

Each nonconformance is addressed by the audit team by issuing a nonconformity report (NCR). NCRs are requirements that candidate operations must agree to, and which must be addressed, within the given timeframe of a maximum of one year period.

[MINOR NCR#:	01/15	**NC Classification:**	Major	Minor X
Standard & Requirement:		**Reference to Standard:** Rainforest Alliance Interim Standard for South Africa, Indicator 1.1.1		
Report Section:		Appendix II; 1.1		
Description of Nonconformance and Related Evidence:				
General workers are engaged under so-called zero hour permanent employment contracts. The current contracts do not specify ordinary hours and days of work, and do not specify period of notice required to terminate employment as required by the Basic Conditions of Employment Act.				
Corrective Action Request:		Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the nonconformance.		
Timeline for Conformance:		By next surveillance		
Evidence Provided by Organization:		EPBSA submitted to the auditors an inspection letter from the department of labor of the Government of South Africa and NCR response in relation to the labor law of South Africa.		
Findings for Evaluation of Evidence:		After a careful review of the two documents it was felt that the company practice of offering Zero hour contracts to some of her workers was within the precincts of the law of South Africa.		
NCR Status:		Closed		
Comments (optional):				

MINOR NCR#:	02/15	**NC Classification:**	Major	Minor X
Standard & Requirement:		**Reference to Standard:** Rainforest Alliance Interim Standard for South Africa, Indicator 6.5.4		
Report Section:		Appendix II; 6.5.4		
Description of Nonconformance and Related Evidence:				

According to the Road Construction, maintenance and closure (Procedure 21) under road construction section on operating procedure1 states that road construction will be conducted in a manner consistent with plans and designed to ensure the protection of water quality and biodiversity conservation. However on field inspection the audit team came across a team of road maintenance crew filling a stream crossing with stones to make it passable by car. This was felt to be against the requirement that culverts are designed so they do not obstruct the stream and also against the company's procedure.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the nonconformance.
Timeline for Conformance:	By next surveillance
Evidence Provided by Organization:	PENDING
Findings for Evaluation of Evidence:	PENDING
NCR Status:	OPEN
Comments (optional):	

MINOR NCR#:	03/2015	**NC Classification:**	Major	Minor X
Standard & Requirement:		**Reference to Standard:** Rainforest Alliance Interim Standard for South Africa, Indicator 6.7.4		
Report Section:		Appendix II; 6.7.4		
Description of Nonconformance and Related Evidence:				
Environmental, Health & Safety (EHS) Manual Section 2.3 has clearly outlined guidelines for waste management which have defined a system for taking waste to appropriate off site locations. However during field inspection it was established that disused planting poly tubes were dumped in a conservation area closer to the edge of Field 3 in block A contrary to the prescribed procedures.				
Corrective Action Request:		Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the nonconformance.		
Timeline for Conformance:		By next surveillance		
Evidence Provided by Organization:		The EPBSA management developed a toolbox talk on impacts of littering which was used to educate all plantation workers on the negative effects of littering. They were also made aware of the importance of waste segregation and disposal of waste in the right way. The waste was further collected and put in the correct areas of disposal and photos of the same were sent to the auditors.		
Findings for Evaluation of Evidence:		The toolbox talk was reviewed by the audit team along with the policy adopted by the company to clean up any planting field before moving to a new area and the photos of all the collected planting bags and empty plastic containers collected from the fields. Given the scope and extent of the nonconformance observed onsite, the actions taken and evidence submitted was found to be sufficient to close this NCR.		
NCR Status:		Closed		
Comments (optional):		Auditors should check the fields during annual surveillance 1 to ensure the good practice is maintained.		

3.4. Observations

Observations can be raised when issues or the early stages of a problem are identified which does not of itself constitute a nonconformance, but which the auditor considers may lead to a future nonconformance if not addressed by the client. An observation may be a warning signal on a particular issue that, if not addressed, could turn into a NCR in the future (or a pre-condition or NCR during a 5 year re-assessment).

OBS 01/2015	**Reference Standard & Requirement: 2.2.3**
Although EBP-SA acknowledges the ESTA rights of the tenant households, and has not violated these, there is presently no signed legal agreement that states the respective rights and duties of the tenants and the property owner with regards to housing.	
Observation: EBP-SA should consider formalizing a written agreement with tenant households detailing agreed use rights to ensure they are respected.	

3.5. Certification Recommendation

Based on a thorough review of FME performance in the field, consultation with stakeholders, analysis of management documentation or other audit evidence the Rainforest Alliance assessment team recommends the following:

Certification requirements met; Upon acceptance of NCR(s) issued above	☒
Certification requirements not met	☐
Subject to conformance with minor NCRs (if applicable), the FME has demonstrated that their described system of management is being implemented consistently over the whole forest areas covered by the scope of the evaluation	Yes ☒ No ☐
Comments:	
FME's management system, if implemented as described and subject to conformance with minor NCRs (if applicable), is capable of ensuring that all the requirements of the certification standards are met across the scope of the certificate	Yes ☒ No ☐
Comments:	
Issues identified as controversial or hard to evaluate.	Yes ☐ No ☒
Comments:	
Description of activities taken by the FME prior to the certification decision to correct major or minor nonconformity(s) identified during the assessment.	
EPBSA was able to present evidence and successfully close NCR 01/2015 and NCR 03/2015 after the assessment closing meeting prior to the Certification decision as indicated in the NCR table above.	
Certificate type recommended:	☒ Forest management and Chain of custody ☐ Forest management only (no CoC)

Once certified, the FME will be audited annually on-site and required to remain in conformance with the FSC principles and criteria as further defined by regional guidelines developed by Rainforest Alliance or the FSC in order to maintain certification. The FME will also be required to fulfill the corrective actions as described below. Experts from Rainforest Alliance will review continued forest management performance and conformance with the corrective action requests described in this report, annually during scheduled and/or random audits.

4. CLIENT SPECIFIC BACKGROUND INFORMATION

4.1 Ownership and land tenure description (legal and customary)

EcoPlanet Bamboo Southern Africa, LLC is a subsidiary of the EcoPlanet Bamboo Group, LLC. It is a Delaware registered limited liability company that is responsible for the development of all EPBG bamboo plantations within Southern Africa. EPBG is owned, managed and operated by its co-founders and principals, and is based in Chicago, Illinois in the United States.
The Company legally owns all land on which EPBG undertakes plantation activities.
EPBG has appointed its subsidiary EcoPlanet Bamboo Southern Africa (Pty) Ltd to manage the day-to-day operations and local interactions of its operations within Southern Africa.
EcoPlanet Bamboo Southern Africa (Pty) Ltd is a South African Company registered in terms of section 14 of the Companies Act, 2008 under the Companies and Intellectual Property Commission of the Republic of South Africa under registration number 2012/086298/07.
EPBG has appointed Samantha Wilde as its Managing Director with responsibility to manage and operate the company's interests in Southern Africa. Troy Wiseman has Power of Attorney over all EPBSA and its subsidiaries' operations in Southern Africa.

On Kowie Bamboo Farm, there are 9 households (53 people in total) residing on the farm, all of which have a head of the household. There are 15 adult males, 17 adult females, and 21 children. EPBSA has full ownership of the farm. EPBSA provides rent-free houses to this community and ensures that their electricity and infrastructure is operating properly on officially established homes. These households have tenure and use rights in terms of the Extension of Security of Tenure Act (ESTA). The tenure rights of these resident households are acknowledged by EPB-SA in the Community Engagement Plan V1 June 2015. However the community is accountable for buying their own electricity cards. EPBSA has prioritized employment for the residents of Kowie Bamboo Farm with 9 residents employed – 6 being females and 3 males.

4.2 Legislative and government regulatory context

All operations in the Kowie Bamboo farm are in line with the South African legal requirements stipulated in appendix A; of the management plan. The South African Laws relevant to EPSA operations in Kowie Bamboo Farm are Agricultural Pests Act (No. 39 of 1983), Conservation of Agricultural Resources Act (No. 43 of 1983, as amended in 2001, Environment Conservation Act (No. 73 of 1989), Fencing Act (No. 31 of 1963), Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (No. 36 of 1947), National Environmental Management: Biodiversity Act (No. 10 of 2004), including National Environmental Management: Biodiversity Act (No. 598 of 2014) and (No. 599 of 2014), National Forests Act (No. 84 of 1998), National Veld and Forest Fire Act (No. 101 of 1998), including National Veld and Forest Fire Amendment Act (No. 12 of 2001), National Water Act (No. 36 of 1998), Animal Disease Act (No. 35 of 1894), Hazardous Substance Act (No. 15 of 1973), National Building Regulations & Building Standards (No. 103 of 1977), National Environmental Management Act (No. 107 of 1998), National Environmental Management: Air Quality Act (2004), National Environmental Management: Protected Areas Act (No 57 of 2003), National Environmental Management: Waste Act (No 59 of 2008), Plant Improvement Act (No. 53 of 1976), Basic Conditions of Employment Act (No. 75 of 1997), including Basic Conditions of Employment Amendment Act (No. 20 of 2013) and Sectorial Determination 13: Farm Worker Sector, Compensation for Occupational Injuries and Diseases Act (No. 130 of 1993), Employment Equity Act (No. 47 of 2013), Employment Services Act (No. 269 of 2014), General Safety Regulations (1986), Labour Relations Act (Act 66 of 1995), including Labour Relations Amendment Act (No. 590 of 2014), Occupational Health & Safety Act (No. 85 of 1993), Skills Development Act (No. 97 of 1998), including Skills Development Levies Act (No. 9 of 1999), Unemployment Insurance Act (No. 63 of 2001) & Unemployment Insurance Act (No. 32 of 2003), including Unemployment Insurance Contributions Act (No. 4 of 2002),

Animal Protection Act (No. 71 of 1962), Extension of Security of Tenure Act (No. 67 of 1997), National Heritage Resources Act (No. 25 of 1999), Prevention of Illegal Eviction from and Unlawful Occupation of Land Act (No. 19 of 1998), Protection of Informal Land Rights Act (No. 31 of 1996), Communal Land Rights Act (No. 11 of 2004), Land Reform (Labour Tenants) Act (No. 3 of 1996), Restitution of Land Rights Act (No. 22 of 1994), including Restitution of Land Rights Amendment Act (No. 526 of 2014), SA Schools Act (No. 84 of 1996).

4.3 Environmental Context

Kowie Bamboo Farm is located in the Ndlambe Municipality, approximately 39 km outside Port Alfred or 32 km outside Grahamstown on the DR02016 off the R67. Bordering to the North is the municipality of Makana, to the South is Port Alfred in the Ndlambe Municipality and the Indian Ocean coastline, to the East the municipality of Ngqushwa, and to the West the municipality of Sunday's River Valley.

The eastern boundary of the farm is at 27°13'15'', western boundary of 27°16'15'', a northern boundary of 33°23'30'', and a southern boundary of 33°25'25'' using the World Geodetic System (WGS) 1984 coordinate system. The farm makes up a total of 482.2 hectares within the boundary and is cordoned off from surrounding agriculture and game farms by roads, fence lines, and tree lanes.

The area is well known for high pineapple yields per hectare, which is the iconic crop for the district. The farm is bordered on two borders by currently active pineapple farms and by cattle grazing lands or game farms on the other borders.

The fields of the farm that were earmarked for the development of bamboo were limited to open grasslands as identified by CES in the ecological baseline assessment. Detailed information on the conversion of lands for bamboo planting is available in the Biodiversity Action Plan. These plantable areas, totaling nearly 350 ha are well connected by service roads and are mostly clear of vegetation.

There are a few small patches of Riparian Forest that occur at the bottom of valleys in the farm. A total of 52 species have been recorded in the Riparian forest. These forests are characterized by large trees such as Sideroxylon inerme, a protected tree species, Schotia brachypetala, Erythrina caffra as well as an understory of herbs and shrubs dominated by Pavonia praemorsa, Plectranthus madagascariensis and Hypoestes forskaolii.

The farm also has High Biodiversity Thicket occuring in isolated patches along the valleys and watercourses. A total of 48 species have been recorded in this vegetation community type. Thicket is typically impenetrable and is characterized by thorny, shrub species that are between 2-3m in height. Dominant species include Rhus pallens, Aloe ferox, Capparis sepiara, Diospyros dichrophylla and Euphorbia tetragona.

There is also a Low Biodiversity Thicket that occurs primarily in the higher lying areas of valleys and watercourses. In this vegetation community type, 33 species have recorded. The dominant species in this vegetation type include Acacia karroo, Diospyros dichrophylla, Sporobolus fimbriatus, Sporobolus africanus, Plectranthus madagascariensis, and Rhus pallens. The Low Biodiversity thicket differs from the High Biodiversity thicket in that it is more open, has a lower biodiversity and has an understory of grasses and herb species that typically occur in the open.

Open Grasslands with Acacia karroo with a similar species composition to the Open Grasslands (formed from old pineapple fields) with the exception that the Open Grasslands do not have Acacia karroo. This is probably due to these areas being cultivated for growing

pineapples and therefore the A. karroo was actively removed. Both these communities are low in species diversity and lack any species of special concern. The dominant species in these two communities are Chloris virgata, Senecio pterophorus and in the case of Open Grasslands with Acacia karroo.

A very small marshland occurs in front of the riparian forest. This is a small natural opening along the river that is dominated by grass species such as Sporobolus fimbriatus, herbs such as Lobelia tomentosum and a few small Euclea undulata shrubs. This area is likely to have species belonging to the Orchidaceae and Campanulaceae family during the flowering season.

The alien stands of Acacia mearnsii (black wattle) and Pinus halepensis occur in small pockets throughout the conservation areas and have low species biodiversity. Acacia mearnsii is considered to be a serious invader of veld, fynbos, indigenous bush, watercourses, roadsides and, occasionally, perennial crops. This species is a serious threat to biodiversity and is one of the most prominent invaders in South Africa.

The vegetation on Kowie Bamboo Farm is mostly in a poor condition primarily due to grazing and the few alien invasive plant species on site. Alien species recorded from the study site included Acacia mearnsii (Schedule 2), Opuntia ficusindica (Schedule 1), Pinus halepensis (Schedule 2) and Verbena bonariensis (Schedule 1). These species are invaders and are required to be removed by law, as they are declared weeds. Several species of special concern were recorded from the site. One species (Sideroxylon inerme) is on the list of Protected Trees, the others are protected in terms of the provincial nature conservation ordinance, CITES, IUCN red data list and the South African red data list. Posters of species of concern have been made available to the staff.
There is a lack of pristine terrestrial habitats in the general farm area. Vegetation clearing for cultivation is the primary impacts on the natural habitats of the region. Despite this, a few small and medium sized animals occur in the region. Reptile and amphibians occurring in the area include many species of frogs, tortoises and terrapins, lizards and snakes.

4.4 Socioeconomic Context

The Kowie Bamboo farm is located in the Ndlambe Local Municipality of the Eastern Cape. The Eastern Cape has one of the highest rates of unemployment and rural poverty in SA. There is a small resident community comprising nine households living on the farm. These households have long term tenacy rights in terms of SA legislation protecting farm dwellers. The closest community outside of the farm is the Nolukanyo Township that forms part of the nearby town of Bathurst. The unemployment rate of township residents is very high and most families depend heavily on social grants from Government. The local communities of the area are predominately amaXhosa. Xhosa speakers are one of the main ethnic groups in South Africa, with the majoirty living in the Eastern Cape Province. Descendents of the indigenous Khoe-San peoples were assimilated into the population of Xhosa and other immigrant ethnic groups in the area.

4.5 Workers

Number of workers including employees, part-time and seasonal workers:

Total workers	155 workers (provide detail below)	
• Local Full time employees (a:b)	132 Male	22 Female
• Non - Local Full time employees (c:d)	Male	1 Female
• Local Part time workers (e:f)	Male	Female
• Non- local part time workers (g:h)	Male	Female

Worker access to potable water on the work site	☒ YES	☐ NO
Full time employees making more than $2 a day	☒ YES	☐ NO
Number of serious accidents (past 12 month period)	None	
Number of fatalities (past 12 month period)	None	

APPENDIX I: Public summary of the management plan

(NOTE: To be prepared by the client prior to assessment, Information verified by assessment team)

1. Main objectives of the forest management are:	
Primary priority:	The Company's first commitment is to ensure that its lessees and investors receive an anticipated return.
Secondary priority:	EPBSA aims to bring positive socio-economic impacts in the areas surrounding its Kowie Bamboo Farm.
Other priorities:	EPBSA aims to enhance the environment on and around Kowie Bamboo Farm, as well as contributing to international climate goals. EPBSA aims to ensure all its plantation activities comply with the principles and criteria of the FSC; Climate, Community, Biodiversity Standards (CCBA) and Verified Carbon Standard (VCS): for certification of sellable carbon credits

Forest composition:
EPBG has prioritized development of plantations of select species of bamboo Bambusa balcooa and Oxytenanthera abyssinica,
Description of Silvicultural system(s) used:
B. balcooa and O. abyssinica reaches maturity within 5-7 years and typically reproduces and thrives for over 80 years. The harvesting of the culms will occur in a sustainable manner. Harvesting will utilize informed plantation productivity specifications from monitoring sites and the harvest plan as prescribed by the Plantation Manager. Culms may be processed and chipped in the fields or upon delivery to EcoPlanet Core Carbon, which is the company that will purchase the feedstock for processing into carbonised products like activated carbon. All materials sold to EcoPlanet Core Carbon or leaving the farm gate will be weighed and tallied, fulfilling internal accounting needs, as well as FSC standards. However since the farm is still in its initiation stage the precise procedures are yet to be developed. Specific harvesting and processing techniques are currently being researched by EPBG to determine the most environmentally and socially responsible as well as financially viable methods.

2. Silvicultural system	**% of forest under this management**
Even aged management	ha
Clearcut (clearcut size range)	ha
Shelterwood	ha
Uneven aged management	482.2ha
Individual tree selection	ha
Group selection (group harvested of less than 1 ha in size)	ha
Other types of management (explain) EPBSA will develop sustainable procedures for harvesting the Bamboo culms. This is still under development and will be ready prior to the first harvest.	ha

3. Forest Operations	
3.1 Harvest methods and equipment used:	This is yet to be determined
3.2 Estimate of maximum sustainable yield for main commercial species:	Still under development

3.3 Explanation of the assumptions (e.g. silvicultural) upon which estimates are based and reference to the source of data (e.g. inventory data, permanent sample plots, yield tables) upon which estimates are based upon.
Still under development and will be ready prior to first harvest.
3.4 FME organizational structure and management responsibilities from senior management to operational level (how is management organized, who controls and takes decisions, use of contractors, provisions for training, etc.).

Plantation Management team lead by the Managing director provides oversight and administrative support to ensure all business activities are conducted legally, efficiently and safely.
The Managing Director is supported by the Plantation Manager and the Assistant Plantation Manager forming the management team.

Under them is the Office Administrator who provides management support on administrative needs, including human resources, finance and procurement, file management and reception.

The Farm Compliance Supervisor proficiently knows the Company policies and procedures and ensures they are being followed in the fields; creates and maintains maintenance systems; conducts operational errands; and carries out field monitoring.

The Warehouse Supervisor ensures that the warehouse is managed in line with the Warehouse Manual and the appropriate PPE is distrusted. He works with the Farm Compliance Supervisor and General Supervisor on maintenance issues as well as oversees the gardeners to ensure a clean and safe working environment.

The General Supervisor ensures that equipment is in good working conditions; serves as a back-up Warehouse Supervisor; conducts operational errands; and works with the staff to ensure that Company policies and procedures are being followed.
The supervisor is responsible for liaising between field work and the management; overseeing team leaders and general workers; daily monitoring of plant conditions in the fields; as well as overseeing that proper health and safety and SOPs are being implemented.

A tractor driver is responsible for: (1) transporting staff workers from the fields using a trailer; (2) cutting the grass; (3) irrigating with water carts; (4) digger with an auger; (5) other tasks as outlined by management.

Clearing worker is responsible for removing over grown brush and weeds that are too big for a spade. They use a chainsaw, brush cutter and pangas (long and short handled) to remove the brush.

The team leader is responsible for ensuring that their teams reach the daily targets and following the procedures as set out by the Management. If their teams are not productive, the team leader must report to the supervisor or the management and provide valid reasons. The team leader must be able to motivate their team members and correct any incorrect techniques.

A general worker is responsible for carrying out all plantation operations across the farm. They report directly to their team leader who in turn reports to the supervisor and the supervisor reports to the plantation manager. The general workers needs to reach a specific daily target set out by the management.

The Nursery Team Leader is responsible for ensuring that their teams perform efficiently and safely. The team leader must be able to motivate their team members and correct any incorrect techniques. The Nursery Team Leader is also responsible for monitoring plant health, overseeing daily activates, keeping records and maintaining good housekeeping in the nursery.

A nursery worker is a general worker who is responsible for carrying out all nursery and possible plantation operations. They report directly to their team leader who in turn reports to Assistant Plantation Manager. The nursery workers need to reach a specific daily target set out by the management
The office caretaker oversees the office and residence on Kowie Bamboo Farm. They make sure the office and house is neat and presentable. They are also responsible for preparing staff lunches.

The garden worker is responsible for keeping the garden neat and tidy, ensuring the main yard and the EPCC yard evoke a pleasant and memorable experience.

3.5 Structure of forest management units (division of forest area into manageable units etc.).

The Farm is divided in to 4 major units referred to as Blocks (A, B, C, D) and further in to smaller 330 units known as to fields.

3.6 Monitoring procedures (including yield of all forest products harvested, growth rates, regeneration, and forest condition, composition/changes in flora and fauna, environmental and social impacts of forest management, costs, productivity and efficiency of forest management).

EPBSA has a Pest and Health monitoring procedure which involves frequent field checks and monitoring of the condition of the plants. Monitoring of the bamboo clumps is carried out bi-annually in Nov/Dec and June/July. The data is used as a management tool to identify operational changes. The information is collected in a scientifically rigorous way to provide the most accurate data possible. EPBSA has specific Ecological Monitoring Procedures, which identifies: Variables monitored such as average number of culms per clump; average height of clumps (m); height of dominant culm (m); average number of shoots per plant; and average diameter of shoots (cm). Sample plots – number, how they're chosen, etc, Reporting and quality control procedures.

3.7 Management strategies for the identification and protection of rare, threatened and endangered species.

A Baseline Ecological Study was conducted by Coastal Environmental Services (CES) that included an assessment of the vegetation types found on the Kowie Bamboo Farm (KBF). Six different vegetation communities were found using a methodology with stratified random sampling and two-way indicator species analysis (TWINSPAN). The six communities are Community Type A: Forest, Community Type B: Thicket (High Biodiversity Thicket & Low Biodiversity Thicket), Community Type C: Open Grassland and Open Grassland with Acacia karroo, Community D: Marshland, Community Type E: Alien Stands.

The vegetation on Kowie Bamboo Farm is mostly in a poor condition primarily due to grazing and the few alien invasive plant species on site. Alien species recorded from the study site included Acacia mearnsii (Schedule 2), Opuntia ficusindica (Schedule 1), Pinus halepensis (Schedule 2) and Verbena bonariensis (Schedule 1). These species are invaders and are required to be removed by law, as they are declared weeds. Several species of special concern were recorded from the site. One species (Sideroxylon inerme) is on the list of Protected Trees, the others are protected in terms of the provincial nature conservation ordinance, CITES, IUCN red data list and the South African red data list. Posters of species of concern have been made available to the staff.
Kowie Bamboo Farm has 4main approaches to conservation management: (1) Education and Awareness; (2) Monitoring conservation areas as well as invasive species levels; (3) Removal of invasive species; and (4) rehabilitation of invasive and degraded lands. Areas that have species of concern are set aside as conservation areas and are provided for under the Biodiversity Action Plan and the management plan. There is a lack of pristine terrestrial habitats in the general study area. In this case, the terrestrial fauna has been severely impacted upon by human activity. Vegetation clearing for cultivation is the primary impacts on the natural habitats of the region. Despite this, a few small and medium sized animals occur in the region. Reptile and amphibians occurring in the area include many species of frogs, tortoises and terrapins, lizards and snakes.

3.8 Environmental safeguards implemented, e.g. buffer zones for streams, riparian areas, seasonal operation, chemical storage, etc.

All watercourses, perennially humid areas, and riparian buffers within ten meters of all watercourses are dedicated as riparian corridor conservation areas. All large remnant pasture trees of ecological value are left to increase the project's overall forest cover and to enhance the carbon sequestration benefits of the plantations. The management plan has stated that efforts will be made to assure increased habitat connectivity when site selections are being made for internal plantation roads and the location of infrastructure.
Conservation areas have been well identified and surveyed during the plantation establishment stages. Maps indicating conservation areas and species of concern locations are posted in the staff break area. Signs have been posted all over the farm to be concerned with the protection of the environment that state "Conservation Area: No Disturbance, No Hunting, No Fires".

All chemicals are used in the nursery operations of the farm only and all chemicals are properly stored in the warehouse. The Farm has contracted Orical environmental Services to take care of all hazardous waste originating from the farm as well as oil spills. Waste profile sheets for all hazardous waste are maintained in the warehouse to ensure that all waste is managed properly. All empty oil containers are also handed back to the oil supplier order zone for safe disposal.

All workers involved in chemical application have been trained on safe handling of chemicals and are provided with the appropriate PPEs.
Other Sections may be added by the FME

APPENDIX IX: EPBSA's Kowie Bamboo Farm Boundaries