PURO.EARTH

OUTPUT AUDIT REPORT

KEY PROJECT INFORMATION	
REPORT ID	PUR.VER.25.011
REPORT TITLE	Namibia Sahvanna Restoration Biochar Project with Planboo Output Audit Report
REPORT DATE	11/12/2025
VERSION NO.	1.0
CO_2 REMOVAL SUPPLIER	Planboo Eco AB
PRODUCTION FACILITY NAME	Farm Gai Kaisa 159
PRODUCTION FACILITY ADDRESSES	D2512, Grootfontein District, Namibia
PRODUCTION FACILITY ID	226049
PRODUCTION FACILITY COORDINATES	19°54'01.1"S 17°50'00.3"E
REMOVAL PERIOD	14/10/2025 to 03/11/2025
CO_2 SINK SECTOR	Biochar
APPLIED METHODOLOGY	Biochar Methodology Edition 2022, v3.0
PURO.EARTH STANDARD VERSION	Puro Standard General Rules Version 4.2 & 3.1
NET VOLUME OF CO_2 REMOVAL	3144.70 CORCs
CLIENT	Puro. Earth
PREPARED BY	Earthood Services Limited (formerly known as Earthood Services Private Limited)
APPROVED BY	 Dr. Kaviraj Singh CEO
WORK CARRIED OUT BY	Team Leader & Methodology Expert: Mehr Munjal Verifier: Mehr Munjal Trainee Verifier: Shubham Patil Technical Reviewer & Methodology Expert: Anjali Chaudhary

Earthood

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1. INTRODUCTION

Earthood Services Limited (here in referred to as Earthood) was contracted by Puro. earth to undertake an output facility audit for the project facility "Farm Gai Kaisa 159" to verify the CO_2 removal claims for the period spanning from 14/10/2025 to 03/11/2025/1/. This report summarizes the results and conclusions of the output audit performed as a formal part of the Puro. Earth certification process as defined in Puro Standard General Rules version 3.1 and version 4.2/5/. Earthood declares that we are an impartial auditor, free from any conflicts of interest, capable, and qualified to complete this audit according to Puro Standard General Rules/5/ and related Validation and Verification Body Requirements version 1.2/6/.

The Planboo Namibia biochar project is a collaborative initiative between Planboo Eco AB and Carbon Capital. Located in the Grootfontein District of central-northern Namibia, the biochar production facility utilizes biomass from Namibian encroacher species, which are invasive and provide sustainable feedstock for the project/14/. The facility employs pyrolysis technology and consists of three charcoal retort kilns operating continuously, with a production capacity of 20 tons of charcoal per day.

The Charcoal produced by the facility is screened and graded into restaurant grade, BBQ grade and charcoal fines which are about 30% of the total production per month amounts to an estimated 180t of charcoal fines per month/13/. Namibia is a leading charcoal producer in this region, it is a common practice to briquette these charcoal fines and burn or is discarded in the open, creating environmental hazards fuel. Under the CDR project these fines classified as biochar are applied to the agriculture land thereby generating carbon removal credits.

1.1 OBJECTIVES

The objective of this audit is to conduct a third-party assessment of the operational and administrative processes of the production facility, as well as the output generated and CO_2 removals achieved during the period from 14/10/2025 to 03/11/2025. The assessment verifies compliance of all project documentation and supporting materials with the rules and requirements of the Puro Standard General Rules /5/. In particular,

- Project conformance to the applied biochar methodology Edition 2022 v3.0/4/.
- Life Cycle Assessment (LCA) Report/2/ and CORC calculation/1/
- Uncertainty and Reversal risk estimation
- Monitoring and Reporting Plan
- Project Description

As directed by Puro.earth, the existing projects need to start following the new versions of the Puro Standard General Rules from the renewal of crediting period i.e. next production facility audit (every 5 years), unless the facility opt to do so earlier. The current project got registered in compliance with the Puro Standard General Rules version 3.1/5/ and is under output audit for third monitoring period (14/10/2025 to 03/11/2025) of the first crediting period (30/01/2024 – 29/01/2029)/19/. Therefore, the ongoing CORC issuance has been granted to Farm Gai Kaisa 159 as per the Puro Standard General Rules version 3.1 and 4.2/5/.

1.2 LEVEL OF ASSURANCE

☒ Reasonable Level of assurance

☐ Limited Level of assurance

Earthood's verification approach is based on understanding the risks associated with reporting GHG emissions data and the controls in place to mitigate these risks. Earthood's plan for the verification process involved obtaining the necessary evidence, information, and explanations to provide a reasonable level of assurance. The VVB reviewed sufficient evidence to verify the project implementation, data, parameters, and emission reduction calculations for this monitoring period. All the supportive documents and evidence referred during current output audit are included in Appendix 2. Any discrepancies found during the verification assessment were raised as audit findings and successfully resolved. All audit findings are included in Appendix 3 of this report.

During the current output audit, the VVB conducted a remote site audit of the project activity, as detailed in Section 2, and observed no substantial changes, thus meeting a reasonable level of assurance.

1.3 AUDIT TEAM

The audit involved a desk review of the relevant documentation, remote site audit, and technical review. The personnel employed and their roles in this assessment were as follows. The assessment team's qualifications are attached as Appendix 4.

Roles allocated to the assessment team						
Role	Name	Nature of involvement				
		Desk Review	Remote Site Audit	Reporting	Supervision	Technical Review

Team Leader, Methodology Expert and Verifier	Mehr Munjal	Y	Y	Y	Y	-
Trainee Verifier	Shubham Patil	Y	Y	Y	Y	
Technical Reviewer& Methodology Expert	Anjali Chaudhary	-	-	-	-	Y

2 AUDIT PROCESS

A planned series of audit activities were conducted during the remote site audit/12/ to independently verify facility operations, production, and output data, and CORC Claims. The remote site audit was conducted following the specifications of Puro Standard General Rules Version 4.2 & 3.1/5/, the Puro Biochar Methodology Edition 2022 version 3/4/. Specific audit activities conducted are summarized below.

1. **Opening meeting**:
    a. Conducted an initial meeting to outline the audit objectives, scope, and methodology.
    b. Reviewed key operational measurement points and instrumentation used in the facility.
    c. Review of ownership details, roles and responsibilities of the removal suppliers.
2. **System Inputs and Outputs Review:**
    a. Examined the inputs (biomass feedstock) and outputs (charcoal and biochar fines) of the production system.
    b. Verified the accuracy and consistency of input and output data.
3. **Records Examination**:
    a. Inspected records related to the receipt of feedstock, including delivery notes and inventory logs.
    b. Reviewed production logs detailing the daily operation of the kilns and production outputs.
    c. Assessed the utilization and maintenance records of the equipment used in production.
4. **Data Collection and Material Handling Procedures:**
    a. Evaluated data collection methods and tools to ensure accurate tracking of production metrics.
    b. Observed material handling procedures to ensure compliance with operational standards and efficiency.

5. **Equipment and Calibration Review:**
    a. Checked the calibration records/11/ for all measurement instruments and equipment used in the production process.
    b. Ensured that all equipment was properly maintained and functioning correctly.
6. **Safety and Social Security Arrangements:**
    a. Assessed the safety measures in place at the production facility, including worker safety protocols and emergency procedures.
    b. Reviewed social security arrangements for employees to ensure compliance with local regulations and standards.
7. **Compliance Checklist:**
    a. Used the Puro Biochar Methodology Compliance Checklist to systematically verify adherence to the specified standards.
    b. Documented findings and ensured all criteria were met, with any discrepancies noted and addressed.
8. **CORC Claims Verification:**
    a. Independently verified the facility's CO_2 Removal Certificates (CORCs) claims.
    b. Cross-checked CORC claims against the production and output data to ensure accuracy and legitimacy.

These activities collectively ensured a comprehensive audit of the charcoal production plant, validating its operations, data integrity, and compliance with the Puro Biochar Methodology version 3.0/4/.

List of facility personnel interviewed during remote site audit is as follows.

S. No	Interviewee			Date	Team member(s)
	Last Name	First Name	Affiliation		
1.	Lindeque	Colin	MD- Carbon Capital Pvt. Ltd.	21/11/2025	Mehr Munjal and Shubham Patil
2.	Hernandez Folguera	Marc	COO & Co-Founder - Planboo	21/11/2025	Mehr Munjal and Shubham Patil
3.	Falk	Stefan	CEO – Retort Charcoal Producers Pvt. Ltd.	21/11/2025	Mehr Munjal and Shubham Patil
4.	-	Adie	Site Personnel	21/11/2025	Mehr Munjal and Shubham Patil

3 COMPLIANCE WITH METHODOLOGY

There are no deviations to applied methodology observed during current monitoring period and project activity complies with the registered PPD and the requirements outlined in the applied methodology Puro Biochar Methodology Edition 2022 version 3/4/.

4 RESOLUTION OF FINDINGS

The process for raising the findings (corrective actions, non-conformities, or other findings) by the assessment team was carried out during the desk review phase and from the remote site audit observations and discussions. As an outcome of the audit process, the assessment team can raise different types of findings according to the following understanding:

1. A clarification request (CL) is raised where information is insufficient or not clear enough to determine whether the applicable requirements of the registry have been met.
2. When a non-conformance arises, the team leader raises a Corrective Action Request (CAR). CAR is issued, where:
    a. The project participant made mistakes that would influence the ability of the project activity to achieve real, measurable, and additional emissions reduction.
    b. The standard and methodology requirements have not been met; there is a risk that emissions reductions cannot be monitored or calculated.
    c. The auditing process may be halted until this information is made available to the team leader's satisfaction. Information or clarification provided as a result of CL may also lead to CAR.
3. A Forward Action Request (FAR) will be raised when certain issues related to project implementation are reviewed during the following validation assessment.

During the Output Audit, a total of 01 CL and 00 CAR were raised and resolved satisfactorily. The list of CARs/CLs raised, and the responses provided, means of verification, reasons for their closure, and corrections in the relevant documents are provided in Appendix 3 of this report. No FAR was raised during this assessment.

5 PRODUCTION STANDING DATA

GENERAL INFORMATION	
Production Facility Name	Farm Gai Kaisa 159 GSRN: 643002406801000992
Facility unique Identity	559332-1291
Facility ID	226049

CO_2 Removal Supplier registering the production facility	86XEBDA43Z- Planboo Eco AB
Location	D2512, Grootfontein District, Namibia
Verified CORC Factor	2.100 CORCs per ton biochar
Verified CORCs for the reporting period from 25/01/2025 to 13/10/2025	3144.70-ton CO_2 eq CORCS
Removal Methodology for which the plant is eligible to receive CORCs	Biochar Methodology Edition 2022 V3
Production facility has benefitted from public funding	No
Removal method specific information as may be specified in the relevant removal method methodology	Biochar, Pyrolysis Process

6 QUANTIFICATION OF CO_2 REMOVAL

INPUT	VERIFIED RATE	UNIT	NOTES (Specifications, source, etc)
Biomass supply inputs (collection, handling, transportation emissions), ($E_{biomass}$)	123.55	tonne CO_2-eq	Emissions are from transport of biomass from source to kiln site. Verified average transport distance is within 35 km, from the suppliers' agreements. Growth and harvesting emission are considered 0 t CO_2 as the biomass is an invasive species and is harvested by hand, as verified from the LCA report. Since, there were no significant changes in the biomass source and harvesting procedures from MP3, the factor for $E_{biomass}$ obtained through LCA analyses was same as that of MP3/2/3/.
Production and operation emissions output ($E_{production}$)	163.83	tonne CO_2-eq	Production emissions include all the material and energy inputs (electricity, heat, water, packaging, other chemical), as well as infrastructure related emissions. During the remote site audit, it was observed that the cooling boxes are used for biochar cooling thus, the production water usage negligible. Calculations are based on the flue gas emissions analysis conducted by Ithaka Institute in 2023/17/.

			In current output audit, the production facility has installed Photovoltaic system replacing diesel generator for in house electricity consumption confirmed during remote site audit/12/, which significantly reduced the emissions from production facility as calculated in LCA analysis sheet/2/ and reported in CORC Report Summary sheet/1/.
Product distribution emissions output (E_{use})	8.09	tonne CO_2-eq	Biochar deliveries to end use cover transport emissions as well as soil incorporation emissions. The activity data is based on data collected each day based on the vehicles used. Verified through the biochar tracking and fuel log. /7/ The produced biochar is applied to the agricultural soils, where the biochar is incorporated in the soil matrix. This is confirmed during remote site audit/12/ and through Statement of End Use – Biochar – RCP/18/. This has resulted in significant reduction in diesel consumption for biochar application, thereby resulting into lesser E_{use} emissions as calculated in LCA analysis sheet/2/ and reported in CORC Report summary sheet/1/.
E_{stored}	-3440.17	tonne CO_2-eq	Dry mass is determined as per the facility protocols and verified by the lab analysis result. /10/
Biochar used for which CORCs are claimed	1497.56	Dry metric tonnes	The geolocation of the farms is recorded in the database, along with images. Also, during the remote site audit it was verified that biochar was applied on the facilities own farm during the current removal period.
CORCs issued	3144.70		The value is correctly calculated based on the total production of biochar during the reporting period, and LCA calculation

Formula CORCS = $E_{stored} – E_{biomass} – E_{Production} – E_{use}$		
$E_{biomass}$	123.55/1497.56	0.08 tonne CO_2-eq/tonne biochar
$E_{production}$	163.83/1497.56	0.11 tonne CO_2-eq/tonne biochar
E_{use}	8.09/1497.56	0.01 tonne CO_2-eq/tonne biochar
E_{stored}	--3440.17/1497.56	-2.30 tonne CO_2-eq/tonne biochar
CORC Factor	3144.70/1497.56	2.100 CORCs/tonne biochar
H:C ratio	0.328	-

7 FINAL OPINION

Based on our comprehensive review of the project documentation, thorough site inspection, and subsequent follow-up actions, Earthood Services Limited has gathered sufficient evidence to conclude that the production facility "Farm Gai Kaisa 159" meets the requirements outlined in the Puro Standard General Rules Version 4.2 & 3.1. We confirm that the Puro Biochar Methodology Edition 2022 version 3 has been correctly applied for output and CO_2 removal calculation.

The project implementation aligns closely with the information provided in the project documentation, and monitoring procedures adhere to the prescribed methodology. Furthermore, the removals achieved during the current monitoring period have been accurately calculated without significant discrepancies.

Our verification approach is grounded in a deep understanding of the risks associated with reporting GHG emission data and the implementation of controls to mitigate these risks effectively. Based on the evaluated information, we affirm that the emission removals for the second reporting period from 14/10/2025 to 03/11/2025, amount to 3144.70 CORCs.

Therefore, Earthood Services Limited confirms the production facility's capability to effectively remove CO_2 and requests the issuance of CORCs for the second reporting period.

APPENDIX 1: ABBREVIATIONS

Abbreviations	Full texts
CAR	Corrective Action Request
CL	Clarification Request
FAR	Forward Action Request
Earthood	Earthood Services Limited
CORC	CO_2 Removal Certificate
GHG	Greenhouse Gas(es)
PPD	Puro Project Description
VVB	Validation and Verification Body
LCA	Life Cycle Assessment
CDR	Carbon dioxide Removal

APPENDIX 2: REFERENCES

S.No.	Title	References to the document	Provider
1	CORC Report Summary - Biochar - 20251103	Dated 03/11/2025	Planboo
2	LCA Reporting Sheet MP 4: 'LCA Result reporting _ 2025-11-03'	Dated 03/11/2025	Planboo
3	LCA Reporting Sheet MP 3: 'LCA Result reporting _ 2025-10-24'	Dated 24/10/2025	Planboo
4	Applied Methodology – Biochar Methodology	Version 3	Puro.earth
5	Puro Standard General Rules a) Version 3.1 b) Version 4.2	 Date:-June 2023 Date:-June 2025	Puro.earth
6	Validation & Verification Requirements	Version 1.2	Puro.earth
7	Biochar and Fuel Tracking sheet	-	Planboo

8	Records of Biochar Used - Weigh Slips - Application Pictures	21/10/2025 to 02/11/2025	Planboo
9	Planboo_MRV_Farm_Gai_Kaisa manual	-	Planboo
10	Biochar Analysis Reports - '20251017_Carbon Capital - Ruhr lab analysis' - '20251017_Carbon Capital - Ruhr lab analysis + PAH' - 'Planboo_Carbon Capital_Biochar Environmental Quality Analysis_251024'	-dated 17/10/2025 -dated 29/10/2025 -dated 01/10/2025	Planboo
11	Calibration Certificates - Weigh Bridge - Moisture Meter - Flow meter	-dated 01/11/2025 -dated 31/10/2025 -dated 01/11/2025	Planboo
12	Remote Site Audit Records	Dated 21/11/2025	-
13	Biochar Production Records	14/10/2025 to 03/11/2025	Planboo
14	FSC Confirmation Certificate for harvesting and Marketing of biomass	Dated - 04/08/2025	Planboo
15	Wood Supply Invoices	Dated -13/10/2025 -27/10/2025	Planboo
16	Environmental Clearance Certificate	Dated 07/02/2025	Planboo
17	Planboo - Flue Gas Emission report by Ithaka Institute	Dated 21/05/2023	Planboo
18	Statement of End Use – Biochar - RCP	Dated 02/02/2024	Planboo
19	Project details on Puro Earth Registry	-	Puro.Earth

	https://registry.puro.earth/projects/226049		

APPENDIX 3: AUDIT FINDINGS

Table 1. FAR from previous verification

FAR ID	NA	Section no.	NA	Date : DD/MM/YYYY
Description of FAR				
NA				
Project participant response				Date : DD/MM/YYYY
Documentation provided by project participant				
VVB assessment				Date: DD/MM/YYYY

Table 2. CL from this verification

CL ID	01	Section no.	-	Date : 04/12/2025
Description of CL				

Observation:

a) **Moisture meter**:

The calibration details have been provided in the 'Retort Charcoal Moisture meter 2025.pdf' file in 'Calibration Certificates for Measuring Devices' folder of the audit pack. According to this pdf file, the serial number of the moisture meter is 'S/N 135' and the dates of calibration are 24/10/2025 to 24/10/2026.

However, as per the recent remote audit conducted by the VVB and the video evidence provided by the CO_2 Removal Supplier, the moisture meter present at site has serial number '839683' and dates of calibration were 31/10/2025 to 31/10/2026. An image of the moisture meter observed during the remote is presented below.

b) **Fuel Pump**:

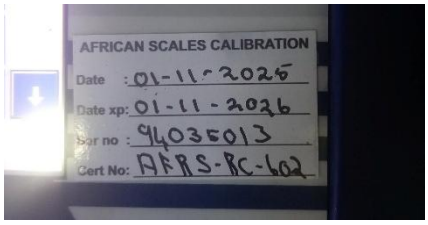
The calibration details have been provided in the 'Retort Charcoal Flow-meter 2025.pdf' file in 'Calibration Certificates for Measuring Devices' folder of the audit pack. According to this pdf file, the dates of calibration for the fuel pump are 30/10/2025 to 30/10/2026.

However, as per recent remote audit conducted by the VVB and the video evidence provided by the CO2 Removal Supplier, the fuel pump present at site has the dates of calibration as 01/11/2025 to 01/11/2026. An image of the fuel pump observed at the site is presented below.

c) **Weigh Bridge**:

The calibration details have been provided in the 'Retort Charcoal weighbridge 2025 AFRS-RT-005.pdf' file in 'Calibration Certificates for Measuring Devices' folder of the audit pack. According to this pdf file, the dates of calibration for the weigh bridge are 31/10/2025 to 31/10/2026.

However, as per the recent remote audit conducted by the VVB and the video evidence provided by the CO2 Removal Supplier, the weighbridge present at site has the dates of calibration as 01/11/2025 to 01/11/2026. An image of the fuel pump observed at the site is presented below.



Action Required:

CO2 removal supplier shall provide clarification on the observed inconsistencies

Project participant response	**Date :** 11/12/2025
African Scales, has issued a statement acknowledging a mismatch on dates due to administrative error (see attached on the email; together with the moisture meter, weight bridge and flow meter certificates).	
Documentation provided by project participant	
VVB assessment	**Date:** 11/12/2025
CO_2 removal supplier has provided the calibration certificates for fuel pump, moisture meter and weighbridge. The details of these certificates are consistent with the serial number and dates of the equipment present at the facility. **Hence, CL#01 is CLOSED**	

Table 3.CAR from this verification

CL ID	NA	**Section no.**	-	**Date :** DD/MM/YYYY
Description of CL				
NA				
Project participant response				**Date :** DD/MM/YYYY
NA				
Documentation provided by project participant				

NA
VVB assessment **Date:** DD/MM/YYYY
NA

Table 1. FAR from this verification

FAR ID	NA	**Section No.**	NA	**Date :** DD/MM/YYYY
Description of FAR				
NA				
Project participant response				**Date :** DD/MM/YYYY
Documentation provided by project participant				
VVB assessment				**Date:** DD/MM/YYYY

APPENDIX 4: AUDIT TEAM EXPERIENCE

Competence Statement			
Name	Mehr Munjal		
Education	B.Sc. (Hons) – Bio-chemistry M.Sc. – Biotechnology		
Experience	2 + Years		
Field	Biochemistry		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Local expert	YES		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	YES (TA 1.1, 1.2, 13.1)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	06/01/2025
Approved by	Deepika Mahala (Technical Manager)	**Date**	06/01/2025

Competence Statement	
Name	Shubham Patil
Education	BE in Mechanical Engineering MS by Research in Sustainable Energy Engineering
Experience	NIL
Field	NIL
Approved Roles	
Team Leader	No
Validator	No
Verifier	No

Methodology Expert	No		
Local expert	No		
Financial Expert	No		
Technical Reviewer	No		
TA Expert (X.X)	No		
Trainee	Yes (Trainee Validator / Verifier)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	05/08/2025
Approved by	Deepika Mahala (Technical Manager)	**Date**	05/08/2025

Competence Statement			
Name	Anjali Chaudhary		
Education	Bachelor of technology in Civil Engineering		
Experience	2+ Years		
Field	Civil Engineering		
Approved Roles			
Team Leader	YES (VM only)		
Validator	YES (VM only)		
Verifier	YES (VM only)		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	Yes		
TA Expert (X.X)	YES (TA 1.1, 1.2, 3.1, 13.1 & 13.2)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	11/09/2024
Approved by	Deepika Mahala (Technical Manager)	**Date**	11/09/2024