

# Public summary of Preliminary Assessment

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| <b>CO<sub>2</sub> Removal Supplier</b> | Roundwood Solutions              |
| <b>Facility</b>                        | Tantanoola 1                     |
| <b>Facility ID</b>                     | 510904                           |
| <b>Methodology</b>                     | Biochar, Edition 2022, Version 3 |
| <b>Date of assessment</b>              | 2024-05-30                       |
| <b>Status of assessment</b>            | Final                            |
| <b>Conclusion of assessment</b>        | Passed                           |

This document contains the Public Summary of the Preliminary Assessment prepared by Puro.earth. The supplier has received separately the *Preliminary Assessment Report*, which contains more detailed remarks and recommendations.

Reminder: Sub-criteria either concern the facility's technical eligibility or its maturity and quality. There are three types of sub-criteria:

- **Required to be passed:** This applies to the core criteria related to facility eligibility. Suppliers must meet those criteria, as they may be otherwise impossible or costly to change at a later stage.
- **Required to be assessed:** These criteria are important for evaluation but do not necessarily determine pass or fail at this stage, as it is understood that the suppliers may be at different stages of development.
- **Not required:** These criteria are optional and do not impact the outcome at this stage. They may provide additional context or information about facility maturity but are not essential for passing the preliminary assessment.

For a facility to be considered eligible for listing, all the sub-criteria that condition eligibility must be met (i.e. passed or assessed). If one of those sub-criteria is not met, the facility in its current state of development is not eligible for listing.

# 1. Public Summary of the Preliminary Assessment

Disclaimer: The assessment has been made against the criteria in the current version of the methodology. Puro.earth relied on the CO<sub>2</sub> Removal Supplier for the correctness of the provided information during the time of the preliminary assessment and will make no representation as to the accuracy or completeness of this report. The CO<sub>2</sub> Removal Supplier must undergo a third-party audit before issuing CO<sub>2</sub> Removal Credits (CORCs). Passing the preliminary assessment does not guarantee a success in the third-party audit.

**Overall evaluation:** Preliminary Assessment is **Passed**.

| ID        | Criteria / Sub-criteria   | Outcome       | Comment  | Evidence reviewed   | Requirement for listed                         | Purpose of criteria   |
|-----------|---|---------------|--|---|--|-----------------------|
| <b>c1</b> | <b>Planned biomass feedstock(s) is(are) eligible</b>  | <b>Passed</b> |  |   | <i>Passed if required sub-criteria are met</i> |                       |
| c1.1      | <i>Biomass feedstocks are identified and compatible with EBC positive list</i>                  | Passed        | Wood trimmings from local plantations, F-02 in EBC list  | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0   | Required to be passed                          | Technical eligibility |
| c1.2      | <i>Biomass feedstock sustainability and chain-of-custody can be demonstrated, if applicable</i> | Passed        | The supplier has identified feedstock sources with most of them eligible based on the sustainability certifications. | AAM_FSC_DDS_Public_Summary_2023<br>FM_CRT_RW_TimberlandsPacific_072022_v2021<br>Green Triangle Forest Products BSI Certificate of Reigstration AFS 700806<br>PEFC International Database Extract - Green Triangle Forest Products Certification<br>PEFC International Database Extract - OneFortyOne Plantations Pty Ltd Certification<br>PEFC International Database Extract - Timberlands Pacific Certification<br>Portland Pine Prodcuts - Chain Of Custody Certifiacte of Approval - AKD Pty Ltd 2022-AKD-Colac-FSC-Certificate | Required to be passed                          | Technical eligibility |
| c1.3      | <i>Bioenergy leakage related to feedstock use is minimal</i>                                    | Assessed      | There are alternative uses for woodchips, but the facility itself is also co-producing process steam.                | Puro.Earth Additionality Assessment - Roundwood Solutions.docx  | Required to be assessed                        | Technical eligibility |
| c1.4      | <i>Land use change related to feedstock use is minimal</i>                                      | Assessed      | This is covered by the sustainability certifications.  | See list in c.1.2   | Required to be assessed                        | Technical eligibility |
| c1.5      | <i>Sourcing of biomass is secured (e.g. letters of intent, contracts)</i>                       | Assessed      | According to the supplier, agreements are in place   | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0   | Not required                                   | Maturity & Quality    |
| <b>c2</b> | <b>Planned biochar production equipment is technically sound</b>                                | <b>Passed</b> |  |   | <i>Passed if required sub-criteria are met</i> |                       |
| c2.1      | <i>Several options of reactor design have been identified</i>                                   | Passed        | The supplier uses EcoRemedy Fluid Lift Gasification system.  | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0<br>Biochar production equipment questionnaire - Roundwood Solutions.xlsx  | Required to be passed                          | Technical eligibility |
| c2.2      | <i>Reactor design has been decided, contracted, or purchased</i>                                | Assessed      | The equipment was commissioned in November 2022.   | 11 Nov 2022 signed commisioning certificate<br>Ecoremedy  | Required to be assessed                        | Maturity & Quality    |

| ID        | Criteria / Sub-criteria  | Outcome       | Comment  | Evidence reviewed  | Requirement for listed                         | Purpose of criteria   |
|-----------|--|---------------|--|--|--|-----------------------|
| c2.3      | Reactor design is vetted, regarding production of biochar with H/C ratio below 0.7                                   | Passed        | Carbonisation temperature is 1090°C (gasification) and residence time is around 10 minutes. It is very likely to produce biochar with H/C ratio below 0.7.   | Biochar production equipment questionnaire - Roundwood Solutions.xlsx  | Required to be passed                          | Technical eligibility |
| c2.4      | Reactor design is vetted, regarding risk for CH <sub>4</sub> emissions   | Passed        | The design of the reactor is deemed sufficient to ensure complete combustion of CH <sub>4</sub> under normal operating conditions.   | Biochar production equipment questionnaire - Roundwood Solutions.xlsx<br>1. 18012 - ECR-AFS General Operationing Instructions<br>18012-01-D01 REV A  | Required to be passed                          | Technical eligibility |
| c2.5      | Reactor design is vetted, regarding air pollutant emissions in line with local regulation                            | Passed        | Emission testing for air pollutants is required by the South Australian EPA. Testing still needs to be performed on the upgraded system.   | Biochar production equipment questionnaire - Roundwood Solutions.xlsx  | Required to be passed                          | Technical eligibility |
| c2.6      | Facility design is vetted, regarding disposal of waste streams, including any liquid streams (wastewater, oil, tars) | Passed        | Oils and tars are fully combusted.   | Biochar production equipment questionnaire - Roundwood Solutions.xlsx  | Required to be passed                          | Technical eligibility |
| c2.7      | Facility is co-producing bioenergy (e.g. heat, power) for internal use   | Assessed      | A boiler generates steam which is used for other purposes within the facility (other purposes than biochar production).  | 1. 18012 - ECR-AFS General Operationing Instructions<br>Puro.Earth Additionality Assessment - Roundwood Solutions.docx<br>Mass and energy balance of production process - Roundwood Solutions.xlsx | Required to be assessed                        | Maturity & Quality    |
| c2.8      | Facility is co-producing bioenergy (e.g. heat, power, fuel) for external use   | Assessed      | For the moment, the steam generation is only internal use, but there is excess steam generated and the supplier is looking at ways to valorise this energy.  | Puro.Earth Additionality Assessment - Roundwood Solutions.docx<br>Puro.Earth Pre-Assessment Roundwood Solutions v.1.0  | Required to be assessed                        | Maturity & Quality    |
| <b>c3</b> | <b>Biochar planned end-use(s) is(are) eligible</b>   | <b>Passed</b> |  |  | <i>Passed if required sub-criteria are met</i> |                       |
| c3.1      | Biochar end-uses are eligible  | Passed        | Planned end-uses include retail and corporate garden markets and broadscale agricultural soil improvement. All are eligible.   | Puro.Earth Additionality Assessment - Roundwood Solutions.docx   | Required to be passed                          | Technical eligibility |
| c3.2      | Plans of biochar end-uses are tangible   | Assessed      | No detailed information was provided, besides the plan of using biochar as soil amendment. Supplier is at an early stage of planning its biochar use.  | No information provided.   | Required to be assessed                        | Maturity & Quality    |
| c3.3      | Biochar environmental quality thresholds are known for the identified end-uses                                       | Assessed      | No detailed information was provided, besides the plan of using biochar as soil amendment. Supplier has not yet tested the environmental quality of its biochar production.  | No information provided.   | Required to be assessed                        | Maturity & Quality    |
| <b>c4</b> | <b>Additionality is demonstrated</b>   | <b>Passed</b> |  |  | <i>Passed if required sub-criteria are met</i> |                       |
| c4.1      | Carbon storage additionality to baseline   | Passed        | The alternative scenarios presented would not lead to permanent carbon storage   | Puro.Earth Additionality Assessment - Roundwood Solutions.docx   | Required to be passed                          | Technical eligibility |
| c4.2      | Financial additionality of facility  | Passed        | The supplier has demonstrated with a cash flow model that the alternative of running a boiler without biochar production would be a more economical alternative to biochar production in the absence of CORC revenues. | Puro.Earth Additionality Assessment - Roundwood Solutions.docx<br>RWS - Boiler Financial Model Investment Case.xlsx  | Required to be passed                          | Technical eligibility |
| c4.3      | Regulatory additionality   | Passed        | The supplier confirms that there are no regulatory requirements to produce biochar.  | Puro.Earth Additionality Assessment - Roundwood Solutions.docx   | Required to be passed                          | Technical eligibility |

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|-----------|---|---------------|--|--|--|---------------------|
| c4.4      | <i>Production equipment is newly built (i.e. not an existing facility or a retrofit of existing facility)</i>   | Assessed      | The facility was commissioned in November 2022, but still requires engineering modifications, upgrades and repair to produce biochar continuously.   | Earth Additionality Assessment - Roundwood Solutions.docx<br>11 Nov 2022 signed commissioning certificate<br>Ecoremedy | Required to be assessed                        | Maturity & Quality  |
| <b>c5</b> | <b>Facility has monitoring, reporting, and LCA capabilities or tangible plans</b>                               | <b>Passed</b> |  |  | <i>Passed if required sub-criteria are met</i> |                     |
| c5.1      | <i>Protocol for biomass and biochar record keeping is prepared</i>  | Passed        | The supplier has a plan to record the information in their accounting system.  | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0  | Required to be assessed                        | Maturity & Quality  |
| c5.2      | <i>Protocol for dry mass determination of biochar is prepared</i>   | Assessed      | The protocol is aligned with Puro guidance but would benefit from further customization to capture specificities of the project.   | Biochar sampling SOP V1.0.docx   | Required to be assessed                        | Maturity & Quality  |
| c5.3      | <i>Protocol for biochar sampling and laboratory analysis is prepared (permanence and environmental quality)</i> | Assessed      | This area is still in the preliminary stages, with no materials provided for review.   | No information provided.   | Required to be assessed                        | Maturity & Quality  |
| c5.4      | <i>Monitoring and reporting plan of facility emissions is prepared</i>  | Assessed      | The supplier has identified most of the relevant emissions and has a plan to record them in their accounting system  | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0  | Required to be assessed                        | Maturity & Quality  |
| c5.5      | <i>An LCA model specific to the facility's operation is prepared</i>  | Not required  | An LCA model was not included in the submission.   | No information provided.   | Not required                                   | Maturity & Quality  |
| <b>c6</b> | <b>Facility has likely co-benefits and positive SDG impacts</b>   | <b>Passed</b> |  |  | <i>Passed if required sub-criteria are met</i> |                     |
| c6.1      | <i>Facility-specific co-benefits have been identified</i>   | Assessed      | The supplier has identified positive impacts in promoting sustainable agricultural practices, as biochar can improve yields, increase water retention, and reduce fertilizer use.                      | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0  | Required to be assessed                        | Maturity & Quality  |
| c6.2      | <i>Facility-specific SDG targets or indicators have been identified</i>   | Assessed      | The supplier targets in particular SDG 12 Responsible Consumption and Production, and SDG 15 Life on Land. Any indicators from the Puro Standard SDG Assessment Requirements have not been identified. | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0  | Required to be assessed                        | Maturity & Quality  |
| <b>c7</b> | <b>Facility team has access to relevant knowledge and skills</b>  | <b>Passed</b> |  |  | <i>Passed if required sub-criteria are met</i> |                     |
| c7.1      | <i>Relating to biomass sourcing, handling, processing</i>   | Assessed      | The company and the team have relevant knowledge and experience from the existing operations in the timber processing business.  | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0  | Not required                                   | Maturity & Quality  |
| c7.2      | <i>Relating to thermochemical processes</i>   | Assessed      | The company and the team have relevant knowledge and experience from the existing operations in the timber processing business.  | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0  | Not required                                   | Maturity & Quality  |
| c7.3      | <i>Relating to biochar use</i>  | Assessed      | The supplier does not seem to have yet relevant expertise in this novel area.  | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0  | Not required                                   | Maturity & Quality  |
| c7.4      | <i>Relating to monitoring and carbon accounting</i>   | Assessed      | The supplier has completed monitoring and carbon accounting for their carbon neutral wood product.   | Puro.Earth Pre-Assessment Roundwood Solutions v.1.0  | Not required                                   | Maturity & Quality  |
| <b>c8</b> | <b>Environmental and social safeguards</b>  | <b>Passed</b> |  |  | <i>Passed if required sub-criteria are met</i> |                     |
| c8.1      | <i>Stakeholder consultations have been planned or conducted</i>   | Assessed      | No information was provided regarding stakeholder consultation.  | No information provided.   | Required to be assessed                        | Maturity & Quality  |

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|------|---|----------|---|--|-------------------------|---------------------|
| c8.2 | <i>Regulation applicable to facility has been identified</i>                              | Assessed | The supplier has identified regulation related to emissions to air and water. They are already monitoring water quality in their existing operations. | Environmental Evaluation Report - Roundwood Solutions.docx | Required to be assessed | Maturity & Quality  |
| c8.3 | <i>Procedures to acquire relevant permits have been identified, started, or completed</i> | Assessed | The site is licensed for "fuel burning". Other emission testing required by the South Australian EPA are yet to be performed on the modified reactor. | Environmental Evaluation Report - Roundwood Solutions.docx | Required to be assessed | Maturity & Quality  |

