| Project Title |
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| Auscarbon Biodiversity Project |
| **Registry ID** |
| GS-3039 |
| **Type of Certification** |
| ☐ Initial Certification ☒ Performance Certification ☒ New Area Certification |

Copy the table for each

- mitigation measure identified in the chapter '3.1 Do-No-Harm Assessment' with the risk rating of 'medium' or 'high', AND
- indicator identified by the Sustainable Development Assessment in the chapter '3.2 Local Stakeholder Consultation' rated as positive (+1) or negative (-1) , AND
- mitigation measure identified by the Sustainable Development Assessment in the chapter '3.2 Local Stakeholder Consultation' that will neutralize the negative indicators

## 3.5 Sustainability Monitoring Plan

1. There are no referenced measures in the current Do-No-Harm Assessment.
2. Below are the indicators rated either +1 or -1 in the Sustainable Development Assessment within the Local Stakeholder Consultations (reference Consultative Meeting Minutes dated 23 March 2018).

| **Sustainability Monitoring ID** | | **1. (reference SD Assessment # 1)**<br>• **Performance Certification Areas – previously raised although Auscarbon has never had the capability to monitor this issue.**<br>• **New Areas - raised in 2018 Consultative Meeting – Auscarbon does not have capability to monitor this issue.** |
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| Indicator for | | Air Quality (+1) |
| Mitigation measure | | Regional Air Quality |
| Chosen parameter | | **No specific parameter(s) chosen – Auscarbon does not have direct capability to measure regional air quality.** |
| Current situation of parameter | | **The regional background air quality incorporates chemicals and particulates generally includes, amongst others, emissions from industrial, domestic situations and vehicles, dust, pollen and water.** |
| Estimation of baseline situation of parameter | | **No known measure** |
| Target for parameter | | **No target set by Auscarbon** |
| Monitoring | How will it be monitored and documented? | **Auscarbon will not be monitoring air quality** |
| | Who is responsible for monitoring and documentation? | **N/A** |
| | When will it be monitored (duration and frequency)? | **N/A** |

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| **Sustainability Monitoring ID** | | **2. (reference SD Assessment #2)**<br>• **Performance Areas – previously considered although difficulty in sampling intermittently-flowing streams.**<br>• **New Areas – A Water Monitoring Plan is being prepared with consultation with Dept. of Water.** |
| Indicator for | | Water Quality (+1) |
| Mitigation measure | | Regional Water Quality **(Stream surface water)** |
| Chosen parameter | | **Stream (surface) water salinity levels – Auscarbon has not previously monitored regional stream water quality.** |
| Current situation of parameter | | **The Water Department monitors water quality on a regional basis. The Dept. monitors (groundwater) bore water salinity but their levels are more influenced by the usage of the bore within local aquifers.**<br>**Dept. monitors some surface water sites, mostly outside Auscarbon's Project Area. Auscarbon can complement with Project Area sites.**<br>**A sampling technique/standard will be developed in consultation with Water Department and will be applied over all areas.** |
| Estimation of baseline situation of parameter | | No known data exists for streams within Auscarbon properties. There are only a few (seasonal flow only) streams within Auscarbon properties. No data exists for these streams.<br>**Baseline samples will be taken in winter 2018.**<br>**Existing Water Department records of external monitoring sites will be incorporated as comparative data.** |
| Target for parameter | | Most streams currently express a saline influence.<br>In the longer term (i.e. 20+ years) it is desirable for a reduction in stream water salinity levels – a reduction of 25% in the stream water salinity levels.<br>**Changes in water salinity can only be expected in a long term – short-term changes are not expected until established-vegetation fully occupies the site and influences surface water flow.** |
| Monitoring | How will it be monitored and documented? | With guidance from the Water Dept. a series of stream monitoring points can be established on Auscarbon properties. Annual water readings can be taken at appropriate times to represent the water quality of those streams.<br>**A Monitoring Plan, which includes monitoring locations, plus Water Dept. monitored sites will be prepared and commenced in winter 2018.** |
| | Who is responsible for monitoring and documentation? | Auscarbon's Resources Manager |
| | When will it be monitored (duration and frequency)? | Annually at an appropriate time to measure stream water quality.<br>**NEW AREAS – possible monitoring streams exist on Colganatta and Mulloncoola. Hughes Block does not have a defined stream zone.**<br>PERFORMANCE AREAS – potential monitoring streams exist on Terra Grata, Hillview, Bowgada Hills. Other properties may have sites suitable for sampling.<br>**Baseline and other monitoring sampling will commence in winter 2018.** |

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| **Sustainability Monitoring ID** | | **3. (reference SD Assessment # 3)**<br>• **Performance Areas – included in monitoring**<br>• **New Areas – to be included in monitoring** |
| Indicator for | | Soil Condition (+1) |
| Mitigation measure | | Soils affected by salinity |
| Chosen parameter | | Property area with salinity |
| Current situation of parameter | | Auscarbon has areas of known salinity within its properties. Some have been mapped accurately within Terra Grata (4.2 ha), Bowgada ((27.63 ha) whilst others (Tomora and Colganatta) have not been accurately mapped (possibly approximately 35 ha).<br><br>Salinity occurs as a result of catchment-wide land use activities. Whilst on-property activities influences the salinity situation, many activities within the complete catchment also impact the extent of salinity outcomes. |
| Estimation of baseline situation of parameter | | Incorporating mapped and unmapped areas, approximately 200 ha of salt-affected land may be within the Auscarbon properties. |
| Target for parameter | | The complete reversal of saline-affected land takes considerable time – likely decades for small changes and possibly a century for significant changes, although this will vary with time since salinity appeared, degree of salinity obtained, topographic position and possibly adjacent land use activities.<br><br>Auscarbon's Target is for Salinity is no further increase in saline-affected area across the existing estate. It is assumed that the extensive biodiverse establishments done by Auscarbon will assist in the lowering of local subsoil water tables which in time affects (reduces) the soil saline levels and extent. |
| Monitoring | How will it be monitored and documented? | Survey and mapping records.<br>**Sample sites will be established in 2018 with baseline references.** |
| | Who is responsible for monitoring and documentation? | Auscarbon Resources Manager |
| | When will it be monitored (duration and frequency)? | Re-mapping of properties takes place periodically with changes in land and resource circumstances. Saline-affected areas can be assessed accurately at those times.<br>PERFORMANCE AREAS = Terra Grata, Tomora, Bowgada Hills and Pine Ridge have applicable evaluation areas.<br>It is appropriate to re-appraise/map those areas on a 5-yearly basis (very little change will take place in 1 year).<br>**NEW AREAS = Mulloncoola and Colganatta. Hughes Block has little saline-influenced land.** |

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| **Sustainability Monitoring ID** | **4. (reference SD Assessment # 5)**<br>• **Performance Areas – included in data collection**<br>• **New Areas – these will be added to data collection.** |
| Indicator for | Biodiversity (+1) |
| Mitigation measure | Ecological diversity |
| Chosen parameter | Area with wider plant and animal diversity (i.e. established under Auscarbon Biodiverse Model) |

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| Current situation of parameter | | There are 3 broad ecological situations applying across the region:<br>1. Remnant vegetation (i.e. natural biodiversity) – this is currently around 20% of the regional area.<br>2. Cleared Agricultural land (i.e. significantly reduced biodiversity) – this is currently between 75-80% of the landscape i.e. the dominant land use.<br>3. Re-vegetated land – e.g. as done by Auscarbon with its biodiverse establishment program. This is currently only 1-2% of the regional landscape. There is a broad regional objective to double that by 2050. |
| Estimation of baseline situation of parameter | | Auscarbon currently has 10,196 ha established across 9 properties in the Morawa and Perenjori Shires. |
| Target for parameter | | Auscarbon has a clear objective to increase its resource base, subject to commercial opportunities.<br>Whilst Auscarbon has a target to establish approximately 15,000 ha by 2020, it should be considered as nominal although desirable. |
| Monitoring | How will it be monitored and documented? | Post-establishment survey and mapping.<br>**An Ecological Biodiversity Plan was developed in May 2018. Past information and documentation will be complied in winter 2018.** |
| | Who is responsible for monitoring and documentation? | Auscarbon Resource Manager |
| | When will it be monitored (duration and frequency)? | After each establishment year, the established area is accurately mapped with GPS units and digital maps are prepared.<br><br>These areas are monitored annually and any variations (i.e. reductions or increases) are incorporated in annual resource statements. |

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| **Sustainability Monitoring ID** | | **5. (reference SD Assessment # 6)**<br>• **Relates to Performance Area**<br>• **Relates to New Area** |
| Indicator for | | Quality of Employment (+1) |
| Mitigation measure | | Skilled employment numbers |
| Chosen parameter | | Skilled employment numbers – full time employees |
| Current situation of parameter | | This information is recorded within company records. |
| Estimation of baseline situation of parameter | | As farms, there were variable employment levels depending on range of farming activities undertaken, scale of activities and the viability of each farm. In general in the 10 years prior to Auscarbon's activities there would have been approximately 2 full-time skilled workers per property, plus a variable level of seasonal, part-time and contractor levels. |
| Target for parameter | | Directly related to Carbon land management activities – Auscarbon expects to have a base employment level of approximately 2 full-time persons per 10,000 ha of resource. With more diversified activities, this could increase to 5-6 per 10,000 ha. |
| Monitoring | How will it be monitored and documented? | Company employment records |
| | Who is responsible for monitoring and | HO Personnel Records Accountant |

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| | documentation? | |
| | When will it be monitored (duration and frequency)? | Annually – end of financial year. |

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| **Sustainability Monitoring ID** | | **6. (reference SD Assessment # 9)**<br>• **Relates to Performance Area**<br>• **Related to New Areas** |
| Indicator for | | Human and Institutional Capacity (+1) |
| Mitigation measure | | Research and Collaboration |
| Chosen parameter | | Auscarbon's Research Program |
| Current situation of parameter | | Auscarbon currently collaborates with CSIRO on the measurement of vegetation biomass. Auscarbon also carries out its own research and contributes data to a national database (Department of Environment through CSIRO).<br>Additional research collaboration with Murdoch University and other centres are being considered in 2018. |
| Estimation of baseline situation of parameter | | Since 2014 Auscarbon and CSIRO have researched considerable information on above--and below-ground biomass development. This has contributed significantly to Auscarbon's understanding of biomass dynamics and growth. |
| Target for parameter | | Auscarbon will maintain an annual research program – some collaboration and some internal including the trialling and adoption of new techniques and the use of specialist persons or organisations. |
| Monitoring | How will it be monitored and documented? | Annual – through research and development activities. |
| | Who is responsible for monitoring and documentation? | Auscarbon Resource Manager |
| | When will it be monitored (duration and frequency)? | Annually |

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| **Sustainability Monitoring ID** | | **7. (reference SD Assessment # 10)**<br>• **Relates to Performance Area**<br>• **Relates to New Area** |
| Indicator for | | Quantitative Employment and Income Generation (+1) |
| Mitigation measure | | Maintain employment in region |
| Chosen parameter | | Auscarbon's regional employee numbers and salary levels. |
| Current situation of parameter | | Auscarbon currently has 6 full-time employees living in the region (i.e. excluding Head Office-based personnel). |
| Estimation of baseline situation of parameter | | Up to 2015 Auscarbon employed 1 person full-time in the region on Carbon and other rural activities. That person covered approximately 8,000 ha. |
| Target for parameter | | With a more diversified works program, Auscarbon has a nominal target of 5-6 full-time regional personnel |
| Monitoring | How will it be monitored and documented? | Personnel records |
| | Who is responsible for monitoring and | Personnel Manager |

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| | documentation? | |
| | When will it be monitored (duration and frequency)? | Annual Personnel records |

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| **Sustainability Monitoring ID** | | **8. (reference SD Assessment # 12)**<br>• **Relates to Performance Area**<br>• **Relates to New Areas** |
| Indicator for | | Technical Transfer and Technological Self-reliance |
| Mitigation measure | | Technical advancement |
| Chosen parameter | | Advancement of Operational Methodologies |
| Current situation of parameter | | Auscarbon annually reviews its establishment methods, tree sampling and measurement techniques. It collaborates and participates with organisations and specialists to improve its knowledge. |
| Estimation of baseline situation of parameter | | 1. Direct seeding and hand planting techniques – species mix and application rates.<br>2. Inventory Sampling – plot types and sampling intensity |
| Target for parameter | | 1. Improved species mix at establishment (Eucalypts > 250 stems/ha).<br>2. Resource sampling – systematic and stratified sampling with maximum error of 20% at a 90% confidence interval |
| Monitoring | How will it be monitored and documented? | 1. Annual Establishment reports – outcomes and specifications<br>2. Maximum 5-yearly inventory sampling program |
| | Who is responsible for monitoring and documentation? | Auscarbon Resource Manager |
| | When will it be monitored (duration and frequency)? | 1. Annually<br>2. Whenever inventory carried out (max 5 years). |