

# COMBINED VALIDATION & VERIFICATION REPORT

Rarakau Rainforest Carbon Project: IFM-LTPF  
Inception Project for the Rarakau Programme

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**Summary:**

Dr Misheck C Kapambwe (Lead Auditor) has performed the assessment of the programme specific Technical Specifications “Rarakau Programme IFM-LtPF Methodology v2.0” and the validation and verification of the project activity “Rarakau Forest Carbon Project: IFM-LtPF Inception Project for the Rarakau Programme” in New Zealand. The objective is to confirm that the carbon accounting elements of the Technical Specifications are sound and the project design and implementation, as documented, are sound and reasonable and meet the identified applicable criteria. The validation and verification scope covers an independent and objective review of the Rarakau Programme Technical Specifications “Rarakau Programme Methodology: D2.1 v2.0”, the Rarakau Programme PDD, “Rarakau Rainforest Carbon Project PD: D3.P1.1 v2.0”, the monitoring report (MR), “Rarakau Project Monitoring Report 2 D3.P1.13v1.0”, and the annual report, “Rarakau Rainforest Carbon Project Annual Report 1 20181110”.

The methodology assessment, project validation and project verification were performed on the basis of the Plan Vivo Standard (2013) and other Plan Vivo requirements for Technical Specifications for the GHG project, as well as criteria from sources such as IPCC, VCS, CCBA and New Zealand carbon monitoring system given to provide good practice guidance for GHG accounting and for consistent project operations, monitoring and reporting. Project validation and verification were conducted by means of document review, follow-up interviews, and the resolution of outstanding issues. The review of the Technical Specifications, PDD and implementation documentation and the subsequent follow-up interviews and site inspection has provided the Lead Auditor with sufficient evidence to determine the fulfilment of stated criteria.

The project activity is forest protection by means of a legal covenant for duration of project period. The project has applied the project specific Technical Specifications “Rarakau Programme IFM-LtPF Methodology”, version 2.0.

In summary, it is the Lead Auditor’s opinion that:

- (a) The project specific Technical Specifications “Rarakau Programme IFM-LtPF Methodology v 2.0”, as described in the methodology element documentation, meets all relevant requirements of Plan Vivo Standard (2013), VCS and IPCC and is technically sound for carbon accounting in the Rarakau Programme;
- (b) The project activity “Rarakau Forest Carbon Project: IFM-LtPF Inception Project for the Rarakau Programme” as described in the PDD, “Rarakau Rainforest Carbon Project PD: D3.P1.1 v2.0” dated 9 October 2018, meets all relevant Plan Vivo Standard (2013) requirements for the Plan Vivo GHG project and correctly applies the project specific Technical Specifications “Rarakau Programme IFM-LtPF Methodology v2.0”. Hence, the Lead Auditor recommends the registration of the project as a Plan Vivo GHG project activity.
- (c) The project activity has been implemented as reported in the “Rarakau Project Monitoring Report 2 D3.P1.13v1.0, dated 9 October 2018. The Lead Auditor is able to certify that the net emission reductions from the “Rarakau Forest Carbon Project: IFM-LtPF Inception Project for the Rarakau Programme” during the project monitoring period 1 January 2012 to 31 October 2018 (6.75 years) amount to 16,589 tonnes of CO<sub>2</sub> equivalent.

The verification of reported emission reductions is based on the information made available to the Lead Auditor and the engagement conditions detailed in this report. The Lead Auditor cannot be held liable by any party for decisions made or not made based on this report.

## GLOSSARY

AFOLU

Guidelines Agriculture, Forestry and Other Land Uses Section of Guidelines for National Greenhouse Gas Inventories 2006

CARs Corrective Action Requests

CCBA Climate Community and Biodiversity Alliance

CLs Clarification Requests

CO<sub>2</sub> Carbon Dioxide

DR Document Review

GHG Greenhouse Gas(es)

ISO International Standards Organisation

IPCC GPG Intergovernmental Panel on Climate Change's Good Practice Guidance

LO Landowner and project owner. The LO in this project is the Rowallan Alton (Maori) incorporation.

LULUCF Land-Use Land Use Change and Forestry

MPI New Zealand Ministry of Primary Industries

MR Monitoring Report

PC Project Coordinator – this is the Project Developer who works for the landowner. The Project Coordinator in this project is Carbon Partnership Ltd

PDD Project Design Document

PO Programme Operator – this entity works for project environmental integrity. The Programme Operator in this project is Ekos (a charity)

PP Project Proponent (Carbon Partnership Ltd)

PPs Project Proponents (Rarakau programme participants)

SILNA South Island Landless Natives Act

SOPs Standard Operating Procedures

tCO<sub>2</sub>e Tonnes CO<sub>2</sub> equivalent

VCS Verified Carbon Standard

VERs Verified Emission Reductions

## 1. INTRODUCTION

Carbon Partnership Ltd has commissioned Dr Misheck C Kapambwe (Lead Auditor) to perform a combined assessment of the new Rarakau Programme IFM-LtPF Methodology (hereafter referred as Technical Specifications), validation and verification of “Rarakau Forest Carbon Project: IFM-LtPF Inception Project for the Rarakau Programme” (project) in New Zealand. This report summarizes the findings of the combined assessment of the applied Technical Specifications and the validation and verification of the project performed on the basis of the Plan Vivo Standard 2013 criteria for the Plan Vivo GHG project, as well as criteria given to provide for new methodology development, consistent project operations, monitoring and reporting. Throughout this report, the Plan Vivo criteria refer to Plan Vivo Standard (2013).

### 1.1 Objective

The purpose of validation and verification is to have an independent third party assess the new Technical Specifications , project design (PDD) and project implementation (MR). In particular, the Technical Specifications, the project's baseline and monitoring plan, and compliance with relevant Plan Vivo Standard (2013) criteria are validated and verified in order to confirm that the project design and implementation, as documented, is sound and reasonable and meets the identified criteria. Validation and verification is necessary to provide assurance to stakeholders of the quality of the project and its intended generation of the verified emission reductions (VERs).

### 1.2 Scope and Criteria

The validation and verification scope is defined as an independent and objective review of the Technical Specifications, Rarakau GHG project document (PDD) and the Rarakau project monitoring report (MR) against the Plan Vivo Standard (2013) and the following criteria which provided the robustness of the Technical Specifications, the project design and the project implementation:

- IPCC 2006 Guidelines on National GHG Inventories ;
- IPCC 2003 Good Practice Guidance on LULUCF ;
- The Verified Carbon Standard ;
- The New Zealand (compliance) Carbon Monitoring System;
- Climate Community and Biodiversity Standard.

The assessment does not include project consulting. However, requests for clarifications and/or corrective actions may have provided input for improvement of the Technical Specifications, project design and project implementation.

### 1.3 Level of Assurance

The Lead Auditor provides reasonable assurance that Rarakau Forest Carbon Project: IFM-LtPF Inception Project and the Technical Specifications for the Rarakau Programme meet the applicable criteria. Any clarification or corrective actions raised have been included in the Appendix. In addition, the Lead Auditor applies materiality of five (5) per cent in accordance with the requirements in the agreement with the PP.

### 1.4 Summary Description of the Project

The Rarakau Forest Carbon Project protects previously logged indigenous forest on 738 ha of land made up of 11 land parcels owned by a Maori incorporation - Rowallan Alton Incorporation. This forest protection is achieved through the creation and sale of carbon assets instead of timber assets on this land. The Rarakau Forest Carbon Project forests are protected by a legal covenant (Memorandum of Encumbrance) on the title of the land. The beneficiary of the Memorandum of Encumbrance is Ekos – a charitable trust functioning as the Programme Operator of the Rarakau Programme.

## 2 ASSESSMENT, VALIDATION AND VERIFICATION PROCESS

### 2.1 Method and Criteria

The process for methodology assessment, project validation and project verification consisted of the following three phases:

- A desk review of Technical Specifications (TS), and project documents ,.
- Follow-up interviews with project stakeholders and project site inspection (to validate project design and verify project implementation);
- The resolution of outstanding issues and the issuance of the combined validation and verification report, including validation and verification opinions.

### 2.2 Document Review

The list of the documentation that was reviewed during the assessment of the Technical Specification, the PDD and the monitoring report is given in the References.

### 2.3 Interviews

During September and October 2018, Paul Barrett (member of the 2-person audit team) visited the project area in South Island, New Zealand and performed interviews with various stakeholders. Details of the site visit and stakeholders interviewed during the site visit, including the topics covered is given in the Verification Site Visit Report.

### 2.4 Site Inspections

For project validation and verification, Paul Barrett (site inspection member of the audit team) performed an on-site inspection from 19 September 2018 and 11 – 12 October 2018. During the site-inspection, the site inspection Auditor inspected and observed activities of project design, project implementation and project monitoring and conducted interviews with project staff and other stakeholders. Objectives of the on-site inspections were to:

- Confirm the location of Rarakau project activity; assess its design, implementation and operation through visual inspection and through interviews with project and non-project staff at randomly selected land parcels.
- Assess the implementation of leakage mitigation activities and review assumptions made in determining the baseline scenario and selection, deforestation drivers, GHG data and cross-check land uses in the project reference areas.
- Verify that the operational and data collection procedures, and information flows for generating, aggregating and reporting the monitoring parameters are implemented in accordance with the monitoring plan of the PDD and applicable Technical Specifications.
- Check and verify that quality control and quality assurance procedures as part of the quality management system are as described in the PDD.
- Review and authenticate the documents provided by project proponents with relevant stakeholders (i.e., relevant national and local government departments) to confirm, for example, proof of title in respect of land use rights, enforceable and irrevocable agreements between project proponents and stakeholders, etc.
- Assess and verify evidence of relevant stakeholder participation in project implementation.
- Assess and verify implementation of plans and methods for continuous community outreach and for handling conflicts.

### 2.5 Resolution of Findings

The objective of this phase of the validation was to resolve any outstanding issues that needed to be clarified prior to the Lead Auditor's positive conclusion on the methodology, project design and project implementation. In order to ensure transparency, a list of validation and verification findings stating the corrective actions and clarification requests raised by the Lead Auditor and the responses to those requests provided by the project proponents are included as Appendix. This ensures a transparent validation process where the Lead Auditor documents how a particular requirement has been validated and verified.

A corrective action request (CAR) is issued if one of the following occurs:

- The Module developers have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions.
- The Plan Vivo requirements have not been met.
- There is a risk that emission reductions cannot be monitored or calculated.

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable Plan Vivo requirements and other carbon accounting best practice have been met.

During the assessment the Lead Auditor raised 49 CARs and 7 CLs. Details of the individual CARs and CLs and the consequent close out information can be found in the Appendix of this report.

## **2.6 Report Structure**

This report adopts elements of the Plan Vivo Standard PDD Template to report the assessment findings for validating Technical Specifications Module and the PDD. Hence, this report has three (3) components: Component One presents findings from the Technical Specifications Module assessment using the format in Part G of Plan Vivo PDD Template; Component Two comprises presents findings from the project validation using the format in Parts A, B, C, D, E, F, H, I, J and K of the Plan Vivo PDD Template and Component Three presents findings from the project verification.

**COMPONENT ONE      TECHNICAL SPECIFICATIONS ASSESSMENT****3 ASSESSMENT FINDINGS**

The assessment process focused on the carbon accounting principles set forth by the ISO 14064-2., IPCC Guidelines. and Part 5 (Quantifying and Monitoring Ecosystem Services) of the Plan Vivo Standard (2013) as well as Part G of the PDD validation template. In particular, the proposed Technical Specifications Module was found to be in full compliance with the principles of relevance, completeness, consistency, accuracy, transparency, and conservativeness set out in the Plan Vivo standard requirements.

- The Technical Specifications adheres to the principle of relevance by selecting the GHG sources, GHG sinks, GHG reservoirs, data and methodologies appropriate to the needs of the Plan Vivo Program.
- The Technical Specifications adheres to the principle of completeness by including all relevant GHG emissions and removals, and including all relevant information to support criteria and procedures.
- The Technical Specifications adheres to the principle of consistency by enabling meaningful comparisons in GHG-related information.
- The Technical Specifications adheres to the principle of accuracy by reducing bias and uncertainties as far as is practical.
- The Technical Specifications adheres to the principle of transparency by disclosing sufficient and appropriate GHG-related information (i.e. giving sufficient and appropriate justification of procedures and criteria) to allow intended users to make decisions with reasonable confidence.
- The Technical Specifications adheres to the principle of conservativeness by using conservative assumptions, values and procedures to ensure that net GHG emission reductions or removals are not overestimated.

**3.1 Structure and Clarity of Technical Specifications Module**

The Lead Auditor assessed the Technical Specifications for compliance with (a) the requirements in the Plan Vivo Standard (2013), (b) appropriate use of terminology and keywords and (c) clarity. After some amendments and revisions to the Technical Specifications Module as a result of CARs, CLs and comments from the assessment team, as shown in Appendix, the Technical Specifications Module follows the instructions in Plan Vivo Standard (2013). The criteria and procedures are included in appropriate sections of the Technical Specifications Module. The terminology used in the Technical Specifications Module is consistent with the general requirements for GHG accounting and the specific requirements of the Plan Vivo Standard (2013).

The Lead Auditor can confirm that the Technical Specifications Module also uses the standard language including definitions and keywords appropriately and consistently. Plan Vivo Standard (2013) key terms such as *must*, *should* and *may* are used appropriately to distinguish mandatory requirements, recommendations (non-mandatory) and permissible or allowable options, respectively. The criteria and procedures are written in a manner that can be understood and applied readily and consistently by project proponents and would enable projects to be unambiguously audited against them.

Overall, Lead Auditor concludes that the Technical Specifications Module has been written in a clear manner and structured according to the requirements of the Plan Vivo Program.

**3.2 Definitions**

Appropriate, clear and concise lists of definitions and acronyms are included under 'definitions' section in the Appendix and are used appropriately and consistently throughout the module. The Lead Auditor concludes that the definitions are clear and appropriate enough to enable users to apply and interpret the Technical Specifications Module.

**PART G: TECHNICAL SPECIFICATIONS**

Theme	G1 Project intervention and activities								
A. PV Requirements	<p>5.1. The project must develop <i>technical specifications</i> for each of the project interventions, describing:</p> <p>5.1.1. The <i>applicability conditions</i>, <i>i.e.</i> under what baseline conditions the technical specification may be used</p> <p>5.1.2. The activities and required inputs</p>								
B. Findings	<p>Section 1.1 of the Technical Specifications Module sets out applicability conditions which project activities must satisfy in line with requirements of Sections 5.1.1 and Section 5.1.2 of the Plan Vivo Standard. Specifically, Section 1.1.1 of the Technical Specifications describes the activity type of each project ‘Improved Forest Management – Logged to Protected Forest’ (IFM-LtPF) and applies to project activities in New Zealand that protect natural forest that would be logged in the absence of carbon finance. The Technical Specifications Module can only be applied when the following conditions are satisfied:</p> <table border="1"> <thead> <tr> <th>Applicability Conditions</th><th>Lead Auditor Findings</th></tr> </thead> <tbody> <tr> <td>Eligible forests will be New Zealand indigenous forests that were already classed as ‘forest lands’ as of 31 December 1989</td><td>Applicability condition is written in a sufficiently clear and precise manner, and can be applied in determining and demonstrating (at validation) whether a project activity meets and conforms to the applicability condition. The applicability condition also ensures that projects occurring on land areas other than within the indigenous forests that qualified as ‘forest land’ as of 31 December 1989 cannot apply the Technical Specifications Module. Remote sensing and GIS data (aerial imagery and maps) can be used to prove or disprove eligibility of forests in the project area.</td></tr> <tr> <td>Baseline and project activities in eligible forests comprise management of carbon stocks in forest-remaining-as-forest activities.</td><td>Applicability condition is sufficiently clear, precise and can be used to determine whether a project activity meets with the condition.</td></tr> <tr> <td>Baseline and project LULUCF GHG emissions, removals, emission reductions, and enhanced removals in eligible forests must lie outside the GHG accounting boundary of the New Zealand Emissions Trading Scheme (NZETS).</td><td>Sufficiently clear and precise, this condition imposes exclusivity to the type of eligible project activities applicable to this Technical Specifications Module. The project to which the Technical Specifications Module can be applied must not only implement activities that prevent deforestation and forest degradation but the project areas must lie outside the GHG accounting boundary of the New Zealand Emissions Trading Scheme (NZETS). This exclusivity would readily enable project verifiers to determine through analysis of appropriate NZETS</td></tr> </tbody> </table>	Applicability Conditions	Lead Auditor Findings	Eligible forests will be New Zealand indigenous forests that were already classed as ‘forest lands’ as of 31 December 1989	Applicability condition is written in a sufficiently clear and precise manner, and can be applied in determining and demonstrating (at validation) whether a project activity meets and conforms to the applicability condition. The applicability condition also ensures that projects occurring on land areas other than within the indigenous forests that qualified as ‘forest land’ as of 31 December 1989 cannot apply the Technical Specifications Module. Remote sensing and GIS data (aerial imagery and maps) can be used to prove or disprove eligibility of forests in the project area.	Baseline and project activities in eligible forests comprise management of carbon stocks in forest-remaining-as-forest activities.	Applicability condition is sufficiently clear, precise and can be used to determine whether a project activity meets with the condition.	Baseline and project LULUCF GHG emissions, removals, emission reductions, and enhanced removals in eligible forests must lie outside the GHG accounting boundary of the New Zealand Emissions Trading Scheme (NZETS).	Sufficiently clear and precise, this condition imposes exclusivity to the type of eligible project activities applicable to this Technical Specifications Module. The project to which the Technical Specifications Module can be applied must not only implement activities that prevent deforestation and forest degradation but the project areas must lie outside the GHG accounting boundary of the New Zealand Emissions Trading Scheme (NZETS). This exclusivity would readily enable project verifiers to determine through analysis of appropriate NZETS
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		documentation, aerial imagery and maps whether a project activity conforms to or meets with the applicability condition
	Eligible forests shall be located on lands owned by individual or communal landowners and/or community groups that have clear land user rights and stable land tenure.	Condition deemed appropriate as it requires projects to provide proof (at project validation and verification) of land ownership and land user rights to (a) assure stability of project tenure and avoid risk of project failure from disputed land rights and (b) to assure continuation of management practices that protect the credited carbon stocks over the length of the project crediting period. By examining the proof of land ownership documentation, project validators and verifiers will be able to determine conformity or otherwise.
	Eligible project interventions shall be designed to protect and/or enhance biodiversity and the social and economic wellbeing of landowners.	Applicability condition is sufficiently clear
	Eligible project interventions shall not cause negative environmental impacts.	Applicability condition is sufficiently clear

Section 1.1.5 of the Technical Specifications Module also includes additional specific conditions for projects applying the Module as follows:

- Project Owner exists as a suitable entity capable of entering into binding project commitments with the Programme Operator and capable of owning carbon credit assets.
- Project Owner owns the carbon rights and management rights over the forest lands in the project area.
- Current and planned land use: land must be legally eligible to be harvested for commercial timber or fuelwood production.
- Forest lands eligible for crediting under this programme will only include lands that have not received financing for the same project activities from another source.
- The boundaries of the forest land must be clearly defined and documented.
- Under the Project Scenario forest use is limited to activities that do not result in commercial timber harvest or forest degradation.
- Planned timber harvest must be estimated using forest inventory methods that determine allowable annual timber harvest volumes ( $m^3 ha^{-1}$ ).
- There may be no leakage through activity shifting to other lands owned or managed by project participants outside the bounds of the carbon project.
- Baseline activities can include legally sanctioned timber harvesting that degrades forest carbon stocks in local government jurisdictions where forest degradation is either permitted or where such activity is likely to get a resource consent and can, potentially, apply to lands covered by the South Island Landless Natives Act (1906).

	<ul style="list-style-type: none"> <li>The Project Period for all projects using the Technical Specifications Module shall be no less than 50 years, with perpetual right of renewal.</li> </ul> <p>Overall, the Lead Auditor concludes that, after satisfactory clarifications and revisions to the Technical Specifications Module as a response to respective CARs, CLs and comments given in the Appendix, applicability conditions are written in a sufficiently clear and precise manner and can be used to determine whether a project activity meets with the condition. As written, applicability conditions will enable projects to demonstrate conformance at the time of project validation and verification to ensure that projects do not fall out of line with applicability conditions.</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
<b>Theme</b>	<b>G2 Additionality and Environmental Integrity</b>
A. PV Requirements	<p>5.4. Ecosystem services forming the basis of Plan Vivo projects must be additional i.e. would not have been generated in the absence of the project, which involves as a minimum demonstrating that:</p> <p>5.4.1. Project interventions are not required by existing laws or regulations, unless it can be shown that those laws are not enforced or commonly met in practice and the support of the project is therefore justified</p> <p>5.4.2. There are financial, social, cultural, technical, scientific or institutional barriers preventing project interventions from taking place</p> <p>5.8. Project intervention areas must not be negatively altered, e.g. deforested or cleared of other vegetation, prior to the start of project activities for the purpose of increasing the payments for ecosystem services that participants can claim</p> <p>5.14. To avoid 'double counting' of ecosystem services, project intervention areas must not be in use for any other projects or initiatives, including a national or regional level mandatory GHG emissions accounting programme, that will claim credits or funding in respect of the same ecosystem services, unless a formal agreement is in place with the other project or initiative that avoids double-counting or other conflicting claims, e.g. a formal nesting agreement with a national PES scheme</p>
B. Findings	<p>Section 2.10 of the Technical Specifications Module requires all projects to identify relevant laws and regulations relating to the project and to demonstrate how the projects comply with these laws. This includes the need to secure any legal or regulatory permission required to carry out project interventions. Section 4.1.5 of the Technical Specifications Module requires projects to apply the most recent version of <i>VT0001, Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities</i> to test the additionality of project activities. Projects are to apply Regulatory Surplus, Implementation Barriers and Common Practice tests. The Lead Auditor deems this VCS tool appropriate for the project activities covered by the Technical Specifications Module because it provides procedure to determine project additionality through evaluation of credible alternatives and proposed project scenarios. This will ensure that:</p> <ul style="list-style-type: none"> <li>Project activities are additional to those that would anyway be required under law or regulations [PV Standard 5.4.1].</li> <li>Generation of the ecosystem service benefits depends solely on implementation of the project activities that would not have been generated in the absence of the project [PV Standard 5.4.2]</li> <li>Project area has not been negatively altered (such as vegetation clearing or deforestation) prior to the project for the purposes of claiming PES payments [PV Standard 5.8].</li> <li>Sufficient steps (by way of applicability/eligibility conditions in Section 1.1, specific conditions in Section 1.1.5 and conditions for transition to compliance in Section 2.15) have been taken to avoid</li> </ul>

	<p>double counting of carbon benefits with any other initiatives in place in the project area [PV Standard 5.14]</p> <p>The Lead Auditor concludes that the selected criteria and procedures for determining additionality and environmental integrity are appropriate for the project activities covered by the Technical Specifications Module, and are in compliance with the requirements of Plan Vivo Standard.</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Theme	<b>G3 Project Period</b>
A. PV Requirements	<p>5.5. Ecosystem services must be accounted for over a specified <i>quantification period</i> that is of sufficient length to provide a clear picture of the long-term impact of the activity</p> <p>5.6. The quantification period must not exceed the period over which participants can make a meaningful commitment to the project intervention, and must be justified in relation to the duration of payment and monitoring obligations</p> <p>5.17. Where climate services are affected by cyclical management activity, e.g. harvesting or naturally occurring cycles, the quantification period must be representative of the services provided throughout the full cycle of events</p>
B. Findings	<p>Section 2.13 of the Technical Specifications Module clearly specifies that the Project Period for all projects using the Module will be 50 years, with the option to roll over the project for a subsequent Project Period of 50 years, or to undertake the project for more than one Project Period (e.g. two 50-year Project Periods) at a time. The Module also specifies that the Project Crediting Period will be 5 yearly monitoring periods starting with the start of the Project Period and will continue until the End of the Project Period.</p> <p>Section 2.13 of the Technical Specifications also clearly provides justification for a 50-year project period, which is to provide for the interests of permanence and to provide a degree of intergenerational equity that would not be available to landowners under a permanent covenant. In other words, the intention of the projects which will apply these technical specifications is to provide for forest protection in perpetuity but in a manner that respects the rights of indigenous peoples and other private landowners in relation to the ability to make land use decisions in future generations.</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Theme	<b>G4 Baseline scenario</b>
A. PV Requirements	<p>5.12. A baseline scenario must be provided for each project intervention, describing current land uses and habitat types and existing major ecosystem services provided in the area, and how these are most likely to change over the quantification period in the absence of project interventions</p> <p>5.15. All <i>carbon pools</i> and <i>emissions sources</i> used to quantify <i>climate services</i> must be specified with justification for their inclusion. Carbon pools expected to decrease, and emissions sources expected to increase as a result of the project intervention must be included, unless decreases or emissions are likely to be insignificant, i.e. less than 5% of total climate benefits</p> <p>5.18. An approved approach must be used to quantify initial carbon stocks and emissions sources, and estimate how they are most likely to change over the project period, as part of the baseline scenario</p> <p>5.2. Sources of data used to quantify ecosystem services, including all assumptions and default factors, must be specified and as up-to-date as possible, with a justification for why they are appropriate</p>

B. Findings	<p><b>Current Conditions and Trends</b></p> <p>Section of 2 of the Technical Specifications includes clear requirements and guidance for prescribing existing conditions and trends in project areas. Furthermore, Section 4 of the Technical Specification provides appropriate and adequate guidance, procedures and criteria for selecting and modelling realistic and credible baseline land use scenario. Each eligible project must determine the baseline scenario as sanctioned or approved commercial timber and/or fuelwood harvesting that result in a reduction in mean carbon stocks and associated emissions (deforestation). When determining the baseline scenario, the Technical Specifications requires projects to:</p> <ul style="list-style-type: none"> <li>• Identify realistic and credible alternative land use scenarios that could have occurred on the eligible forest land in the absence of the project activity.</li> <li>• Select the most realistic and feasible land uses in the absence of the project on the basis of land suitability, technical and economic barriers and institutional constraints. This must be done taking into account relevant national and/or sectoral policies and circumstances.</li> <li>• Demonstrate a baseline of deforestation as per applicability conditions of the Technical Specifications Module.</li> </ul> <p>The Technical Specifications Module also requires projects to justify both the selected baseline in terms of the most likely baseline activity and its scale, and the exclusion of alternative baselines by means of an assessment of the feasibility or likelihood of alternative baselines. All projects applying this Technical Specifications Module are required to revise the selected baseline every 10 years from the project start date. This revision should include revision of the technical data used to create the baseline and project scenarios from an ecosystem service accounting perspective.</p> <p>The Technical Specifications Module also requires all projects to stratify the baseline scenario into:</p> <ul style="list-style-type: none"> <li>(a) Forest composition stratification which includes forest type, vegetation type and/or target timber species</li> <li>(b) Forest management stratification which includes logged and unlogged forests, as follows: <ul style="list-style-type: none"> <li>(i) Logged forests - areas of forest subjected to timber harvesting between 1 January 1900 and 31 December 2009</li> <li>(ii) Unlogged forests - areas of forest not subjected to past timber harvesting</li> </ul> </li> </ul> <p><b>Carbon Pools</b></p> <p>The Technical Specifications Module requires that projects include and account for all significant carbon pools and sources of GHG emissions in project boundaries and to conservatively exclude the insignificant ones. Section 2 of the Technical Specifications Module provides criteria and procedures for describing the project spatial, temporal and gaseous boundaries. The carbon pools and emissions sources that should be accounted for and the justifications for their inclusion or exclusion are clearly listed in Tables 3a, 3b and 3c, Tables 5a, 5b and 5c as well Tables 6a, 6b and 6c as required by Plan Vivo Standard (PV requirement 5.15)</p> <p><b>Baseline Methodology and Baseline Emissions</b></p> <p>Section 7.1 of the Technical Specifications Module has included clear procedures, criteria and equations to quantify the initial carbon stock for each carbon pool and to estimate the changes in carbon stocks for each carbon pool under baseline conditions, including guidance on how this should be assessed as required by Plan Vivo Standard (PV requirement 5.18). To estimate the initial and changes in carbon stocks for each carbon pool under baseline conditions, projects are required to use criteria, procedures, default values and equations under the following sections:</p> <p style="padding-left: 20px;">Section 7.1.1 – Calculation the Harvest Rate (HR)</p>
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	<p>Section 7.1.2 – Calculation of Total Wood Harvested (TWH)</p> <p>Section 7.1.3 – Calculation of Collateral Damage (CD)</p> <p>Section 7.1.4 – Above Ground Biomass Emitted (AGBE)</p> <p>Section 7.1.5 – Below Ground Biomass Emitted (BGBE)</p> <p>Section 7.1.6 – Total Emitted Wood Volume in Cubic Metres (TM3)</p> <p>Section 7.1.7 – Gross Total Emissions in tCO<sub>2</sub>e (GTCO<sub>2</sub>)</p> <p>Section 7.1.8 – Gross Baseline Emissions (GBE)</p> <p>Section 7.1.9 – Sequestration into Long Term Wood Products (ltWP)</p> <p>Section 7.1.10 - Net Baseline Emissions Avoided (NBEA)</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A

Theme	<b>G5 Ecosystem service benefits</b>
A. PV Requirements	<p>5.1.3. The project must develop <i>technical specifications</i> for each of the project interventions, describing what ecosystem service benefits will be generated and how they will be quantified</p> <p>5.7. An <i>approved approach</i> must be used to quantify ecosystem services generated by each project intervention compared to the baseline scenario</p> <p>5.15. All <i>carbon pools</i> and <i>emissions sources</i> used to quantify <i>climate services</i> must be specified with justification for their inclusion. Carbon pools expected to decrease, and emissions sources expected to increase as a result of the project intervention must be included, unless decreases or emissions are likely to be insignificant, i.e. less than 5% of total climate benefits</p> <p>5.18. An approved approach must be used to quantify initial carbon stocks and emissions sources, and estimate how they are most likely to change over the project period, as part of the baseline scenario</p>
B. Findings	<p><b>Climate Benefits Methodology</b></p> <p>Section 7.2 of the Technical Specification provides clearly stated procedures and equations to quantify climate benefits for each monitoring period. To estimate the changes in carbon stocks under project conditions relative to the baseline for each carbon pool, projects are required to use criteria, procedures, default values and equations in Section 7.2.1 (Net Project Removals – NPR)</p> <p><b>Expected Climate Benefits</b></p>

	<p>Procedures and equations for calculating net climate benefits are given in Section 8 of the Technical Specifications. Expected net climate benefits are to be estimated after accounting for leakage (Section 8.1.1) and non-permanence risk (Sections 8.2, 8.3 and 8.4).</p> <p>The Lead Auditor checked and can confirm that the Technical Specifications appropriately applies the IPCC 2006 Guidelines for National GHG Inventories and the IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry. The project buffer rating of 20% required by the Technical Specifications Module is deemed conservative as a result of the risk assessment and meets the Plan Vivo Standard (PV requirement 6.4). In addition, other credible literature references have been used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions and these (i.e., carbon stocks and GHG emissions) have been presented as tCO<sub>2</sub> per year. This is deemed to be in line with requirements of Plan Vivo Standard</p> <p>Overall, the Lead Auditor concludes that after satisfactory amendments and revisions to relevant sections of the Technical Specifications (see Appendix), the procedures for quantifying project emissions are appropriate for the project activities covered by the Technical Specifications Module. The equations and formulas used are appropriate and without error, and default factors and parameters used are appropriate and in conformance with Plan Vivo Standard requirements.</p>
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C. Conformance	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
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Theme	G6 Leakage & Uncertainty
A. PV Requirements	<p>5.2. Sources of data used to quantify ecosystem services, including all assumptions and default factors, must be specified and as up-to-date as possible, with a justification for why they are appropriate</p> <p>5.3. Technical specifications must be updated at least every 5 years where they are still being used to sign new PES Agreements, by reviewing both available data from project monitoring results, e.g. species growth data, and new available data from outside the project</p> <p>5.9.5. A monitoring plan must be developed for each project intervention which specifies the validity of any assumptions used in <i>technical specifications</i> are to be tested</p> <p>5.20. Where leakage is likely to be significant, i.e. likely to reduce climate services by more than 5%, an approved approach must be used to monitor leakage and subtract actual leakage from climate services claimed, or as a minimum, make a conservative estimation of likely leakage and deduct this from the climate services claimed</p>
B. Findings	<p>Section 7.3 of the Technical Specifications Module requires all projects to establish procedures to quantify all significant sources of leakage (i.e., any increase in GHG emissions that occurs outside the project boundary (but within the same country), and is measurable and attributable to the project activities). All projects must apply the GreenCollar IFM LtPF v1.3 VCS approved methodology VM0010 (2016) to calculate activity shifting leakage and market leakage (if the latter is significant) to derive Total Leakage (TLK). The procedures and guidelines sufficiently fulfil Plan Vivo Standard requirements (PV requirement 5.19 and 5.20).</p> <p>Section 10.4 of the Technical Specifications Module has clearly identified aspects where uncertainty would potentially exist in the calculations and has taken these into account to give a conservative estimate of climate benefits under the Plan Vivo Standard (PV requirement 5.11). Uncertainty in the estimation of aboveground biomass in each stratum is reduced by means of a forest biomass inventory at a precision of ±10% of the true value of the mean at the 95% confidence level and by using a stratified random sampling</p>

	<p>approach to locate sample plots. Furthermore, the Module applies allometry and diameter: height ratio derived from diameter: height data from indigenous forest in New Zealand which is in the same geographical location as the projects in which the Technical Specifications Module will be applied. Wood density value is derived from conservative defaults from the latest version of the IPCC Guidelines on National GHG Inventories.</p> <p>For belowground biomass estimation, application of IPCC default value of 0.37 for proportion of belowground biomass to above ground biomass reduces the uncertainty the uncertainty. Similarly, uncertainty in the calculation of Gross Total Emissions in tCO<sub>2</sub>e (GTCO<sub>2</sub>) is minimised by application of IPCC procedure for converting moist wood volume to carbon dioxide as well as by using the mean wood density for the species mix contained in the harvest rate data. Where local (country-specific) wood density data are unavailable, the Module has used IPCC GHG Inventory Guidelines for default values for applicable genera and families to build conservativeness into the estimation of project GHG emissions and removals.</p> <p>Overall, the Lead Auditor concludes that, after satisfactory amendments and revisions to relevant sections of the Technical Specifications Module as a result CARs, CLs and Comments (see Appendix), the procedures for quantifying project emissions in the Technical Specifications Module are appropriate for the project activities covered by the Technical Specifications and can be applied to validate and verify projects. The equations and formulas used are appropriate and without error, and default factors and parameters used are appropriate and in conformance with Plan Vivo Standard requirements.</p>
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C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
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Theme	<b>Monitoring Project Activities</b>
A. PV Requirements	<p>5.9. A monitoring plan must be developed for each project intervention which specifies:</p> <p>5.9.1. Performance indicators and targets to be used and how they demonstrate if ecosystem services are being delivered. <i>Performance targets</i> may be directly or indirectly linked to the delivery of ecosystem services, e.g. based on successful implementation of management activities or other improvements but must serve to motivate participants to sustain the project intervention</p> <p>5.9.2. Monitoring approaches (methods)</p> <p>5.9.3. Frequency of monitoring</p> <p>5.9.4. Duration of monitoring</p> <p>5.9.5. How the validity of any assumptions used in <i>technical specifications</i> are to be tested</p> <p>5.9.6. Resources and capacity required</p> <p>5.9.7. How communities will participate in monitoring, e.g. by training community members and gradually delegating monitoring activities over the duration of the project</p> <p>5.9.8. How results of monitoring will be shared and discussed with participants</p>
B. Findings	The criteria and procedure for the monitoring plan and monitoring activities are set out in Section 11 of the Technical Specifications Module and found to be in line with Section 5.9 of the Plan Vivo Standard requirements and Section 5.10 of the ISO 14064-2 Standard. The Technical Specifications Module has listed

	<p>and described all monitored (Section 11.7.2) and non-monitored data and parameters (including frequency of monitoring, sources of data and units of measurement) in Section 11.7.1).</p> <p>The Lead Auditor concludes that data and parameters to be reported, including sources of data and units of measurement are clearly stated and their inclusion and/or exclusion sufficiently justified in the Technical Specifications. In addition, the Technical Specifications Module includes requirements for the development of a project monitoring plan. Tasks to be addressed by the monitoring plan include revision of the baseline; monitoring of project implementation; monitoring of actual stock changes and GHG emissions; monitoring of leakage carbon stock changes and GHG emissions; and estimation of ex-post net carbon stock changes and GHG emissions. These monitoring tasks are deemed to be (a) compliant with the Section 5.9 of the Plan Vivo Standard requirements and Section 5.10 of the ISO 14064-2 Standard and, (b) sufficient to be used for monitoring projects covered by this Technical Specifications.</p>
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C. Conformance	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
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Theme	TECHNICAL SPECIFICATIONS ASSESSMENT CONCLUSION
Assessment Conclusion	<p>The validation was performed on the basis of Plan Vivo Standard requirements and Part G of the PDD validation template, as well as ISO 14064-2 Standard and IPCC criteria given to provide for consistent project operations, monitoring and reporting. The review of the Technical Specifications Module documentation and the subsequent follow-up interviews has provided the Lead Auditor with sufficient evidence to determine the fulfilment of stated criteria. The Technical Specifications Module correctly applies the requirements set out under the Plan Vivo Program Projects applying the Technical Specifications Module will result in reductions of CO<sub>2</sub> emissions which are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that by applying the Technical Specifications Module, projects will be able to demonstrate that they are not likely to be the baseline scenario. Emission reductions attributable to the project applying and meeting the requirements of the Technical Specifications Module would hence be additional to any that would occur in the absence of the project activity.</p> <p>In particular, the proposed Technical Specifications Module was found to be in full compliance with the principles of relevance, completeness, consistency, accuracy, transparency, and conservativeness set out in ISO 14064-2 requirements.</p> <ul style="list-style-type: none"> <li>• The Technical Specifications adheres to the principle of relevance by selecting the GHG sources, GHG sinks, GHG reservoirs, data and methodologies appropriate to the needs of the Plan Vivo Program.</li> <li>• The Technical Specifications adheres to the principle of completeness by including all relevant GHG emissions and removals, and including all relevant information to support criteria and procedures.</li> <li>• The Technical Specifications adheres to the principle of consistency by enabling meaningful comparisons in GHG-related information.</li> <li>• The Technical Specifications adheres to the principle of accuracy by reducing bias and uncertainties as far as is practical.</li> <li>• The Technical Specifications adheres to the principle of transparency by disclosing sufficient and appropriate GHG-related information as well as giving sufficient and appropriate justification of procedures and criteria to allow intended users to make decisions with reasonable confidence.</li> </ul>

	<ul style="list-style-type: none"><li>• The Technical Specifications adheres to the principle of conservativeness by using conservative assumptions, values and procedures to ensure that net GHG emission reductions or removals are not overestimated.</li></ul>
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In summary, it is the Lead Auditor's opinion that the Technical Specifications Module – Rarakau Programme IFM-LtPF Methodology: D2.1 v2.0, dated 15 May 2018 as described therein, meets all relevant Plan Vivo Standard requirements and adheres to the principles of relevance, completeness, consistency, accuracy, transparency and conservativeness as required by Section 3 of ISO 14064-2 Standard. Hence, the Lead Auditor recommends the approval of Technical Specifications Module under the Plan Vivo Standard.

**COMPONENT 2**      **PROJECT DESIGN VALIDATION**

Theme	Title of Project
A. PV Requirements	PDD Template
B. Findings	The title of the project is stated as 'Rarakau Rainforest Carbon Project: IFM-LtPF Inception Project for the Rarakau Programme' in Section 2.1 of the Project Design Document (PDD).
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Theme	Executive Summary
A. PV Requirements	PDD Template
B. Findings	Executive Summary is included on page 6 of the PDD
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Theme	Part A: Aims and Objectives
A. PV Requirements	<b>A1 Describe the project's aims and objectives and the problem(s) that the project will address</b>
B. Findings	<p>The aims of the all projects under the Rarakau Grouped Projects Programme are described in Section 2.1.2 as to reduce GHG emissions and enhance GHG removals through a greenhouse gas project involving the protection of indigenous forests within the project boundary, enhance Maori cultural development and to enhance biodiversity conservation as a result of the project.</p> <p>The objectives of all projects under this programme are clearly stated in Section 2.1.3 of the PDD as:</p> <ul style="list-style-type: none"> <li>(a) Avoid GHG emissions from timber harvesting in the Project Area.</li> <li>(b) Enhance GHG removals through management of the Project Area as protected forest.</li> <li>(c) Ensure and document that the project conforms to the requirements of the Plan Vivo Standard and has been validated and verified.</li> <li>(d) Manage the project forests for biodiversity conservation (non-GHG co-benefit).</li> <li>(e) Manage the project forests for Maori cultural enhancement (non-GHG co-benefit).</li> </ul>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Theme	Part B: Site Information
A. PV Requirements	<b>B1 Project location and boundaries</b>
	<ul style="list-style-type: none"> <li>• Maps showing overall project area and boundaries</li> </ul>

B. Findings	Section 2.3 of the PDD describes the project location including maps (Figures 2.3.5a to 2.3.5f) showing overall project area and clear boundaries. The overall project area is a subset of the Rowallan-Alton Maori lands (13,217 ha), which lie directly east of the Hump Ridge and west of the Waiau River in western Southland, New Zealand. The area, most of which remain in Maori ownership, is divided into approximately 150 sections. Eleven of these sections totalling 1,367 ha are managed by the Rowallan Alton Incorporation. The Rowallan Alton Incorporation is the Project Owner of the Rarakau Rainforest Carbon Project. The eligible forest area (EFA) for purposes of the Rarakau Rainforest Carbon Project is 738ha and takes into consideration Eligible Forest Areas excluded from the carbon project due to inaccessibility and areas removed due to land management considerations. Section 2.3.7 also describes reference area land parcels for the Rarakau Rain Forest Carbon Project. The audit team inspected the project site including the 11 land parcels and confirmed that the project location is as described in Section 2.3 of the PDD.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<b>B2 Description of the project area (PV requirement 5.1.1)</b> <ul style="list-style-type: none"> <li>Geophysical description (climate, ecological conditions, soils, topography etc.)</li> <li>Presence of endangered species and habitats</li> <li>Other critical factors affecting project management e.g. roads, infrastructure, climate hazards</li> </ul>
B. Findings	Section 2.3 of the PDD contains detailed geophysical description of the project area including topography, geology and soils, climate and vegetation types and species.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<b>B3 Recent changes in land use and environment conditions</b> <ul style="list-style-type: none"> <li>Describe current land-use practices and their effects</li> </ul>
B. Findings	According to Section 1.1.2 of the PDD and Technical Specifications Module, current baseline activities include sanctioned timber and fuelwood harvesting by means of a sustainable management plan or permit. Baseline activities can also include activities that measurably reduce carbon stocks from other than timber harvesting (e.g. fire used as a management tool). Furthermore, Section 9.1.2 of the PDD describes other productive uses of some of these lands, such as removal of forests to create farmland. This was achieved in small part by some SILNA owners, including the Rowallan Alton Incorporation (RAI), who developed some dairy grazing lands within their estate, whilst retaining and commercially harvesting timber from indigenous forest in the remainder within a Sustainable Forest Management Plan. The effect of these current land-use practices has been described in Section 4.1.3 of the PDD as forest degradation in the form of diminishing carbon stocks through time, particularly for regenerating forest lands within the Project Area and an increase in associated GHG emissions. Such lands can and do become subject to periodic anthropogenic disturbance that not only arrests natural succession but degrades the structure of the forest system through time.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<b>B4 Drivers of degradation</b>

	<ul style="list-style-type: none"> <li>Describe the causes of land &amp; ecosystem degradation and/or deforestation and loss of ecosystem services</li> </ul>
B. Findings	The cause of land and ecosystem degradation and/or deforestation and loss of ecosystem services in the project area is described in Section 1 of the PDD as legally sanctioned harvesting of commercial timber or fuelwood production as well as removal of forests to create farmland (Section 9.1.2).
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Theme	<b>Part C: Community and Livelihoods Information</b>
A. PV Requirements	<p><b>C1 Describe the participating communities/groups (PV requirement 1.1, 7.2.1, 7.2.7, 7.2.8)</b></p> <ul style="list-style-type: none"> <li>Populations</li> <li>Cultural, ethnic and social groups</li> <li>Gender and age equity</li> </ul>
B. Findings	Participating communities are clearly described in Section 9.1.1 of the PDD. Landowners in the Rarakau Rainforest Inception Carbon Project are indigenous peoples of Maori descent from a variety of tribal backgrounds. All of the landowners reside outside the Project Area. The Project Owner community is represented by the committee of the Rowallan Alton Incorporation (RAI), which is also the Project Steering Committee for the Rarakau Rainforest Carbon Project. The Rowallan Alton Incorporation represents the descendants of 99 named members of the following families; Baird, Fluerty, Manihere, Pahau, Pere, Ropata, Saunders, Tikou and Wells, who were granted land under "The South Island Landless Natives Act 1906" (SILNA). Each of these descendants comprises the shareholders of the "Rowallan Alton Incorporation" established in accordance with the Maori Affairs Act with a total land resource of 1,212 hectares. The full list of the original grantees is included in Appendix 7 of the PDD. The Project Steering Committee have a mandate to represent the landowners of the lands contained in the Project Area who, in their aggregate, comprise the descendants of the individual landless Maori who were granted these particular land blocks in 1906 as compensation for lands illegally alienated during the 19 <sup>th</sup> century.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>C2 Describe the Socio-economic context (PV requirement 7.2.2-7.2.5)</b></p> <ul style="list-style-type: none"> <li>Livelihoods activities including access to land, natural resources and energy</li> <li>Cultural and religious context</li> <li>Assets and incomes/poverty status</li> </ul>
B. Findings	According to Section 9.1.1 of the PDD, the dispersed nature of the actual beneficial owners - none of whom live at the project site – makes it impossible to undertake an assessment of the social and economic status of the landowners or describe livelihood activities, cultural and religious context, and poverty status. The membership of the Rowallan Alton Incorporation is not representative of the landowner group but has been mandated to manage this land on behalf of the beneficial owners. Suffice to state that the purpose of this project is to operate a self-sustaining communally-owned farm, a self-sustaining communally-owned indigenous forest area as well as a place to come to for cultural gatherings, education, and conservation activities.

C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>C3 Describe land tenure &amp; ownership of carbon rights</b></p> <ul style="list-style-type: none"> <li>For smallholders and for community land (PV requirement 1.1)</li> <li>For other land included in the project (PV requirement 1.2)</li> </ul>
B. Findings	<p>According to Section 9.1.1 of the PDD, all landowners in the Rarakau Rainforest Carbon Inception Project are indigenous peoples of Maori descent from a variety of tribal backgrounds. There is no land tenure disputes associated with the lands contained within the Project Boundary. The audit team checked with both national government and local government authorities to confirm ownership of the project. Furthermore, the Lead Auditor interviewed some shareholders of the Rowallan Alton Incorporation during the site inspection to confirm the right of use of the land included in the project, and also to confirm authenticity of some documents. On the basis of evidence provided and gathered, the Lead Auditor can confirm that the project owners have the right of use of land included in the inception</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
<b>Theme</b>	<b>Part D: Project Interventions &amp; Activities</b>
A. PV Requirements	<p><b>D1 Summarise the project interventions</b>  Describe the types of intervention that are included in the project (PV requirements 2.1.1-2.1.4) including those for:</p> <ul style="list-style-type: none"> <li>Ecosystem restoration</li> <li>Ecosystem rehabilitation</li> <li>Prevention of ecosystem conversion or degradation (includes REDD+)</li> <li>Improved land management</li> </ul>
B. Findings	<p>As indicated in Sections 1.1.1 – 1.1.5 of the PDD and applicable Technical Specification Module, the project intervention is improved forest management that prevents conversion of forest to agricultural use as well as prevention of ecosystem degradation by stopping gradual or persistent process of loss of capacity of the forest ecosystem (through legally sanctioned commercial timber harvest) to provide ecosystem services.</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<b>D2 Summarise the project activities for each intervention</b>
B. Findings	<p>Section 1.1.3 of the PDD sets out the project activity as required by the applicable Technical Specifications Module (Rarakau Programme Methodology D2.1 v2.0, 15 May 2018): The project is the inception project in a grouped project of the Rarakau Programme. The project activity involves the legal protection (by way of the Memorandum of Encumbrance) of the eligible forests within the project area, whereby this protection is afforded by means of a legal covenant on the title of the land preventing baseline activities (that involve timber and fuelwood harvesting, that result in a reduction in mean carbon stocks and an increase in</p>

	associated GHG emissions) for the duration of the Project. The audit team reviewed and authenticated the Memorandum of Encumbrance (PDD Appendix 16) by cross-checking it with the participating communities.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>D3 Effects of activities on biodiversity and the environment</b></p> <ul style="list-style-type: none"> <li>Describe how project activities will affect biodiversity (PV requirement 2.2 &amp; 2.4)</li> <li>Describe how project activities will affect the environment (soil, water) (PV requirement 2.3)</li> </ul>
B. Findings	The positive effects of projects activities are clearly outlined in Section 9.2 of the PDD. The project is designed to enhance biodiversity and environment in this lowland and coastal indigenous forest which has experienced a high degree of forest degradation and some deforestation in recent decades. According to the PDD, the biodiversity value of this project is implied by means of the kind of forest conservation involved, with the actual biodiversity benefits documented during project development in the form of site descriptions provided in Section 2 of the PDD, and descriptions available in the sustainable forest management plans used in the baseline scenario calculations. Project activities will include biodiversity monitoring through biodiversity surveys and pest control. The project activity will also stop exposure of harvested areas of the forest to soil erosion, sedimentation and will result in improved water quality.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Theme	<b>Part E: Community Participation</b>
A. PV Requirements	<p><b>E1 Participatory project design</b></p> <ul style="list-style-type: none"> <li>Describe the participatory planning process (PV requirement 4.1)</li> <li>Describe the identified target group(s) and their involvement in design (PV requirement 4.4)</li> <li>Describe how any community groups are governed (PV requirement 4.4)</li> <li>Describe how any barriers to participation will be addressed to ensure the involvement of women, socially excluded communities etc. (PV requirement 4.2 &amp; 4.3)</li> </ul>
B. Findings	The project follows the Project Consultation Protocol in the applicable Technical Specifications Module. Sections 9.1.3 and 2.9 of the PDD outlines the participatory planning process, target group(s) and their involvement in project design. Project design involved a sequence of meetings/workshops undertaken by the Project Owner and the Project Developer (including other key/relevant stakeholders). It also involved face-to-face meetings, consultations via telephone conversations and emails between the Project Steering Committee and the Project Developer, together with the circulation of memos, and project documents. Evidence for this is contained in Appendix 19 to the PDD. The Lead Auditor deems this approach enabled free, prior informed consent by Project Owners for all aspects of project development and implementation. It also provided a transparent starting point for addressing social and cultural safeguards associated with project implementation.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A

A. PV Requirements	<p><b>E2 Community-led implementation</b></p> <ul style="list-style-type: none"> <li>Describe the preparation and registration requirements for plan vivos or management plans (PV requirement 4.5, 4.6 &amp; 4.7)</li> <li>Describe the assessment system for plan vivos for technical and other criteria. (PV requirement 4.7)</li> <li>Describe the mapping, recording and storage of plan vivos/management plans (PV requirement 4.8 &amp; 4.9)</li> <li>Provide GIS version of plan vivos (only if applicable) (PV requirement 4.11)</li> </ul>
B. Findings	<p>Sections 2.9 and 9.1.3 of the PDD outlines the involvement of the Project Coordinator (Carbon Partnership Ltd) in assisting the project participants/project owner (Rowallan Alton (Maori) Incorporation with the selection of the baseline scenario, preparation and registration requirements for the project and management plans, as well as developing and aligning project interventions with the project's Technical Specification to ensure consistency with project participants' livelihood and priorities. Evidence of community involvement is provided in Appendices 12 and 19 of the PDD. Geographical coordinates for accurately verifying the location, boundary and size of land parcels in the project area provided in Appendix 18 of the PDD.</p> <p>Section 10.2 of the PDD also states that the project has an on-line data management system to streamline data management, data archiving and accessing by project participants. To achieve this, the project will store all project-specific data and documents electronically as follows:</p> <ul style="list-style-type: none"> <li>Project Developer: Three secure full data archives on data storage hardware</li> <li>Programme Operator: One secure full data archive held on data storage hardware</li> <li>One complete data archive held on data storage hardware owned by the Project Owner</li> <li>One partial data archive held by the Registry</li> </ul> <p>The Standard Operating Procedure (SOP) for data storage and security for the project is presented in the Rarakau Project Standard Operating Procedures D3.P1.17 v1.0 15 May 2012 (Appendix 23).</p> <p>The Lead Auditor reviewed documents relevant to stakeholder consultation, project data management and access. Furthermore, during the site inspection, the Lead Auditor (in 2012) and the site visit auditor (in 2018) interviewed stakeholders representing the landowner community and confirmed the authenticity of the documents provided for project validation. The Lead Auditor also checked and confirmed that free, prior and informed consent was sought from stakeholders and that their views were taken into account in project development and implementation. Hence, the Lead Auditor deems that project planning and implementation was community-led.</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>E3 Community-level project governance</b></p> <ul style="list-style-type: none"> <li>Describe how communities will be involved in decision-making and project management in coordination with the Project Coordinator (PV requirement 4.12)</li> <li>Describe the community-based grievance and grievance recording system for the project (PV requirement 4.13 &amp; 4.14)</li> </ul>
B. Findings	The project uses the Project Consultation Protocol provided in Section 9.1.3 of the Rarakau Programme Methodology D2.1 v2.0, 15 May 2018. Each consultation event will follow the meeting requirements set

	<p>out in Section 9.1.3 as well as in Table 9.1.3 of the Rarakau Programme Methodology D2.1 v2.0, 15 May 2018. The Project Consultation Protocol is required to provide a transparent starting point for addressing social and cultural safeguards associated with project implementation and to enable free, prior informed consent for all aspects of project development and implementation. The Project Consultation Protocol will involve a sequence of meetings/workshops undertaken by the Project Owner and the Project Developer (including other key/relevant stakeholders where appropriate), throughout the project cycle.</p> <p>According to Section 9.1.4 of applicable Technical Specification Module , each project in the Rarakau Programme is required to prepare a Project Dispute Resolution Framework to guide the process of dispute resolution should it occur during the course of the project. Projects are required to incorporate the dispute resolution framework into project design documentation. For this Inception project, dispute resolution procedures are outlined in the Section 6 of the Certificate of Encumbrance (PDD Appendix 16) and in Section 13 of Program Agreement (PDD Appendix 17). The Lead Auditor deems the provisions for community-level project governance adequate for the project.</p>
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C. Conformance	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
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Theme	<b>Part F: Ecosystem Services &amp; Other Project Benefits</b>
A. PV Requirements	<p><b>F1 Carbon benefits</b></p> <ul style="list-style-type: none"> <li>Summarise the carbon benefits per ha for each intervention over the project crediting period</li> </ul>
B. Findings	<p>A step-by-step description of the calculation process that was undertaken to quantify the GHG emission reductions and removals is provided in Sections 7 and 8 of the PDD consistent with the equations and other requirements of the applicable Technical Specifications Module. The Lead Auditor also considered the provisions of ISO 14064-2 Standard, IPCC guidance, VCS approved methodology VM0010, conditions observed during site inspection, and knowledge of other ecosystems and forest projects when judging the appropriateness of GHG emission reduction calculations of this project. The Lead Auditor concludes that all significant emission sources are included in project emission calculations. Calculation equations are presented in the applicable Technical Specifications Module and PDD Appendix 6. The Lead Auditor reviewed the calculations in detail and, with the corrections made in response to the CARs and CLs, calculations are correctly applied as specified by the Technical Specifications Module. Factors used in calculations are stated in the PDD and the Methodology and are derived from New Zealand local measurements and widely-referenced public sources. As per applicable Technical Specifications Module , the total leakage for projects under Rarakau Programme is zero (0).</p> <p>Assumptions and data used by the project participants are listed in the PDD and/or supporting documents, including their references and sources as per applicable Technical Specifications Module. All documentation used by the project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD. All values used in the PDD are considered reasonable in the context of the proposed project activity. The Technical Specifications Module has been applied correctly to calculate project emissions, baseline emissions, leakage, and emission reductions. All estimates of the baseline, project and leakage emissions can be replicated using the data and parameter values provided in the PDD.</p> <p>The Lead Auditor found no potential sources of error or misstatement in the GHG accounting. Based on the calculations and results presented in the PDD and PDD Appendix 6, implementation of the project activity will result in an average <i>ex post</i> estimation of Net Project Benefits (NPB) conservatively calculated to be 2,730 tCO2e per annum and the net emission reduction credits equate to 2 458 tCO2e <i>ex-post</i> annually.</p>

	Table F1 summarises the carbon benefits from project intervention per year.					
Table F1 – Carbon benefits						
	1	2	3	4	1+2-(3+4)	
	Intervention type (technical specification)	Net Emissions Avoided (t CO <sub>2</sub> e/ yr <sup>-1</sup> )	Net Project Removals (Removal enhancement from terminating baseline activities) (t CO <sub>2</sub> e/ yr <sup>-1</sup> )	Expected losses from leakage (t CO <sub>2</sub> e/ yr <sup>-1</sup> )	Deduction of risk buffer (t CO <sub>2</sub> e/ yr <sup>-1</sup> )	Net carbon benefit (t CO <sub>2</sub> e/ yr <sup>-1</sup> )
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A					
A. PV Requirements	<b>F2 Livelihoods benefits</b> <ul style="list-style-type: none"> <li>Describe how the project will affect different livelihoods aspects of the participating groups (use a separate table for each group if necessary) (PV requirement 7.3)</li> <li>Clearly identify any livelihoods aspects that may be negatively affected as well as those that will be positive (PV requirement 7.5)</li> <li>If any possible negative impacts are identified describe mitigation measures to address them (PV requirement 7.5)</li> </ul>					
B. Findings	<p>Section 9.1.6 of the PDD describes how the project will undertake community impact monitoring: The project will undertake community impact monitoring once the project becomes financially sustainable. Community impact monitoring will include low resolution baseline and project status of community impact using selected key performance indicators (KPIs) such as economic, social, cultural, educational, etc., directly and indirectly attributable to the project, with the option to include higher resolution measurement through time. During any period in which the project is not financially self-sustaining, the project will implement a community impact monitoring that will involve a simplified community impact monitoring regime. According to Section 2.1.2 of the PDD, the primary goal of the management and shareholders of the Rowallan-Alton Incorporation is to develop and derive a sustainable revenue stream from their indigenous forest resource, and to use these revenues to enhance their livelihood now without compromising the ability of their future generations to enhance their livelihoods.</p>					
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A					
A. PV Requirements	<b>F3 Ecosystem &amp; biodiversity benefits</b> <ul style="list-style-type: none"> <li>Describe the ecosystem impacts of each project intervention (PV requirement 5.13)</li> </ul>					

B. Findings	<p>According to Section 2.3.4 of the PDD, the original forested cover, much of which is now extensively modified, was predominantly beech (<i>Nothofagus</i> spp.) forest with scattered rimu (<i>Dacrydium cupressinum</i>) (inland blocks) to beech/rimu mixes, to predominantly rimu forest nearer the coast. All of the Rowallan Alton estate has been logged during the 20th century while some parts of the property have been intermittently farmed and there has been some exotic tree planting. The remainder of the land is gradually reverting to native forest after past farming or indigenous timber harvesting activities.</p> <p>As stated in Section 9.2.2 of the PDD, the project protects lowland and coastal indigenous forest adjacent to Fiordland National Park and in an area that has experienced a high degree of forest degradation and some deforestation in recent decades. The biodiversity value of this project is implied by means of the kind of forest conservation involved, with the actual biodiversity benefits documented during project development in the form of site descriptions provided in Section 2 of this PD, and descriptions available in the Sustainable Forest Management Plans used in the Baseline Scenario calculations.</p>														
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A														
Theme	<b>Part H: Risk Management</b>														
A. PV Requirements	<p><b>H1 Identification of risk areas</b></p> <ul style="list-style-type: none"> <li>Identify the risk areas, risk levels and actions to be taken mitigate risks (including the frequency of reassessing risks). Present this in the form of a table. (PV requirements 6.1 &amp; 6.2)</li> </ul>														
B. Findings	<p>The project's non-permanence risk is calculated in Section 8.2 of the PDD. The PP has used the latest version of the VCS AFOLU Non-Permanence Risk Tool to identify and rate the internal, external and natural risks related to the project as required by the applicable Technical Specifications. The following is a summary of key project risks that have been identified and clearly described in the PDD:</p> <table border="1" data-bbox="504 1343 1335 1641" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Overall Risk Rating Calculation</th> </tr> <tr> <th data-bbox="504 1365 1160 1410">Risk Category</th><th data-bbox="1160 1365 1335 1410">Rating</th></tr> </thead> <tbody> <tr> <td data-bbox="504 1410 1160 1455">a) Internal Risk</td><td data-bbox="1160 1410 1335 1455">5</td></tr> <tr> <td data-bbox="504 1455 1160 1500">b) External Risk</td><td data-bbox="1160 1455 1335 1500">5</td></tr> <tr> <td data-bbox="504 1500 1160 1545">c) Natural Risk</td><td data-bbox="1160 1500 1335 1545">10</td></tr> <tr> <td data-bbox="504 1545 1160 1590"><b>Overall Risk Rating (a + b + c)</b></td><td data-bbox="1160 1545 1335 1590"><b>20</b></td></tr> <tr> <td data-bbox="504 1590 1160 1635"><b>Overall Risk Rating (%)</b></td><td data-bbox="1160 1590 1335 1635"><b>0.20</b></td></tr> </tbody> </table>	Overall Risk Rating Calculation		Risk Category	Rating	a) Internal Risk	5	b) External Risk	5	c) Natural Risk	10	<b>Overall Risk Rating (a + b + c)</b>	<b>20</b>	<b>Overall Risk Rating (%)</b>	<b>0.20</b>
Overall Risk Rating Calculation															
Risk Category	Rating														
a) Internal Risk	5														
b) External Risk	5														
c) Natural Risk	10														
<b>Overall Risk Rating (a + b + c)</b>	<b>20</b>														
<b>Overall Risk Rating (%)</b>	<b>0.20</b>														
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A														
A. PV Requirements	<p><b>H2 Risk buffer</b></p> <ul style="list-style-type: none"> <li>State the risk buffer % for each technical specification (minimum is 10%) with justification (PV requirements 6.3 &amp; 6.4)</li> </ul>														

B. Findings	<p>The risk buffer of 20% in the Technical Specifications has been applied which, when multiplied by the net change in the project's carbon stocks to determine the number of buffer credits to offset the non-performance risk as required by the tool. The Lead Auditor has assessed and checked the credibility of all data, assumptions, rationales and documentation used by PPs to calculate and determine the project's overall non-permanence risk rating and the contribution to the buffer pool. Furthermore, the audit team conducted in-depth interviews and discussions with the Rowallan Alton Incorporation management and shareholders to crosscheck authenticity of assertions and assumptions used for internal and external non-permanence risk assessment. Assertions and assumptions were confirmed to be appropriate. Furthermore, assertions and assumptions used for determining natural risks for the current monitoring period were cross-checked and confirmed with other available literature (e.g. ), the New Zealand Ministry of Agriculture and Forestry and the Southland District Council. Additionally, following responses to CARs and CLs raised after the site inspection, the PP put in place SOP for managing fire risk from piles of log and tree stumps in areas adjacent to the eligible forest area boundary.</p> <p>Based on of the above evidence, The Lead Auditor found the approach for non-permanence risk assessment and meets the requirements of the VCS AFOLU Non-Permanence Risk Tool and accepts the project's overall risk rating of 20% determined from PPs' self-assessment as conservative.</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A

Theme	<b>Part I: Project Coordination &amp; Management</b>
A. PV Requirements	<p><b>I1 Project Organisational Structure</b></p> <ul style="list-style-type: none"> <li>• Project coordinator and legal status (PV requirements 3.1 &amp; 3.5)</li> <li>• Describe the organisational structure for the project and the roles of each organisation involved (use diagrams and tables if necessary) (PV requirement 3.2)</li> <li>• Capacity and experience of each organisation involved (PV requirement 3.4)</li> <li>• Stakeholder analysis (PV requirement 3.6)</li> </ul>
B. Findings	<p>Roles and responsibilities of the project participants are detailed in Section 2.9 of the PDD. This section adequately describes roles and responsibilities for the project owner and project developer in relation to project management and project monitoring as required by applicable Methodology and as imbedded in the project agreements between the project owner and the project developer. The Project Coordinator is Carbon Partnership Ltd., who is an established legal entity with the overall responsibility for the project and meeting the requirements of the Plan Vivo Standard for its duration. The Project Coordinator has the legal and administrative capacity to enter into PES agreements with participants and to manage the disbursement of payments for ecosystem services.</p> <p>Under Section 2.9.2 of the PDD, Table 2.9.2 sets out the project roles and responsibilities for each participant and bodies including formalised legal instruments/agreements and contact details, while Section 2.9.3 details the experience and relevant skills of key project personnel.</p> <p>According to Section 2.9.1 of the PDD, Carbon Partnership Ltd has been in operation in forest carbon markets since 2007 and has developed the capacity to support participants in the design of project interventions, select appropriate participants for inclusion in the project, and develop effective participatory relationships including providing required ongoing support to sustain the project. The Lead</p>

	<p>Auditor has checked and can confirm the Project Coordinator's capacity and experience to support this project, given similar projects they have undertaken in the Pacific Islands.</p> <p>Section 2.9.1 of the PDD also states that Carbon Partnership Ltd undertook a stakeholder analysis to identify key communities, organisations, and local and national authorities that have a stake in the project. The following were identified as project stakeholders:</p> <ul style="list-style-type: none"> <li>• Rowallan Alton (Maori) Incorporation (Project Owner)</li> <li>• Carbon Partnership Ltd (Project Coordinator)</li> <li>• Ekos (Programme Operator and carbon credit sales agent)</li> <li>• Southland District Council (local government regulator)</li> <li>• Ministry for Primary Industries (national government regulator)</li> <li>• Te Puni Kokiri / Ministry for Maori Development (funding support)</li> </ul> <p>Project Coordinator has taken steps to inform each of these stakeholders about the project, to seek their views, and secure approval where necessary. The audit team interviewed identified stakeholders (PDD Appendix 19), who confirmed being consulted about the project and that they were fully aware about the Rarakau forest carbon project and that their views were taken into consideration during project design and implementation.</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>I2 Relationships to national organisations</b></p> <ul style="list-style-type: none"> <li>• Describe how the project coordinates and communicates with national organisations (especially government)</li> <li>• Describe (if any) linkages between the project and other government schemes or projects</li> </ul>
B. Findings	<p>Section 2.9.1 of the PDD describes how the Project Coordinator (Carbon Partnership Ltd) undertook a stakeholder analysis to identify key communities, organisations, and local and national authorities that have a stake in the project.</p> <p>These include:</p> <ul style="list-style-type: none"> <li>• Rowallan Alton (Maori) Incorporation (Project Owner)</li> <li>• Carbon Partnership Ltd (Project Coordinator)</li> <li>• Ekos (Programme Operator and carbon credit sales agent)</li> <li>• Southland District Council (local government regulator)</li> <li>• Ministry for Primary Industries (national government regulator)</li> <li>• Te Puni Kokiri / Ministry for Maori Development (funding support)</li> </ul> <p>During the site audit, the audit team interviewed stakeholders representing the New Zealand Ministry of Agriculture and Forestry, Southland District Council and landowner community and confirmed that the Project Developer had taken steps to communicate and inform each of these stakeholders about the project, to seek their views, and secure approval where necessary, as evidenced by review of documentation relevant to stakeholder consultation (PDD Appendix 19).</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>I3 Legal compliance</b></p>

	<ul style="list-style-type: none"> <li>Describe how the project will meet any legal requirements of the country. Include any written approval from government for the project if required. (PV requirements 3.7 &amp; 3.8)</li> <li>Outline the policies of the project coordinator to ensure equal opportunities for employment and any other legal compliance (PV requirements 3.13-3.15)</li> </ul>
B. Findings	Relevant laws and regulations relating to the project have been identified in Section 2.10 of the PDD as Forest Amendment Act (1993) and Resource Management Act (1991). Since there is no logging in the project scenario, the Forests Amendment and the Resource Management Acts do not apply. There is no environmental impact assessment requirement for protecting indigenous forest in New Zealand and so the Resource Management Act also does not apply. Section 2.18 of the PDD provides the project's equal opportunity policy in which project participants, including women and members of marginalised groups, are to be given an equal opportunity to fill employment positions in the project where job requirements are met or for roles where they can be cost-effectively trained. The PDD also states that the project does not employ any staff. The audit team checked with the Ministry of Agriculture and Forestry and the Southland District Council regarding the compliance or non-compliance of Rarakau Programme with the applicable national and local laws, statutes and other regulatory frameworks such as Forest Act 1949 and the Forests Amendment Act 1993. The Lead Auditor can confirm that Rarakau programme complies with laws, status and other regulatory frameworks of New Zealand.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>I4 Project management</b></p> <ul style="list-style-type: none"> <li>Give a timeline (approximate) for project establishment, piloting, scaling up and monitoring</li> <li>Describe the project record keeping system (PV requirements 3.11 &amp; 3.12)</li> <li>Describe who will be in charge of business development, sales and managing transactions on the Markit environmental registry (Markit)</li> </ul>
B. Findings	<p>The project timeline elements for the project are clearly outlined in Section 2.13 of the PDD. The Project period is 50 years from 1 January 2009 till 31 December 2058 with an indefinite option to roll over for subsequent project periods, crediting period of 5 yearly, annual project management periods starting 1 January 2009 and a project termination scheduled for 31 December 2058 (with an indefinite option to roll over for subsequent project periods. As required by PV requirements 3.11 and 3.12, Section 10 of the PDD applies data storage and retrieval system prescribed in Section 10.1 of the Rarakau Programme Methodology D2.1 v2.0, 15 May 2018 and will cover the following platforms and data content elements:</p> <ul style="list-style-type: none"> <li>All project documents listed in Section 12.1 of PDD</li> <li>Project Description Information Platform</li> <li>GHG Information Platform</li> <li>Ancillary Impacts Information Platform</li> <li>Project Administration Information Platform</li> <li>Project Management Information Platform</li> <li>Project Monitoring Information Platform</li> </ul> <p>Section 10.2 of the PDD specifies that all project-specific data and documents will be stored electronically in multiple places following the Standard Operating Procedure (SOP) for data storage and security as presented in the Rarakau Project Standard Operating Procedures D3.P1.17 v1.0 15 May 2012 (PDD Appendix 23). The Lead Auditor deems the proposed project record keeping/data management and archiving system adequate. According to Table 2.9.2 under Section 2.9.2 of the PDD, the Project</p>

	Coordinator, Carbon Partnership Ltd and Programme Operator, Ekos, are the carbon credit sales, marketing agents, and managers of transactions on the Markit Environmental Registry, subject to Project Agreement (PDD Appendix 17) with the project owner, Rowallan Alton Incorporation.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>I5 Project financial management</b></p> <ul style="list-style-type: none"> <li>Describe the mechanisms for disbursement of PES funds (PV requirement 3.9)</li> <li>Show the project budget and financial plan (PV requirement 3.10)</li> <li>Describe whether the project is seeking, or has obtained, co-financing from partner organisations for the operational phase of the project, e.g. for expansion, ongoing technical work, tree planting activities, etc.</li> </ul>
B. Findings	The mechanism and procedure for the receipt, holding and disbursement of carbon credit revenues has been described as follows: Ekos is the Programme Operator and sales agent for this project. Ekos disburses funds on a quarterly basis to the Project Owner and Project Coordinator. Ekos manages the carbon market registry account for this project and retires carbon credits when they are sold by Ekos directly to carbon offset consumers, and transferred to registry accounts when they are sold to carbon offset resellers. The proportion of funds allocated to the Project Owner and Project Coordinator is determined in the Project Budget and Pricing spreadsheet (Appendix 6) and the Ekos sales register. Carbon credit funds are managed through an account established for this sole purpose, separate to the project coordinator's general operational finances. As indicated in Section 2.17 of the PDD, the project budget and financial plan have been developed and presented in the Project Budget and Pricing spreadsheet of PDD Appendix 6.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>I6 Marketing</b></p> <ul style="list-style-type: none"> <li>Describe how Plan Vivo certificates will be marketed by the project coordinator</li> <li>Describe the process for preparing a marketing plan for the project</li> </ul>
B. Findings	According to Section 2.16 and Table 2.9.2 PDD, the Programme Operator, Ekos, and Project Coordinator act as joint marketers and sales agent for carbon credits issued to the project (as per purchase agreements with carbon buyers) and Tasman Environmental as carbon credit sales intermediary based on the brokerage agreement with Project Developer and Project Owner. Ekos monetises Rarakau carbon credits through its retail and wholesale carbon trading platforms. The retail platform comprises an e-commerce website targeting businesses and individuals seeking to offset their GHG emissions for carbon-related claims while the wholesale uses the same marketing presence to enable Ekos projects to be discoverable by resellers searching for New Zealand indigenous forest carbon credits.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>I7 Technical Support</b></p> <ul style="list-style-type: none"> <li>Describe how continued technical support and capacity development will be provided for project participants</li> </ul>

B. Findings	The Project Coordination strategy is for Carbon Partnership to play the leading role in project coordination activities and to share responsibilities as much as possible with the Project Owner. The goal is to reduce the effort and responsibility of Carbon Partnership and correspondingly increase the effort and responsibility of the Project Owner through time as a result of capacity building activity.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
<b>Theme</b>	<b>Part J: Benefit sharing</b>
A. PV Requirements	<p><b>J1 PES agreements</b></p> <ul style="list-style-type: none"> <li>Describe the procedures for entering into PES agreements (PV requirements 8.1 &amp; 8.2)</li> <li>Describe how the project coordinator will ensure that obligations are met (PV requirement 8.5 &amp; 8.7)</li> <li>Identify any risks and associated mitigation measures regarding PES agreements (PV requirements 8.3, 8.4 &amp; 8.6)</li> </ul>
B. Findings	<p>The transaction of ecosystem services between the project coordinator and participants has been formalized in a written PES Agreement (PDD Appendix 17), where project participants have agreed to follow their plan vivo in return for staged, performance-related payments or benefits. The issues covered by the PES Agreement include:</p> <ul style="list-style-type: none"> <li>Roles and responsibilities</li> <li>Project design and development</li> <li>Project co-management</li> <li>Project co-monitoring</li> <li>Project credit sales and marketing</li> <li>Project insurance facilitation</li> <li>Guardianship of project's environmental integrity</li> <li>Permanence/Reversals/Memorandum of Encumbrance</li> <li>Carbon credit registry for pooled buffer account and ownership of buffer credits</li> </ul> <p>The PES Agreement also includes agreed upon mechanism to resolve disputes or arbitrate any conflict arising from the design and implementation of the project, following established community practices or legal rules in New Zealand. The project has in place a Dispute Resolution Framework prepared in collaboration between the Project Coordinator (Carbon Partnership Ltd) and Project Owner (Rowallan Alton Incorporation). The audit team cross-checked and established the authenticity of PES Agreement and the Dispute Resolution Framework documentation with all project participants. The Lead Auditor deems the provisions for dispute resolution procedures are outlined in the Section 6 of the Certificate of Encumbrance (PDD Appendix 16) and in Section 13 of Program Agreement (PDD Appendix 17) follow community practices and legal rules in New Zealand and are adequate for the project.</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>J2 Payments &amp; Benefit Sharing</b></p> <ul style="list-style-type: none"> <li>Describe how payments will be disbursed to participants and how they are linked to performance.</li> <li>Describe the conditions under which payments will be withheld</li> </ul>

	<ul style="list-style-type: none"> <li>Describe the measures that will be taken to ensure equitable and transparent benefit sharing by the project (PV requirements 8.8-8.13)</li> </ul>
B. Findings	<p>In Section 2.16 of The PDD, the mechanism and procedure for the receipt, holding and disbursement of carbon credit revenues have been determined by the Project Owner in consultation with Project Coordinator. as follows: Ekos is the Programme Operator and monetises Rarakau carbon credits. Ekos disburses funds on a quarterly basis to the Project Owner and Project Coordinator. Ekos manages the carbon market registry account for this project and retires carbon credits when they are sold by Ekos directly to carbon offset consumers, and transferred to registry accounts when they are sold to carbon offset resellers.</p> <p>The proportion of funds allocated to the Project Owner and Project Coordinator is determined in the Project Budget and Pricing spreadsheet (PDD Appendix 6; MR Appendix 4) and the Ekos sales register. Carbon credit funds are managed through an account established for this sole purpose, separate to the project coordinator's general operational finances. According to Rarakau Project Budget spreadsheet in PDD Appendix 6, aims to deliver 62 % of the proceeds from the sale of Plan Vivo Certificates to Rowallan Alton Incorporation (Project Owner) and 38% to the Project Coordinator. This benefit sharing ratio complies with the Plan Vivo guideline of 60:40 ratios for revenue allocation between landowners and project coordinators, respectively.</p> <p>The audit team cross-checked with project participants and confirmed that carbon revenue use and reinvestment is determined and managed by the Rowallan Alton Incorporation.</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A

Theme	Part K: Monitoring
A. PV Requirements	<p><b>K1 Ecosystem services benefits</b></p> <ul style="list-style-type: none"> <li>Describe the monitoring plan for each project intervention. (PV requirement 5.9)</li> <li>Describe how communities will be involved in monitoring activities</li> <li>Describe the indicators that will be monitored; the frequency (annually, after every 5 years etc.); who will carry out the monitoring and how the results will be used and shared with participants (PV requirement 5.9)</li> </ul>
B. Findings	<p>Section 11 of the PDD outlines how the project will be monitored. As part of the implementation plan, detailed project management and project monitoring plans, as well as the Standard Operating Procedure for project monitoring (Appendix 23) are included in Section 11 of the PDD in line with the Technical Specifications Module. The Lead Auditor confirmed that the data and parameters available at validation and those to be monitored, including the monitoring methods, in the PDD are appropriate and as required by the applicable Technical Specifications Module. Project monitoring roles and responsibilities of the project participants are detailed in Table 11.4.3 of the PDD. This section adequately describes roles and responsibilities for the project owner and project developer in relation to project management and project monitoring as required by applicable Technical Specifications Module and as imbedded in the project agreements between the project owner and the project developer.</p>
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A

A. PV Requirements	<p><b>K2 Socio-economic impacts</b></p> <ul style="list-style-type: none"> <li>Describe the socio-economic monitoring plan (PV requirement 7.3)</li> <li>Identify the selected socio-economic monitoring indicators and describe how they will be regularly monitored in a participatory way focusing on target groups (PV requirement 7.4)</li> </ul>
B. Findings	According to Section 9.1.6 of the PDD, the project will undertake community impact monitoring once the project becomes financially sustainable. Community impact monitoring will include low resolution baseline and project status of community impact KPIs (such as economic benefits directly and indirectly attributable to the project), with the option to include higher resolution measurement though time. During any period in which the project is not financially self-sustaining, community impact monitoring could involve a simplified community impact monitoring regime.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>K3 Environmental and biodiversity impacts</b></p> <ul style="list-style-type: none"> <li>Describe environmental and biodiversity indicators that will be monitored</li> <li>Describe how each indicator will be assessed; the frequency and who will carry out the monitoring</li> </ul>
B. Findings	Section 9.2.1 of the PDD states that the project will undertake environmental and biodiversity impact monitoring once the project has become financially self-sustaining. Existing orders for PVCs (~3,000 tCO2e) and existing general demand in the Ekos retail carbon business indicate that project financial self-sustainability will begin as soon as this issuance has been executed. This project produces a relatively small volume of carbon credits, yielding insufficient carbon credit cash flows to finance detailed biodiversity surveys. For this reason, the project plans to undertake a simplified biodiversity monitoring concurrently with project carbon monitoring. This will involve recording biodiversity encountered during project carbon monitoring and noting any conservation management issues arising (e.g. pest browsing). The project also plans to access low-cost or grant funded biodiversity monitoring services (e.g. through attempts to partner with tertiary education providers).
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
A. PV Requirements	<p><b>K4 Other monitoring</b></p> <ul style="list-style-type: none"> <li>Describe any other monitoring and indicators including (i) indicators of drivers of degradation (ii) institutional indicators (iii) governance indicators</li> </ul>
B. Findings	The project includes the undertaking of the management and monitoring of offsite stakeholder impacts (Section 9.1.5 of the PDD). To achieve this, the project will use the methodological guidance of the Plan Vivo Standard to assess the offsite stakeholder impacts. Results from this assessment will be incorporated into Project Management Reports and Project Monitoring Reports.
C. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A

Theme	PROJECT DESIGN VALIDATION CONCLUSION
Assessment Conclusion	<p>The objective of project validation is to confirm that the project design, as documented, is sound and reasonable and meet the identified applicable criteria. The validation scope covers an independent and objective review of the project document (PDD). The validation was performed on the basis of the Plan Vivo Standard of Plan Vivo Standard requirements, Technical Specification Module, PDD, ISO 14064-2 Standard requirements for the GHG project, as well as criteria from sources such as IPCC, Verified Carbon Standard and New Zealand carbon monitoring system given to provide good practice guidance for GHG accounting and for consistent project operations, monitoring and reporting. The review of the project design documentation and the subsequent follow-up interviews have provided the Lead Auditor with sufficient evidence to determine the fulfilment of stated criteria. The project design correctly applies the Technical Specification Module.</p> <p>The project activity involves the legal protection of the eligible forests within the project area, whereby this protection is afforded by means of a legal covenant on the title of the land preventing baseline activities (legally sanctioned commercial timber and fuelwood harvesting) that result in a reduction in mean carbon stocks and an increase in associated GHG emissions for the duration of the Project.</p> <p>If implemented as designed, the project will result in reductions of CO<sub>2</sub> emissions which are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. The total Gross Carbon Benefits (GCB) from the project are estimated to be on the average 3,072 tCO<sub>2</sub>e per year over the selected 50 year renewable crediting period, and the net emission reduction credits equate 2 458 tCO<sub>2</sub>e <i>ex-post</i> VERs annually. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achievable on condition that the underlying assumptions do not change.</p> <p>The monitoring plan provides for the monitoring of the project's emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design and it is the Lead Auditor's opinion that the project participants are able to implement the monitoring plan, given their (participants') technical as well as project management skills and experience gained from similar projects undertaken in Pacific Islands.</p> <p>In summary, it is the Lead Auditor's opinion that the project activity "Rarakau Forest Carbon Project: IFMLtPF Inception Project for the Rarakau Programme", as described in the PDD, version 2.0 2018, meets all relevant Plan Vivo Standard of Plan Vivo Standard requirements, Technical Specification Module, ISO 14064-2 Standard requirements for the GHG project, as well as criteria from sources such as IPCC, Verified Carbon Standard and New Zealand carbon monitoring system given to provide good practice guidance for GHG accounting and for consistent project operations, monitoring and reporting. Hence, the Lead Auditor recommends the registration of the project as a Plan Vivo GHG project activity.</p>

## COMPONENT THREE

## PROJECT IMPLEMENTATION VERIFICATION

## 5 PROJECT IMPLEMENTATION VERIFICATION FINDINGS

**Basis for the verification:**

- Rarakau Monitoring Report (MR)
- PDD, and
- Technical Specifications Module applied by the project

**Monitoring Period:**

01 January – 30 September 2018

**Site Inspection Dates:**

The site inspection took place on 19 September 2018 and from 11 – 12 October, 2018. The personnel and stakeholders who were interviewed or who assisted the verification team are listed in the verification site visit report and in the References of this report.

Theme	<b>5.1 Project Implementation Status</b>
A. Findings	<p>During the site visit, the following field tasks were completed:</p> <ul style="list-style-type: none"> <li>• the data and information presented in the monitoring report was assessed by reviewing the additional documentation and checking with the New Zealand Ministry of Agriculture and Forestry in Christchurch and the Southland District Council in Invercargill</li> <li>• interviews were held with personnel on-site and in Christchurch</li> <li>• observation of established monitoring and reporting practices was conducted by assessing the implementation of leakage and risk mitigation activities as well as the stratification of the project area through inspection of eligible forest area boundaries with guidance from the forest area map imagery;</li> <li>• Observation of on-going land use activities in the non-eligible parts of the project area and the reference areas.</li> </ul> <p>This enabled the audit team to assess the accuracy and completeness of the reported monitoring results and to verify the correct application of the monitoring plan in the PDD and the Technical Specifications Module and the determination of the reductions in emissions. The audit team was able to verify that the project has been implemented in accordance with the project description contained in the PDD, and that the monitoring has been carried out in accordance with the monitoring plan in the PDD for the project. All of the necessary parameters have been properly monitored to ensure accuracy of the emission reduction calculations.</p>
B. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Theme	<b>5.1.1 Deviation from Simplified Project Monitoring Report Methodology</b>
A. Findings	The Monitoring Report comprises a Simplified Project Monitoring Report following the Simplified Project Monitoring Plan as required in the PDD and the Methodology for this inception project of the Rarakau Programme. According to Section 2.2 of the Rarakau Monitoring Report, the only deviation from the

	Monitoring Plan is the monitoring period is longer than the 5-yearly monitoring period specified in the Monitoring Plan. This longer period arose because there were insufficient commercial project cash flows to cover the costs of a verification event inside the first 5 years following first verification. The audit team deems this deviation to have no material impact on the accuracy of GHG emission reduction or removal calculations.																				
B. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A																				
<b>Theme</b>	<b>5.1.2 Assessment of All the Monitored Parameters</b>																				
A. Findings	<p>The Table below provides the assessment of all monitored parameters</p> <table border="1"> <thead> <tr> <th><b>Data / Parameter:</b></th><th><b>Assessment</b></th></tr> </thead> <tbody> <tr> <td>Eligible Forest Area (ha)</td><td> <p>The audit team reviewed information on the parameter reported in the PDD and the MR. By using the satellite imagery supplied by the project, the audit team inspected the eligible and ineligible forest areas and checked and compared forest composition classifications/stratification and mapped cover types for general correspondence and found this to be reasonable. The reasonableness of reported value of 738 ha was checked with, and confirmed by, the Southland District Council.</p> <p>The audit team inspected, assessed and confirmed forest succession occurring within the vegetation cover types in the logged forest area components of the eligible forest area.</p> <p>The audit team inspected and assessed the eligible forest area for indications of recent reversals through logging or firewood harvesting above the <i>de minimis</i> threshold stated in the PDD. The audit observed no recent forest harvesting in the eligible forest area above <i>de minimis</i> threshold, no changes to project boundaries, no avoidable reversals and no unavoidable reversals.</p> </td></tr> <tr> <td>Harvest Rate (m<sup>3</sup> ha<sup>-1</sup> yr<sup>-1</sup>)</td><td>No revision for this monitoring period. Remains at 212 m<sup>3</sup> ha<sup>-1</sup> yr<sup>-1</sup></td></tr> <tr> <td>Total Activity Shifting Leakage</td><td>As per PDD, the assessment for this parameter for current monitoring period is zero</td></tr> <tr> <td>Overall Risk rating</td><td> <p>During the site inspection, the audit team interviewed Rowallan Alton Incorporation management and shareholders to cross-check authenticity of assertions and assumptions used for the following risk ratings from internal, external and natural non-permanence risk assessment.</p> <table> <thead> <tr> <th><b>Risk Category</b></th><th><b>Rating</b></th></tr> </thead> <tbody> <tr> <td>a) Internal Risk</td><td>5</td></tr> <tr> <td>b) External Risk</td><td>5</td></tr> <tr> <td>c) Natural Risk</td><td>10</td></tr> <tr> <td><b>Overall Risk Rating (a + b + c)</b></td><td><b>20 (20%)</b></td></tr> </tbody> </table> </td></tr> </tbody> </table>	<b>Data / Parameter:</b>	<b>Assessment</b>	Eligible Forest Area (ha)	<p>The audit team reviewed information on the parameter reported in the PDD and the MR. By using the satellite imagery supplied by the project, the audit team inspected the eligible and ineligible forest areas and checked and compared forest composition classifications/stratification and mapped cover types for general correspondence and found this to be reasonable. The reasonableness of reported value of 738 ha was checked with, and confirmed by, the Southland District Council.</p> <p>The audit team inspected, assessed and confirmed forest succession occurring within the vegetation cover types in the logged forest area components of the eligible forest area.</p> <p>The audit team inspected and assessed the eligible forest area for indications of recent reversals through logging or firewood harvesting above the <i>de minimis</i> threshold stated in the PDD. The audit observed no recent forest harvesting in the eligible forest area above <i>de minimis</i> threshold, no changes to project boundaries, no avoidable reversals and no unavoidable reversals.</p>	Harvest Rate (m <sup>3</sup> ha <sup>-1</sup> yr <sup>-1</sup> )	No revision for this monitoring period. Remains at 212 m <sup>3</sup> ha <sup>-1</sup> yr <sup>-1</sup>	Total Activity Shifting Leakage	As per PDD, the assessment for this parameter for current monitoring period is zero	Overall Risk rating	<p>During the site inspection, the audit team interviewed Rowallan Alton Incorporation management and shareholders to cross-check authenticity of assertions and assumptions used for the following risk ratings from internal, external and natural non-permanence risk assessment.</p> <table> <thead> <tr> <th><b>Risk Category</b></th><th><b>Rating</b></th></tr> </thead> <tbody> <tr> <td>a) Internal Risk</td><td>5</td></tr> <tr> <td>b) External Risk</td><td>5</td></tr> <tr> <td>c) Natural Risk</td><td>10</td></tr> <tr> <td><b>Overall Risk Rating (a + b + c)</b></td><td><b>20 (20%)</b></td></tr> </tbody> </table>	<b>Risk Category</b>	<b>Rating</b>	a) Internal Risk	5	b) External Risk	5	c) Natural Risk	10	<b>Overall Risk Rating (a + b + c)</b>	<b>20 (20%)</b>
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		<p>Assertions and assumptions were confirmed to be appropriate. Furthermore, assertions and assumptions used for determining natural risks for the current monitoring period were cross-checked and confirmed with other available literature (e.g. ), the New Zealand Ministry of Primary Industries (formerly Ministry of Agriculture and Forestry) and Southland District Council.</p> <p>The audit team deems the overall non-permanence risk rating of 20% to be Reasonable and conservative.</p>
B. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	
<b>Theme</b>		<b>5.2 Accuracy of GHG Emission Reduction or Removal Calculations</b>
A. Findings	<p>The project proponent has provided the verification team with spreadsheet and information necessary for verification of the emission reductions in Monitoring Report appendices. The calculations for baseline emissions, project activity emissions/removals and leakage provided in the spreadsheet of Appendix 6 as well as calculations in the monitoring report for the monitoring period under review were checked by the audit team and found to be correct and in accordance with the formulae and methods described in the monitoring plan and the applied Technical Specifications Module, as detailed below:</p> <ul style="list-style-type: none"> <li>• Calculations of net emission reductions were reviewed in detail and were found to correctly apply appropriate emission factors, IPCC default values and other reference values.</li> <li>• The sustainable harvest rates from SFM plans in the Rowallan Alton Maori lands, as well as the default mean sequestration rates used to estimate carbon sequestered in harvest patches in indigenous forest types of the project area were cross-checked and confirmed by the New Zealand Ministry of Primary Industries.</li> <li>• The project area, forest boundary and vegetation cover types were correctly mapped and quantified using aerial imagery from a Landsat image from 1990 with a resolution of 30m.</li> <li>• By walking in the eligible forest area and along the eligible forest boundaries, The audit team was able to check and confirm the baseline stratification of the project area into forest composition and forest management strata as required by the applied Technical Specifications Module and the PDD</li> <li>• Audit team visited the reference areas of the project and can confirm that the reference area encompasses lands that are as similar as possible to project lands.</li> <li>• Audit team checked and confirmed information and assumptions used in estimating non-permanence risk rating and deemed the risk buffer proportion used by the project to be appropriate. As one of the measures to protect the eligible forest area and to mitigate project non-permanence risk, the Memorandum of Encumbrance and the Programme Agreement between the project owner and the programme operator were sighted and validated by cross-checking with officials at New Zealand Ministry of Primary Industries.</li> <li>• Audit team found no significant project emissions to be included in the calculations and all assumptions, emission factors and default values that were applied in the calculations were appropriately justified.</li> </ul>	
B. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	

Theme	<b>5.3 Quality of Evidence to Determine GHG Emission Reductions/Removals</b>
A. Findings	<p>The Rarakau Forest Carbon Project baseline scenario data is based on the annual allowable timber harvest rate for each land parcel as documented in the Sustainable Forest Management Plan and timber harvesting assessment. The project uses other national factors, e.g., average wood density, ratio of below-ground to above-ground biomass that is also used under the New Zealand Land Use Carbon Accounting System (LUCAS), and other external information underlying the GHG data from IPCC and published sources.</p> <p>Multiple strategies were also used to obtain data quality and accuracy of numbers. Contractors with specialized expertise were engaged when the project participants did not have necessary expertise. The audit team checked all references and confirmed with the New Zealand Ministry of Primary Industries about the existence of documented SFM plans for the project area and the applicability and reliability of default mean sequestration rates used to estimate carbon sequestered in harvest patches of the project area.</p>
B. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Theme	<b>5.4 Management and Operational System</b>
A. Findings	<p>During the site inspection, the audit team checked and confirmed existence of a management system for monitoring and reporting. The project has suitable organisational structure with associated responsibilities and required competencies. The project's operational system includes documented standard operating procedures for, inter alia, internal audits and management review, non-conformance handling and dispute resolution procedures. The quality assurance and quality control system in terms of data and information management and reporting are appropriate.</p>
B. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Theme	<b>5.5 Project Benefit Monitoring Results 2012-2018</b>
A. Findings	<p>The benefits flowing from project implementation over the monitoring period 2012-2018 have been reported in the MR, Community Impact Monitoring Report (MR Appendix 4) and Biodiversity Impact Monitoring Report (MR Appendix 5) and are presented under the respective themes below.</p>
Theme	<b>5.5.1 Economic Benefits</b>
A. Findings	<p>Total wholesale carbon revenue of US\$80,980 was raised from monetisation of carbon credits from the first verification of in 2013 of 2009-2011 vintage under ISO 14064-2 Standard requirements. These funds were shared as presented in the Table below.</p>

	<table border="1"> <tr> <td>Carbon Revenue*</td><td>Landowner</td><td>Project Coordinator/Programme Operator</td></tr> <tr> <td>US\$80,980</td><td>US\$48,534</td><td>US\$32,356</td></tr> <tr> <td></td><td>60%</td><td>40%</td></tr> </table>	Carbon Revenue*	Landowner	Project Coordinator/Programme Operator	US\$80,980	US\$48,534	US\$32,356		60%	40%
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<p>This represents a revenue sharing ratio of 63:37 and well above the minimum ratio 60:40 required by Plan Vivo Standard. These funds have been used to support operations by helping fund improved pasture development and maintenance including weed and pest control. Part of the revenue is earmarked to fund conservation management of the protected forest, principally pest control from 2019 calendar year.</p> <p>With the help of Programme Operator (Ekos) and Project Coordinator (Carbon Partnership Ltd), the project received a grant from the Nature Heritage Fund of \$1.1m in 2016. The purpose of this grant was to support the forest conservation effort with a particular focus on fencing all of the farmland off from the forest to prevent stock from entering and damaging the protected forest area. As a result, the project has since completed the construction of 19.6km of new fencing. The grant also contributed to 3.5km of fencing upgrade of existing fencing. This grant was made possible because of the Rarakau Rainforest Carbon Project and comprises the most significant economic benefit to Rarakau as a result of this forest carbon project.</p>										
B. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A									
<b>Theme</b>										
<b>5.5.2 Social Benefits</b>										
A. Findings	<p>Social benefits arising from the project remain limited to improvements in the economic situation for Rowallan Alton Incorporation, due to the increased revenue derived from a combination of carbon credit sales and grant funding that has leveraged off the carbon project. This helps to fund management committee governance and management activities as well as interactions with the beneficial owners through annual AGM (with typically around 35 representatives in attendance) and the forthcoming development of a website dedicated to Rarakau project. This website is designed to provide a better link between the RAI Management Committee and project owner population of 1,357 people.</p>									
B. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A									
<b>Theme</b>										
<b>5.5.3 Cultural Benefits</b>										
A. Findings	<p>The sense of cultural connection project participants have with the protected forest continues to grow, as illustrated by a recent promotional video of the project produced in partnership with Qantas:</p> <p><a href="https://vimeo.com/goodchatty/review/269774111/6dc6362f06">https://vimeo.com/goodchatty/review/269774111/6dc6362f06</a></p>									

B. Conformance	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
<b>Theme</b>	<b>5.5.4 Wider Community</b>		
A. Findings	The recreational use of Rarakau by the wider public continues, although this also comes with its management challenges. This is mainly because many who visit project area and enjoy its forest areas for hunting and other recreation often do not realise that they are actually on private land and that its management is privately funded (not funded by the government). The project plans to erect better signage and interpretation to further enable the public education, which is essential in building strong connections with local community users of our forest area.		
B. Conformance	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
<b>Theme</b>	<b>5.5.5 Educational Benefits</b>		
A. Findings	The Project Coordinator has undertaken a series of training workshops with the Project Owners in the second monitoring period as part of Project Owner consultations associated with annual decisions relating to project management. Furthermore, the Project Coordinator has involved members of the Project Owner management committee in project site inspections, other monitoring activities and reporting. This is to gradually enable the Project Owner to take greater control over the project operations. Increased interaction between Project Coordinator and Project Owner (through consultations and workshops) over the years has resulted in improved understanding of carbon markets and climate change, better advocacy for what the project is doing at Rarakau and stronger community connections, particularly among potential partners in future projects including tourism development at the project.		
B. Conformance	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
<b>Theme</b>	<b>5.5.6 Biodiversity Benefits</b>		
A. Findings	Biodiversity monitoring has been undertaken in conjunction with annual site inspections as part of the project monitoring plan. Biodiversity monitoring has involved survey of larger wildlife survey (birds and mammals, but excluding reptiles, invertebrates and stream fauna) and vascular plant species. Bird surveys have involved walking through the forest and forest margins and spotting and listening to birds. Vegetation surveys (which only introductory for now) have involved walking through the forest and forest margins and noting plant species present. Summary of native biodiversity recorded at the project site from annual surveys between 2012 and 2018 inclusive are included in the MR Appendix 5.		
B. Conformance	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A

Theme	PROJECT IMPLEMENTATION VERIFICATION CONCLUSION																																																																																	
Verification Conclusion	<p>The objective of project verification is to develop evidence to confirm that the project implementation has been carried out according to the Rarakau Forest Carbon project PDD and to certify that the reported greenhouse gas assertion were calculated correctly on the basis of the applicable Technical Specification Module. The project participants are responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project. It is the Lead Auditor's responsibility to express an independent verification statement on the reported GHG emission reductions from the project.</p> <p>The verification included i) checking whether the project has been implemented in accordance with the project description; ii) checking whether the provisions of the monitoring plan were consistently and appropriately applied; iii) the collection of evidence supporting the reported data and iv) the assessment of the non-permanence risk analysis.</p> <p>The Lead Auditor's verification approach draws on an understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. The Lead Auditor planned and performed the verification by obtaining evidence and other information and explanations that the Lead Auditor considers necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.</p> <p>It is the Lead Auditor's opinion that the GHG emissions reductions of the "Rarakau Forest Carbon Project: IFM-LtPF Inception Project for the Rarakau Programme" for the period are fairly stated in the monitoring report dated 09 October 2018. The GHG emission reductions were calculated correctly on the basis of the applicable Technical Specifications Module and the monitoring plan contained in the PDD.</p> <p>The Lead Auditor is able to verify that the net emission reductions from the "Rarakau Forest Carbon Project: IFM-LtPF Inception Project for the Rarakau Programme" during the project monitoring period (1 January 2012 – 30 September 2018 (6.75 years)) amount to 16,589 tonnes of CO<sub>2</sub> equivalent, detailed in the Table (reproduced from MR) below.</p> <table border="1"> <thead> <tr> <th>Area ID</th><th>Total area (ha)</th><th>Technical Specification</th><th>Saleable ER's (tCO<sub>2</sub>) available from previous periods*</th><th>Total ER's (tCO<sub>2</sub>) achieved this period**</th><th>% Buffer</th><th>No. of PVCs allocated to buffer from ER's achieved this period</th><th>Saleable ER's (tCO<sub>2</sub>) from this period</th><th>Issuance request (PVCs)</th></tr> </thead> <tbody> <tr> <td>Eligible area 2012</td><td>738 ha</td><td>Rarakau IFM-LtPF</td><td>0</td><td>3,072</td><td>20</td><td>614</td><td>2,458</td><td>2,458</td></tr> <tr> <td>Eligible area 2013</td><td>738 ha</td><td>Rarakau IFM-LtPF</td><td>0</td><td>3,072</td><td>20</td><td>614</td><td>2,458</td><td>2,458</td></tr> <tr> <td>Eligible area 2014</td><td>738 ha</td><td>Rarakau IFM-LtPF</td><td>0</td><td>3,072</td><td>20</td><td>614</td><td>2,458</td><td>2,458</td></tr> <tr> <td>Eligible area 2015</td><td>738 ha</td><td>Rarakau IFM-LtPF</td><td>0</td><td>3,072</td><td>20</td><td>614</td><td>2,458</td><td>2,458</td></tr> <tr> <td>Eligible area 2016</td><td>738 ha</td><td>Rarakau IFM-LtPF</td><td>0</td><td>3,072</td><td>20</td><td>614</td><td>2,458</td><td>2,458</td></tr> <tr> <td>Eligible area 2017</td><td>738 ha</td><td>Rarakau IFM-LtPF</td><td>0</td><td>3,072</td><td>20</td><td>614</td><td>2,458</td><td>2,458</td></tr> <tr> <td>Eligible area 2018***</td><td>738 ha</td><td>Rarakau IFM-LtPF</td><td>0</td><td>2,304</td><td>20</td><td>461</td><td>1,841</td><td>1,841</td></tr> <tr> <td><b>TOTAL</b></td><td></td><td></td><td><b>0</b></td><td><b>20,736</b></td><td></td><td><b>4,147</b></td><td><b>16,589</b></td><td><b>16,589</b></td></tr> </tbody> </table> <p>*Number of tCO<sub>2</sub> sequestered or avoided emission through participants' activities in previous reporting periods which have not yet been issued as PVCs</p> <p>** Number of tCO<sub>2</sub> sequestered or avoided emissions through participants' activities this reporting period</p> <p>*** Statement of tCO<sub>2</sub> reductions for the 2018 year to date (1 January 2018 - 30 September 2018)</p>	Area ID	Total area (ha)	Technical Specification	Saleable ER's (tCO <sub>2</sub> ) available from previous periods*	Total ER's (tCO <sub>2</sub> ) achieved this period**	% Buffer	No. of PVCs allocated to buffer from ER's achieved this period	Saleable ER's (tCO <sub>2</sub> ) from this period	Issuance request (PVCs)	Eligible area 2012	738 ha	Rarakau IFM-LtPF	0	3,072	20	614	2,458	2,458	Eligible area 2013	738 ha	Rarakau IFM-LtPF	0	3,072	20	614	2,458	2,458	Eligible area 2014	738 ha	Rarakau IFM-LtPF	0	3,072	20	614	2,458	2,458	Eligible area 2015	738 ha	Rarakau IFM-LtPF	0	3,072	20	614	2,458	2,458	Eligible area 2016	738 ha	Rarakau IFM-LtPF	0	3,072	20	614	2,458	2,458	Eligible area 2017	738 ha	Rarakau IFM-LtPF	0	3,072	20	614	2,458	2,458	Eligible area 2018***	738 ha	Rarakau IFM-LtPF	0	2,304	20	461	1,841	1,841	<b>TOTAL</b>			<b>0</b>	<b>20,736</b>		<b>4,147</b>	<b>16,589</b>	<b>16,589</b>
Area ID	Total area (ha)	Technical Specification	Saleable ER's (tCO <sub>2</sub> ) available from previous periods*	Total ER's (tCO <sub>2</sub> ) achieved this period**	% Buffer	No. of PVCs allocated to buffer from ER's achieved this period	Saleable ER's (tCO <sub>2</sub> ) from this period	Issuance request (PVCs)																																																																										
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	<p>The Lead Auditor does not assume any responsibility towards the issuance and utilization of the VERs hereby verified. Request for issuance of VERs shall be made by the project proponent to Markit Environmental Registry. The verification of reported emission reductions is based on the information made available to the Lead Auditor and the engagement conditions detailed in this report. The Lead Auditor cannot be held liable by any party for decisions made or not made based on this report.</p>
B. Conformance	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A

## SIGNATURE

*Signed for and on behalf of:*

*Name of entity:*      *Dr Misheck C Kapambwe*  
Lead Auditor - International Forest Carbon Projects

*Signature:*



*Date:*      *31 March 2019*

## 6 REFERENCES

Documents provided by the project participants that relate directly to the GHG components of the project. These and other documents have been used as direct sources of evidence for the validation and verification conclusions, and were further checked through interviews with key personnel.

- /1/ Plan Vivo Foundation: *Plan Vivo Standard* (2013)
- /2/ VERRA: *VCS Standard: VCS Version 3/ AFOLU Requirements: VCS Version 3*
- /3/ International Standards Organisation: *ISO 14064-2 Standard (2006)*
- /4/ VERRA: *Approved VCS AFOLU Additionality Tool: VT0001, Version 3, Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities*, 2012
- /5/ VERRA: *AFOLU Non-Permanence Risk Tool: VCS Version 3*
- /6/ Carbon Partnership Ltd: *Rarakau Rainforest Carbon Project PD: D3.P1.1 v2.0*” 9 October 2018.
- /7/ Carbon Partnership Ltd: *Rarakau Programme IFM-LtPF Methodology v 2.0*”, 15 May 2018, version.
- /8/ Carbon Partnership Ltd: *“Rarakau Project Monitoring Report 2 D3.P1.13v1.0*, 9 October 2018.
- /9/ Wallwork Forest Management Ltd: *Draft Sustainable Forest Management Plan For the Land: Section 15 Block IV Rowallan Survey District*, July 2006.
- /10/ Carbon Partnership Ltd: *Email Confirmation of TPK meetings*, 12 August 2011.
- /11/ Southland District Council: *Appendix 2: Southland District Plan, Section 3, General Objectives, Policies, Methods and Rules – 3.4, Heritage*, 27 June, 2001.
- /12/ Clayton Wallwork: *Appendix 3 - Revised Desk Top Assessment of SILNA Rowallan/Alton Sections For Carbon Partnership Ltd*, August 2011.
- /13/ Carbon Partnership Ltd: *Appendix 6 - Project GHG Accounting Excel Spreadsheet*.
- /14/ The Maori Land Court of New Zealand: *Appendix 7 - Rowallan Alton Incorporation Section Owners*, 4 September, 1969.
- /15/ Rowallan Alton Incorporation: *Appendix 8: The Constitution of the Rowallan Alton Incorporation*, 1 November, 2003.
- /16/ Burrows, L.E., Evans, G.R, Pruden, C.C., Kuru, G.A & Janett, D: *Appendix 9 – The standing wood volumes of the Landless Native Grant Lands of Southland and Stewart Island*, June 1992.
- /17/ Ministry of Agriculture and Forestry: *Appendix 10 - Assessment of SILNA Timber Resources, 1999: Land Designated under the South Island Landless Natives Act, 1906*, December 2000.
- /18/ South Land District Council: *Appendix 11 - Report to Resource Planning Committee*, 8 December 1999.
- /19/ Ministry of Agriculture and Forestry: *Appendix 12 - Email correspondence regarding project additionality*, 12 October, 2011.

- /20/ Carbon Partnership Ltd: *Appendix 13 – Carbon Sequestration Rates Excel Spreadsheet*.
- /21/ Carbon Partnership Ltd: *Appendix 15 - EIA Confirmation*
- /22/ Carbon Partnership Ltd: *Appendix 16 – Memorandum of Encumbrance*
- /23/ Carbon Partnership Ltd: *Appendix 17 – Programme of Agreement*
- /24/ Carbon Partnership Ltd: *Appendix 19 – Evidence of Consultation*
- /25/ Carbon Partnership Ltd: *Appendix 20 – Eligible Forest Boundary Inspection Template*
- /26/ Carbon Partnership Ltd: *Appendix 21 - Eligible Forest Area Inspection Template*
- /27/ Carbon Partnership Ltd: *Appendix 22 – SILNA Timber Resources 1999*
- /28/ International Organisation for Standardisation: *ISO 14064-2*, 1 March 2006
- /29/ Verified Carbon Standard: *AFOLU Non-Permanence Risk Tool*, Version 3.0, and 8 March 2011.
- /30/ Verified Carbon Standard: *Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities* (VT0001, Version 1.0).
- /31/ Verified Carbon Standard: *VCS Standard*: Version 3.0, 8 March 2011.
- /32/ Verified Carbon Standard: *VCS Standard*: 2007.1, 18 November 2008.
- /33/ Climate, Community & Biodiversity Alliance: *CCB Standards*, Second Edition, 2011.
- /34/ Verified Carbon Standards: *Approved VCS Methodology VM0010 – Methodology for Improved Forest Management: Conversion of Logged to Protected Forest*, Version 1.1, December 2008.
- /35/ Verified Carbon Standard: *Approved VCS Methodology VMD0017 – REDD Methodological Module: Estimation of Uncertainty for REDD Project Activities (XUNC)*: Version 1.0.
- /36/ Verified Carbon Standard: *VCS Guidance – AFOLU Guidance: Example for GHG Credit Accounting Following a Loss Event*: 8 March 2011.
- /37/ Verified Carbon Standard: *Approved VCS Tool for the Estimation of Uncertainty for the IFM Project Activities* VT0003 v1.0, 2010.
- /38/ IPCC: *2006 IPCC Guidelines for National Greenhouse Gas Inventories, National Greenhouse Gas Inventories Programme*. Eggleston et al (eds.). Volume 4: Agriculture, Forestry and Other Land Use.
- /39/ IPCC: *2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry*, prepared by the National Greenhouse Gas Inventories Programme, Penman et al: Chapter 3: LUCF Sector Good Practice Guidance.
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/43/ Payton, I.J., Barringer J., Lambie, S., Lynn, I., Forrester, G., Pinkney, E.J. 2009. *Carbon sequestration rates for post-1989-compliant indigenous forests*. Landcare Research report LC0809/107 to MAF Policy.

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/45/ Vittoz, Pascal1; Stewart, Glenn H.1 & Duncan, Richard P.1: *Earthquake impacts in old-growth Nothofagus forests in New Zealand*, *Journal of Vegetation Science* 12: 417- 426, 2001.

/46/ Ministry of Agriculture and Forestry: *Forests Act 1949*, 11 October 1949.

/47/ Ministry of Agriculture and Forestry: *Forests Amendment Act 1993*, Public Act 1993 No. 7, 24 March 1993.

/48/ Ministry of Agriculture and Forestry: *A field measurement approach for carbon assessment in post-1989 forests*, October 2010

/49/ Carbon Partnership: *Verification Site Visit Report*, October 2018

/50/ Carbon Partnership: *Rarakau Rainforest Carbon Project Annual Report 1 20181110*

/51/ Plan Vivo Foundation: *Project Design Document template for Plan Vivo projects*, May 2015

Persons interviewed during the initial verification, or persons who contributed with other information that are not included in the documents listed above

Date	Name	Organisation	Topic
	N/A	Ministry of Primary Industries	<ul style="list-style-type: none"> <li>• Cross-check eligibility or ineligibility of project area under Article 3.4 of the Kyoto Protocol and the New Zealand compliance carbon accounting system (to confirm compliance with no double counting from the Ministry)</li> </ul>
/53/ 19 September 2018 & 11-12 October 2018	Sean Weaver (Project Coordinator)	Carbon Partnership Ltd	<ul style="list-style-type: none"> <li>Methodology development, Project design and implementation</li> <li>• Discuss process of site visit validation (activities &amp; scope) and its link to the project verification</li> </ul>

				<ul style="list-style-type: none"> <li>• Explain of possible outcomes of site visit</li> <li>• Review and Confirmation of audit plan/schedule</li> <li>• Health and Security issues</li> </ul>
/54/	11 October 2018	Ken McEnergy (Secretary RAI)	Rowallan Alton Inc	<p>Project ownership &amp; status</p> <ul style="list-style-type: none"> <li>• Discuss progress of the project from inception to present.</li> <li>• Confirm the beneficial impact of the project.</li> <li>• Discuss and confirm benefit sharing principles in the project.</li> <li>• Confirmation that the Project Owner has adequate understanding of the principles and requirements of the project and is competent to conform to those principles and requirements.</li> <li>• Confirmation that the Project Owner participated in project design</li> </ul>
/55/	12 October 2018	Bruce Halligan (Group Manager Environmental Services)	Southland District Council	<p>Discuss the project, Southland District Plan and how the project is viewed by the regulator</p> <ul style="list-style-type: none"> <li>• Confirmation of Common practice including deforestation and forest degradation</li> <li>• Confirmation of actual land uses and land-use Alternatives in the project area;</li> <li>• Confirmation of existence of sustainable forest management plans in all 11 land parcels in the Inception Project</li> <li>• Authentication of project documents stated in the PDD and the monitoring report</li> <li>• Regulation of indigenous forest reserves with regard to sustainable forest management</li> </ul>

				<ul style="list-style-type: none"> <li>• Applicability of environmental impact assessment requirement to Rarakau forest carbon project</li> <li>• Right of use of land by project proponents</li> <li>• Carbon credit ownership</li> </ul>
/56/	11 October 2018	Glen (Farm Manager)	Rowallan Alton Inc.	Overview of management of forest and farmland including fencing off of farmland
/57/		Harold Thomas	RAI Management Committee	Confirmation of free prior and informed consent (FPIC) in relation to stakeholder participation in project design and the supporting evidence that due account of stakeholder comments had been taken. Authentication of project documents stated in the PDD and Monitoring Report
/58/		Jim Hume	RAI Management Committee	
/59/		Mike Gibbs	RAI Management Committee	

## APPENDIX

### CORRECTIVE ACTION AND CLARIFICATION REQUESTS

**Table 1 Resolution of Corrective Action Requests and Clarification Requests – Methodology Assessment**

CAR/CL ID	Corrective Action Request	Response By Project Proponent	Lead Auditor's Assessment of Response By Project Proponent
CAR 1	<p><b>Introduction: par. 1</b>  The methodology name is inconsistent with the title of this methodology, 'Rarakau Programme Methodology D2.v2.0, 15 May 2018'.</p> <p>Please correct or clarify the inconsistency</p>	Methodology title amended to align with the methodology name used in the document.	Error corrected CAR 1 closed
CAR 2	<p><b>Introduction: par. 2</b>  It may be more appropriate to refer to the provisions in the Plan Vivo Standard (than VCS Standard) regarding grouped projects, which is implied in 'whole landscape' approach under "A landscape and ecosystem services approach" on page 2 of the Standard.</p> <p>Please revise.</p>	Amended as recommended.	Correction made CAR 2 closed
CAR 3	<p><b>Figure 1.1.4a and Figure 1.1.4b: Key</b>  It is not clear that the key applies to both figures.</p> <p>Please make it explicit that the Key applies to Figure 1.1.4a and Figure 1.1.4b</p>	Amended to clarify.	Amendment clarifies the Key applies to Figures 1.1.4a and 1.1.4b CAR 3 Closed
CAR 4	<p><b>2.3.7 Reference Area:</b>  Unless where projects can demonstrate unavailability of reference areas, the methodology should require projects to identify and use reference areas to</p>	Amended to require the use of reference areas (where available).	Methodology now requires require projects to identify and use reference areas to support basis of calculations in the baseline CAR 4 closed

	<p>support basis of calculations in the baseline scenario.</p> <p>Please clarify or correct this.</p>		
CAR 5	<p><b>7.1.3 Collateral Damage:</b> What is the basis for 10% collateral damage?</p> <p>Please include short justification for 10% collateral damage</p> <p><u>Round 2</u></p> <p>Unless timber harvesting techniques and/or equipment can be proved to be same or similar to New Zealand's, CD for Nakau Programme cannot simply be assumed to apply for Rarakau Programme without acceptable justification.</p> <p>CAR 5 still open</p>	<p>Collateral Damage has been estimated conservatively at 10% of TWH. This follows the 15% Collateral Damage rate used in the Nakau Programme technical specifications module: TS Module (C) 1.1 (IFM-LtPF) D2.1.1 v2.0 20151009</p> <p>This TS Module has already been certified to the Plan Vivo standard and audited by the same validator as this validation audit. We assume that no further justification is needed.</p> <p><u>Round 2</u></p> <p>Carbon Partnership consulted the published literature and consulted with forest carbon experts in New Zealand and could find no published or unpublished studies on collateral damage in indigenous timber harvesting operations in New Zealand indigenous forest. Carbon Partnership was therefore left to provide a conservative estimate of the likely volume of collateral damage caused by logging operations to non-target above-ground and below-ground biomass in the baseline.</p> <p>Collateral damage is caused by the felling and hauling of target trees, log loading sites, and road-building activities. Carbon Partnership is committed to including a conservative estimate of non-target biomass emissions in the baseline</p>	<p><del>CAR 5 still open</del></p> <p>Justification for 10% collateral damage included and is deemed sufficient.</p> <p>CAR 5 closed</p>

		<p>to reflect the realities of logging operations. In the absence of published or unpublished data on this topic Carbon Partnership has decided to include a default for this methodology element but make it more conservative than previously estimated (20%) and calculate Collateral Damage (CD) as 10% of the Sustainable Harvest Rate (HR). The HR is an above-ground carbon pool only and accounts only for the merchantable bole of the harvested target tree. Carbon Partnership asserts that a CD of 10% of HR is therefore conservative.</p>	
CAR 6	<p><b>7.2.1 Net Project Removals:</b> Why refer to removals as <math>NPE_{TOT}</math> in Methodology and NPR in PDD? Why not just <math>NPR_{TOT}</math> in the Methodology and PDD?</p> <p>Please correct the inconsistency</p>	<p>This has been clarified and made consistent between the methodology and the PD. The correct nomenclature is NPR (Net Project Removals), <math>NPR_{TOT}</math> for the sum of NPR for each forest type. Forest types are beech, podocarp, and broadleaf dominated forest.</p>	<p>Correction made.</p> <p>CAR 6 closed</p>
CAR 7	<p><b>7.3.1 Total Activity Shifting Leakage:</b> The version of referenced methodology is not the most recent version.</p> <p>Please reference the most recent version of this methodology and cross-check revisions (if any) to the calculation of leakage</p>	<p>Updated to version 1.3 (2016) of the Green Collar methodology. Cross checked for consistency with previous version on this element.</p>	<p>Update made</p> <p>CAR 7 closed</p>
CAR 8	<p><b>7.3.2 Total Market Leakage: par. 4</b> Country's forest estate?</p> <p>Please cross-check with the most recent version of Green Collar meth and revise the paragraph to align definition</p>	<p>This section has been updated to apply the latest version of the Green Collar market leakage methodology. Cross checked to align.</p>	<p>Update made</p> <p>CAR 8 closed</p>

CAR 9	<p><b>Equation 7.3:</b> Parameter TKL in the parameter list is inconsistent with parameter in Equation 7.3.</p> <p>Please correct</p>	Corrected (TKL changed to TLK)	Correction made  CAR 9 closed
CAR 10	<p><b>8.2 Non-Permanence Risk: par. 1</b> Reference most recent version and revise as per provisions of the most recent version of the Tool</p> <p><u>Round 2</u> Unless the non-permanence risk factors can be proved to be same or similar to New Zealand's, a risk assessment (as well as the risk buffer) for Nakau Programme cannot simply be assumed to apply for Rarakau Programme without acceptable justification.</p> <p>CAR 10 still open</p>	<p>Consistent with response to CL 1 this methodology has been amended to come into alignment with Plan Vivo validated Nakau Programme technical specifications modules. This assigns a default 20% risk buffer. Due to this approach already have received Plan Vivo approval in previous validation audits of Nakau Programme Technical Specifications Modules, we assert consistency with those validated approaches.</p> <p>Section 8.3.2 updated to align exactly to Plan Vivo validated technical specifications module: TS Module (C) 1.1 (IFM-LtPF) D2.1.1 v2.0 20151009</p> <p><u>Round 2</u> Reinstated VCS risk rating tool used by this project in its first validation/verification. Have modified the methodology to require a minimum Project Risk Rating of 0.20 and application of the VCS Risk Rating tool to arrive at either 0.20 or the result of application of the VCS Risk Rating tool – whichever is the larger.</p>	<p><del>CAR still open</del></p> <p>Checked. VCS risk rating tool reinstated.</p> <p>CAR 10 is closed</p>

CAR 11	<b>9.1.6 CM2 Offsite Stakeholder Impacts:</b> Please include a statement to justify why addressing offsite stakeholder impacts is optional	Offsite stakeholder impact assessment is no longer optional and therefore consistent with the Plan Vivo Standard.	Correction deemed sufficient  CAR 11 closed
CAR 12	<b>10.4.1.1 Harvest Rate:</b> Par. 2 first sentence appears incomplete.  Please revise	This has been clarified and sentence completed.	Sentence revised and appears complete  CAR 12 closed
CAR 13	<b>11.7.2 Monitored Parameters</b>  Monitored Parameter 'HR' missing from monitored data and parameters table.  Please correct	Fixed including all of the section numbering – in order to align with the exact section numbering of the same section of the Methodology.	Checked. Corrections made.  CAR 13 is closed
CL1	<b>2.8 Project Risks:</b>  Is the VCS Tool approach to calculating the level of risk buffer approved by Plan Vivo Certification?  Please clarify  <u>Round 2</u> Unless the non-permanence risk factors can be proved to be same or similar to New Zealand's, a risk assessment (as well as the risk buffer) for Nakau Programme cannot simply be assumed to apply for Rarakau Programme without acceptable justification.	The approach has been amended to apply a default 20% buffer to projects. This is consistent with two methodologies that we have certified to Plan Vivo in the past:  TS Module (C) 1.1 (IFM-LtPF) D2.1.1 v2.0 20151009  TS Module (C) 2.1 (AD-DtPF) D2.2.1 v1.0 20150815  <u>Round 2</u>  Reinstated VCS risk rating tool used by this project in its first validation/verification. Have modified the methodology to require a minimum Project Risk Rating of 0.20 and application of the VCS Risk Rating tool to arrive	CL 1 is still open  Checked. VCS risk rating tool reinstated and corresponding modification made in the Technical Specifications Module  CL 1 closed

	CL 1 still open	at either 0.20 or the result of application of the VCS Risk Rating tool – whichever is the larger.	
CL2	<b>9.2 Biodiversity Benefits:</b> What would constitute 'simplified' biodiversity impact monitoring regime?  Please clarify	This has been clarified.	Clarification made and deemed sufficient  CL2 closed
Typo	<b>11.1 Purpose of monitoring: par.1</b> ...evidence to demonstrate...?	Fixed.	Typo fixed

**Table 2 Resolution of Corrective Action Requests and Clarification Requests – PDD Assessment**

CAR/CL ID	Corrective Action Request	Response By Project Proponent	Lead Auditor's Assessment of Response By Project Proponent
CAR 1	<b>1.1.2 Baseline Activity: Table 1.1.2</b> Appendix 1 and Appendix 4 are not included in the PDD Appendices.  Please include Appendix 1 and Appendix 4	Ministry for Primary Industries rules on indigenous timber harvesting has been supplied in Appendix 1. Reference to Appendix 4 has been removed as Appendix 3 is sufficient to demonstrate commercially viable wood volumes.	Correction made.  CAR 1 closed
CAR 2	<b>2.1.3 Project Objectives:</b> Par. 1 last sentence, "...Project lists three specific objectives."  This sentence is inconsistent with the five (5) objectives (a, b, c, d, e) listed.  Please correct the inconsistency	Fixed	Correction made. Sentence consistent with objectives  CAR 2 closed

CAR 3	<b>2.3.6 Project Areas: Table 2.3.6</b> Please insert correct Appendix numbers	Fixed by referring to Appendix 18 rather than Appendix 6	Correction made.  CAR 3 closed
CAR 4	<b>2.5: Project GHG Strategy: Table 2.5 (2.5d) under 'Location' column</b>  This part just repeats the Methodology requirement. Like 2.5a and 2.5b, this part should contain evidence to demonstrate how the requirement has been met, i.e., have project owners executed a legal covenant on the land title with respect to the protection of their forests for purposes of complying with the Rarakau Programme and where is this document located?  Please clarify or correct this.	This has been corrected by referring to Appendix 16.	Correction made.  CAR 4 closed
CAR 5	<b>2.7 Carbon Benefits: Table 2.7.1</b> CO <sub>2</sub> e per year?  Please correct	Corrected	Correction made  CAR 5 Closed
CAR 6	<b>2.9.2 Key Project Stakeholders:</b> In Table 2.9.1 of Section 2.9.2 of the Methodology, insurers are secondary project stakeholders. Insurers are missing from Table 2.9.1a.  Please correct or clarify the inconsistency	Corrected in PD and also amended in the Meth by signalling that secondary participants are optional, as all of the tasks attributable to secondary participants can potentially be undertaken by the primary participants (e.g. project development activities), or not undertaken at all (e.g. carbon brokerage, insurance). These changes in the Meth have been inserted in red font.	Changes made in the Meth and PD.  CAR 6 closed
CAR 7	<b>2.18 Equal Opportunity:</b> Please check and correct the number sequence	Fixed	Number sequence now correct  CAR 7 closed

CAR 8	<b>2.19 Transferral of Project Coordination:</b> Please check and correct the number sequence	Fixed	Number sequence now correct  CAR 8 closed
CAR 9	<b>3. Identifying GHG Sources, Sinks and Reservoirs:</b>  While it may seem repetitive, the GHG sources, sinks and reservoirs selected must be included here, especially for the benefit of those users of the PDD who may not have the Methodology.  Please correct	Corrected	Correction made  CAR 9 closed
CAR 10	<b>4.1.1.4 Technical Capacity:</b>  Last part of the first sentence in par. 1 is not clear.  Please revise to improve clarity.	This has been clarified.	Sentence revised and is clear  CAR 10 closed
CAR 11	<b>5. Baseline Scenario GHG Sources, Sinks and Reservoirs:</b>  While it may seem repetitive, relevant baseline scenario GHG sources, sinks and reservoirs must be included here, especially for the benefit of those users of the PDD who may not have the Methodology.  Please correct	Corrected	Relevant baseline scenario GHG sources, sinks and reservoirs included  CAR 11 closed
CAR 12	<b>6. Selecting Relevant Baseline GHG Emissions and Removals:</b>  While it may seem repetitive, relevant baseline scenario GHG emissions and	Corrected	Relevant baseline scenario GHG emissions and removals included  CAR 12 closed

	removals must be included here, especially for the benefit of those users of the PDD who may not have the Methodology.  Please correct		
CAR 13	<b>7.1.1 Harvest Rate (HR): par1, last sentence</b> ...HR?...per ha per year?  Please correct	Corrected	Correction made  CAR 13 closed
CAR 14	<b>Equation 7.1.1:</b> Equation 7.1.1 in the Methodology ( $HR = HR_{BC} + HR_{PC} + HR_{BL}$ ) is different from the one used here ( $HR = HR_{BC} + HR_{PC}$ ). Parameter for $HR_{BL}$ is not included.  Please correct or clarify the inconsistency	Corrected	Parameter for $HR_{BL}$ included  CAR 14 closed
CAR 15	In the last sentence of <b>7.1.1 Harvest Rate (HR)</b> , i.e., "Therefore: $HR = HR_{BC} + HR_{PC} = 180 + 32.3 = 212 \text{ m}^3 \text{ yr}^{-1}$ , and is presented in Appendix 6"  Please correct or clarify why is $HR_{BL}$ excluded from the calculation	Corrected	Parameter $HR_{BL}$ included  CAR 15 closed
CAR 16	<b>Equation 7.1.2a:</b> Equation 7.1.2a in the Methodology ( $TWH = TWH_{BC} + TWH_{PC} + TWH_{BL}$ ) is different from the one used here ( $TWH = TWH_{BC} + TWH_{PC}$ ). Parameter for $TWH_{BL}$ is not included.  Please correct or clarify the inconsistency	Corrected	Parameter for $TWH_{BL}$ included  CAR 16 closed

CAR 17	<p><b>Equation 7.1.2b:</b> Total Wood Harvested broadleaf (<math>TWH_{BL} = SHR_{BL} \div 0.80</math>) is not included as required by the Methodology.</p> <p>Please correct or clarify the inconsistency</p>	Corrected	<p>Total Wood Harvested broadleaf (<math>TWH_{BL} = SHR_{BL} \div 0.80</math>) is included</p> <p>CAR 17 closed</p>
CAR 18	<p><b>Equation 7.1.4:</b> Parameter acronym for total wood harvested (TWH) in Equation 7.1.4 in the Methodology is not consistent with the one used here (<math>TWH_{TOT}</math>).</p> <p>Please correct or clarify the inconsistency</p>	Corrected	<p>Parameter acronym for total wood harvested (TWH) is now consistent with the Meth</p> <p>CAR 18 closed</p>
CAR 19	<p>In the last sentence of <b>7.2.1 Net Project Removals</b>, i.e., “<math>NPR_{TOT}</math> is calculated for the Rarakau Rainforest Carbon Project as 2,730 tCO<sub>2</sub> yr<sup>-1</sup> and is presented in Appendix 6/ Rarakau Carbon tab, cell D15”. The parameter <math>NPR_{TOT}</math> is inconsistent with the NPR in Equation 7.2.1.</p> <p>Please correct or clarify the inconsistency</p>	Corrected	<p>Correction made</p> <p>CAR 19 closed</p>
CAR 20	<p><b>Equation 7.3.2:</b> Parameter acronym (NBEA) in the parameter list is inconsistent with the parameter acronym in Equation 7.3.2.</p> <p>Please correct the inconsistency</p>	Corrected	<p>Parameters are now consistent</p> <p>CAR 20 closed</p>

CAR 21	<p><b>Figure 8.2.2:</b> If available, revise Figure 8.2.2 to the latest ratings</p> <p><u>Round 2</u></p> <p>(a) Unless the non-permanence risk factors can be proved to be same or similar to New Zealand's, a risk assessment (as well as the risk buffer) for Nakau Programme cannot simply be assumed to apply for Rarakau Programme without acceptable justification, even though the former programme has been validated to Plan Vivo Standard. The two programmes are in completely different geographical and political locations with different risk factors and drivers.</p> <p>(b) Please reinstate/include the overall risk rating calculation (8.2 &amp; 8.3) for Rarakau Programme as required by Part H of the PV PDD Template and PV requirement 6.1 &amp; 6.2). Removing this calculation is not only a non-compliance with these requirements but also diminishes the robustness of the project design.</p> <p>CAR 21 still open</p>	<p>Corrected by removing the Overall Risk Rating calculation from the PD. The Methodology also states that non-permanence risk is addressed through the assignment of a 20% default buffer to the project. This is conservative given that the Overall Risk Rating (i.e. buffer percentage) at first verification as 0.11 (i.e. 11%).</p> <p><u>Round 2</u></p> <p>Reinstated VCS risk rating tool used by this project in its first validation/verification. Have modified the methodology to require a minimum Project Risk Rating of 0.20 and application of the VCS Risk Rating tool to arrive at either 0.20 or the result of application of the VCS Risk Rating tool – whichever is the larger.</p> <p>Overall Risk Rating calculated using the VCS tool was 0.11. Therefore 0.20 was applied.</p>	<p><b>CAR 21 is still open</b></p> <p>Checked. VCS risk rating tool reinstated.</p> <p>CAR 21 closed</p>
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CAR 22	<b>8.3.2 Step 15 – Buffer Credits</b> Equation 8.3.2b missing.  Please correct	This has been corrected by adding these calculations	Correction made  CAR 22 closed
CAR 23	<b>8.3.2 Step 15 – Buffer Credits</b> Parameter <i>BUFNBEA</i> not in Equation 8.3.2a. Please correct.  Parameter <i>BUFNPR</i> not in Equation 8.3.2a. Please correct	This has been corrected	Parameter <i>BUFNPR</i> included in Equation 8.3.2a  CAR 23 closed
CAR 24	11.7.2 Monitored Parameters  Monitored Parameter 'HR' missing from monitored data and parameters table.  Please correct	Fixed	Checked. Parameter added to the parameter table  CAR Closed
CL1	<b>Page 48 is blank</b> Intentional or mistake?  Please clarify	Fixed	Correction made  CL1 closed
CL2	What would constitute 'simplified' biodiversity impact monitoring regime?  Please clarify	This has been clarified in the Meth section 9.2 and addressed in the PD.	Clarification checked  CL2 closed
Typo	<b>1.1.4 Logged and Unlogged:</b> Par.1 third sentence ...diagram...?	Fixed	Typo fixed
	<b>4.1.5 Additionality:</b>	Fixed	Typo fixed

	Par. 1 first sentence ...additionality...?		

**Table 3 Resolution of Corrective Action Requests and Clarification Requests – Monitoring Report**

CAR/CL ID	Corrective Action Request	Response By Project Proponent	Lead Auditor's Assessment of Response By Project Proponent
CAR 1	<p><b>1.1.1 Simplified Project Management Report Methodology:</b> In Section 11.3.9 of the PDD, the project management period for first and second verification covers years 2009 to 2017 inclusive. This is inconsistent with the project management period covering 1 January 2012 to 30 September 2018 inclusive.</p> <p>Please correct or clarify the difference in the management period end years (2017 inclusive in the PDD and 2018 inclusive in the Monitoring Report)</p>	Corrected in the Monitoring report by changing 1 January 2012 to 1 January 2009 – the latter being the correct dates.	Correction made  CAR 1 closed
CAR 2	<p><b>1.1.2 Simplified Project Monitoring Report Methodology:</b> Par. 1 statement contradicts the requirement of simplified project monitoring report for the first two 3<sup>rd</sup> party verifications in the PDD.</p>	Easy	Paragraph revised  CAR 2 closed

	Please correct or clarify the contradiction		
CAR 3	<p><b>1.1.2 Simplified Project Monitoring Report Methodology:</b></p> <p><b>First sentence of par 2:</b> The project is verified against Plan Vivo Standard and associated Plan Vivo certification requirements. Reference to VCS monitoring report template is therefore incorrect unless this is permitted by Plan Vivo certification scheme.</p> <p>Please correct or clarify this anomaly.</p> <p><b>Last sentence of par 2:</b> Is it not project activity that has taken place between end of the first monitoring (Dec 2011) and second monitoring periods (Sept 2018), i.e., 01-January-2012 to 30 September 2018?</p> <p>Please clarify.</p>	Corrected	<p>Revisions made</p> <p>CAR 3 closed</p>
CAR 4	<p><b>1.8 Title and Reference of Methodology</b> The word 'Methodology' not used consistently hereafter in the rest of this report. Instead, 'Rarakau Programme Methodology D2.1 v2.0, 15 May 2018' and 'Rarakau Programme Methodology' appear to be used interchangeably. Better to use one consistently throughout the report to maintain clarity.</p>	Fixed	<p>Correction made</p> <p>CAR 4 closed</p>

	Please correct		
CAR 5	<p><b>2.1.2.3 Project Risk</b>  <b>Last sentence of par.1</b>  A bit more information on how the overall risk rating was affected as well as how much in % or absolute value was the buffer determination influenced would add more clarity.</p> <p>Please correct</p> <p><u>Round 2</u></p> <p>Addressing CAR 21 in Table 2 would also address this CAR</p>	<p>A sentence has been added to clarify this point: "The Project Risk Rating was increased from 11% to 20%."</p> <p><u>Round 2</u></p> <p>The final two sentences of Par 1 have been changed as follows:  <i>"This fire event affected the methodology for determining the Project Risk Rating of the Rarakau Forest Carbon Project, which in turn influenced the buffer determination for this monitoring period.</i> The methodology change involved the application of a minimum Project Risk Rating of 0.20."</p> <p>CAR 21 in Table 2 has been addressed.</p>	CAR 5 still open The change deemed appropriate and sufficient. Car 5 closed
CAR 6	<p><b>Data and Parameters Monitored:</b>  <b>Parameter SHR:</b>  Inconsistent with the parameter acronym (HR) used in Section 4.1 (Baseline Emissions Table) of this report.</p> <p>Is this acronym (SHR) still used, since it is no longer 'sustainable' harvest rate?</p> <p>Please correct or clarify the inconsistency</p>	This has been corrected. HR is used throughout and SHR has been removed throughout (Meth, PD, and MR).	Correction made CAR 6 closed
CAR 7	<p><b>3.3 Description of the Monitoring Plan:</b>  Par. 1 statement contradicts the requirement of simplified project</p>	Corrected	Correction made CAR 7 closed

	monitoring report for the first two 3 <sup>rd</sup> party verifications in the PDD.  Please correct or clarify the contradiction		
CAR 8	<b>3.3 Description of the Monitoring Plan:</b> Par.2 - The project is verified against Plan Vivo Standard and associated Plan Vivo certification requirements. Reference to VCS monitoring report template is therefore incorrect. Please correct this anomaly.	Reference to VCS removed.	Correction made  CAR 8 closed
CAR 9	<b>3.3.3.1 Forest Management Areas:</b> What is the relevance of par.1?  Please revise	Paragraph 1 has been removed.	Paragraph revised  CAR 9 closed
CAR 10	<b>3.3.3.8 Project Management Audit:</b> <b>Last dot point:</b> Please provide indication of when these project activities could be implemented	Corrected by stating that each outstanding element will be delivered by 3 <sup>rd</sup> verification.	Correction made. Number sequence corrected as well  CAR 10 closed
CAR 11	<b>3.3.4 Project Monitoring Plan:</b> Par.2: Clarify whether this VCS template is acceptable under Plan Vivo certification	Clarified by removing reference to VCS template.	Clarification deemed sufficient  CAR 11 closed
CAR 12	<b>4. Additional Information:</b> Incorrect number sequence.  Please correct	Corrected	Number sequence corrected  CAR 12 closed
CL1	<b>3.3.4 Project Monitoring Plan:</b> Par.2:	Clarified by removal of reference to VCS	Clarification deemed sufficient

	Clarify whether the VCS Monitoring Report Template is permitted under Plan Vivo certification		CL1 closed
CL2	<p><b>3.3.3.4 Monitoring Roles And Responsibilities</b></p> <p>What specific activities is the Project Coordinator implementing to build capacity of the Project Owner to undertake project management and monitoring to assure project continuity and mitigate the risk of project failure?</p> <p>Please clarify</p>	<p>This has been clarified by adding paragraphs to this section.</p>	<p>Clarification deemed sufficient</p> <p>CL2 closed</p>