

# NEW LEAF CARBON PROJECT

## TASMANIA

## MONITORING PLAN



Document Prepared By Forests Alive on behalf of the Tasmanian Land Conservancy

|                      |                                                                            |
|----------------------|----------------------------------------------------------------------------|
| <b>Project Title</b> | <i>Reducing Carbon Emissions by Protecting a Native Forest in Tasmania</i> |
| <b>Version</b>       | <i>1</i>                                                                   |

|                      |                                                                                                                      |
|----------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Report Title</b>  | <i>Monitoring Plan</i>                                                                                               |
| <b>Pages</b>         | <i>27</i>                                                                                                            |
| <b>Date of Issue</b> | <i>3<sup>rd</sup> June 2013</i>                                                                                      |
| <b>Prepared By</b>   | <i>Forests Alive Pty Ltd</i>                                                                                         |
| <b>Contact</b>       | <i>Suite 7.03, 222 Pitt Street, Sydney, NSW, 2000, 0282 709 908,<br/>info@forestsalive.com, www.forestsalive.com</i> |
| <b>Approved By</b>   | <i>ESI</i>                                                                                                           |

## Table of Contents

|     |                                              |    |
|-----|----------------------------------------------|----|
| 1   | INTRODUCTION.....                            | 3  |
| 1.1 | Objective .....                              | 3  |
| 1.2 | Project Activity.....                        | 3  |
| 1.3 | Project Proponent .....                      | 4  |
| 1.4 | Other Entities Involved in the Project.....  | 4  |
| 1.5 | Monitoring Methods.....                      | 4  |
| 2   | CL. Climate Impact monitoring Plan .....     | 5  |
| 2.1 | Project Area Sampling .....                  | 5  |
| 2.2 | Climate Variables .....                      | 5  |
| 3   | CM. Community Impact Monitoring Plan .....   | 9  |
| 4   | B. Biodiversity Impact Monitoring Plan ..... | 10 |
| 4.1 | Measuring Outputs, Outcomes and Impacts..... | 10 |
| 5   | Reporting.....                               | 12 |
| 6   | Monitoring Timeframe .....                   | 12 |
| 7   | Reporting Responsibilities.....              | 14 |
| 8   | Data Management.....                         | 16 |
| 8.1 | Data Processes .....                         | 16 |
| 8.2 | Internal Auditing and non-conformities ..... | 17 |
| 9   | Adaptive Management Plan .....               | 18 |
| 10  | Appendices.....                              | 19 |

## 1 INTRODUCTION

### 1.1 Objective

This document presents the monitoring plan, as proposed in the Project Design Document, published in 3<sup>rd</sup> June 2013. The monitoring plan has been published to provide a stand-alone document which will be referenced during the Verification of the New Leaf Carbon project. The project duration is 30 years. The landowner and project proponent will be responsible for monitoring the project and has acknowledged the responsibilities outlined in the monitoring plan.

This monitoring plan has been developed in accordance with all requirements of the Voluntary Carbon Standard (VCS) and the Climate Community and Biodiversity Association (CCBA). The carbon stock changes, which are a major component to the climate activities of the CCB standard, are monitored as required by the VCS-IFM methodology VM0010<sup>1</sup> v1.2. The remaining Community and Biodiversity monitoring will be presented in the “Theory of change” format, as described in the CCBA “Social and Biodiversity Impact Assessment” documentation<sup>2</sup>.

### 1.2 Project Activity

The New Leaf Carbon Project activity is as described in the joint VCS-CCB template. The project protects 12,143 ha of native forest from degradation caused through logging activities. By protecting forest from these activities there is an avoidance of carbon emissions providing an immediate climate benefit. In addition to this, the forest is able to sequester carbon as it recovers from previous logging events and regenerates to reach the original carbon carrying capacity of a native forest before logging was introduced.

The biodiversity value of a forest is well understood and documented in scientific journals. By protecting forest the habitat quality can only improve, species can be free from un-natural disturbances and native species habitat, including the large marsupial carnivores (Tasmanian Devil, Tasmanian Spotted Quoll) is improved.

Community benefits that derive from this project are based on opportunity; the opportunity to employ local communities to manage the project, increase the environmental services the forest provides, the opportunity to develop new economic activities through sustainable industry such as tourism and even increase the capacity for organisations to deliver more ground-breaking land management projects through knowledge sharing.

All benefits are fully explored in the PDD. This monitoring document provides a list of project activities and the guidelines for how these will be monitored throughout the project lifetime.

---

<sup>1</sup> VCS Methodology for improved Forest Management: Conversion from Logged to Protected Forest.  
<http://v-c-s.org/methodologies/VM0010>

<sup>2</sup> CCBA Documents, Social and Biodiversity Impact Assessment. <http://www.climate-standards.org/documents/>

### 1.3 Project Proponent

The Tasmanian Land Conservancy (hereby known as the TLC) is the project proponent and they are the current owners and managers of the New Leaf estate. The organisation is responsible for the implementation and the on-going monitoring obligations described below.

**Contact person:** Daniel Sprod  
**Role:** Landscape Ecologist  
**Address:** 827 Sandy Bay Rd, Sandy Bay, Tasmania, 7005  
**Telephone:** (+61) 03 6225 1399  
**Email:** dsprod@tasland.org.au

### 1.4 Other Entities Involved in the Project

Forests Alive Pty Ltd has been contracted to design this project. Forests Alive have been responsible for producing all the documentation for the validation and verification of this project.

Forests Alive is the main contact point for the validation agency during the initial validation and verification process.

**Contact person:** Jarrah Vercoe  
**Role:** Project Manager  
**Address:** 210 Collins Street, Hobart, Tasmania, 7000  
**Telephone:** 61 (4) 1713 7751  
**Email:** Jarrah@forestsalive.com

### 1.5 Monitoring Methods

The community and biodiversity project activities will be monitored using the “Theory of change” method as described within the CCBA Standard’s Social and Biodiversity Impact Assessment guidelines. It is anticipated that larger impacts will be visible in the long term. Therefore, the monitoring of these activities will rely on Outputs and Outcomes;



The variables to be monitored and the timeframes have been identified and the expected Outputs, Outcomes and Impacts have been speculated in this report. There are a mixture of options to report the monitoring of suggested activities including reports, statements and observations.

Due to the project comprising a single project activity across land areas, one monitoring technique can be used to determine multiple project impacts. Where possible, all the activities to be monitored are listed, and the measurable outcomes of these are identified.

## 2 CL. CLIMATE IMPACT MONITORING PLAN

### 2.1 Project Area Sampling

A carbon inventory has been taken for the project area using the VCS IFM methodology “VM0010: Methodology for Improved Forest Management: Conversion of Logged to Protect Forest Version 1.2”.

The total area of the New Leaf Estate is 22,793.57 ha. Within this, the total area of commercial native forest is 12,143.01 ha. The project area has been stratified into 11 strata, reflecting variations of carbon density as a result of historical land use and biophysical differences. 187 randomly placed, fixed plots have been sampled to determine the carbon stock of the forest. Data from these plots has been used to calculate the total avoided emissions from preventing logging activities within the area. A map of the area, strata and plots can be found in the appendices.

The number of plots has been allocated using the Winrock International Sampling Calculator. In accordance with the methodology, the uncertainty level has been set to 95%, whilst the standard error of the mean has been set at 15%.

### 2.2 Climate Variables

This project generates carbon credits from the avoided logging of the forest. Therefore the variables from the carbon inventory need to be monitored to ensure the calculated avoided emissions and the sequestration rates of the now protected forest are accurate. Any discrepancies between field sampling and model outputs can be reported in the verification process and annual credit allocation can be modified accordingly.

As the VCS monitoring plan states, the forest variables monitored are;

- Project area;
- Carbon stock;
- Illegal logging rates;
- Natural disturbance; and
- Leakage.

#### **Project Area**

|                                                                  |                                                                   |
|------------------------------------------------------------------|-------------------------------------------------------------------|
| Data Unit / Parameter:                                           | Project Area $A_i$                                                |
| Data unit:                                                       | Ha                                                                |
| Description:                                                     | Project Area                                                      |
| Source of data:                                                  | GPS coordinates and/or remote sensing and/or legal parcel records |
| Description of measurement methods and procedures to be applied: | Property boundary overlay                                         |
| Frequency of monitoring/recording:                               | Biennially                                                        |
| Value monitored:                                                 | Property boundaries                                               |

|                                 |                                                                                                                                                                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monitoring equipment:           | Arc GIS, Google Earth, Land Title Documentation, <a href="http://www.thelist.tas.gov.au">www.thelist.tas.gov.au</a>                                                                                                                  |
| QA/QC procedures to be applied: | Standard quality control / quality assurance (QA/QC) procedures for forest inventory including field data collection and data management shall be applied                                                                            |
| Calculation method:             | N/A                                                                                                                                                                                                                                  |
| Any comment:                    | the baseline scenario, strata shall not change with time. The <i>ex ante</i> assumption with the project scenario is that the strata will not change with time: modifications can be made <i>ex post</i> in the wake of disturbance. |

### Carbon stock changes

The determination of carbon stock change in aboveground trees is based upon field inventory data and FullCAM. The estimate of uncertainty related to carbon stocks is derived from the original fieldwork, with the variance calculated by using the Winrock Sampling Calculator. This will be re-assessed every five years, when fieldwork is conducted as part of the monitoring event. This will involve randomly measuring 20% of the original field plots. The increment in merchantable biomass, and therefore carbon sequestered, is extrapolated to hectare level using Equations 17 to 19. These results – and the standard deviation – can be entered into the Winrock Sampling Calculator to determine the variance for each stratum at a 95% confidence interval.

Measurement of carbon stock change is undertaken at 5 year intervals.

|                                                                  |                                                                                                                                                                                                                                         |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data Unit / Parameter:                                           | Carbon stock                                                                                                                                                                                                                            |
| Data unit:                                                       | tC/ha                                                                                                                                                                                                                                   |
| Description:                                                     | Carbon stock in aboveground biomass.                                                                                                                                                                                                    |
| Source of data:                                                  | Fieldwork and FullCAM model.                                                                                                                                                                                                            |
| Description of measurement methods and procedures to be applied: | Fieldwork to take samples of DBH and tree heights in the field. Allometrics from the Farm Forestry Toolbox (FTT) are used to determine merchantable volume of timber. FullCAM is used once more to project future carbon sequestration. |
| Frequency of monitoring/recording:                               | 5 Yearly                                                                                                                                                                                                                                |
| Value monitored:                                                 | DBH of trees in fieldwork plots                                                                                                                                                                                                         |
| Monitoring equipment:                                            | Fieldwork equipment, FTT, FullCAM                                                                                                                                                                                                       |
| QA/QC procedures to be applied:                                  | Data checked on entry and FullCAM checked by independent sources.                                                                                                                                                                       |

|                     |                                                                           |
|---------------------|---------------------------------------------------------------------------|
| Calculation method: | Volume of timber * 1.17 * 0.5 to determine carbon in merchantable timber. |
| Any comment:        | N/A                                                                       |

### **Illegal logging:**

Illegal logging is de minimis within Tasmania. Please refer to section 3.2 of the Grouped Project PDD for a full justification of this. In summary, commercial forest harvesting is regulated through the Tasmanian Forest Practices Authority (FPA). Illegal logging is absent or *de minimis* on private lands. This is partially because forest harvesting on private land can only occur with the consent of the landowner, and property boundaries are well-marked and recognised within Tasmania. Secondly, the major markets for forest products are saw millers and one export woodchip mill. Timber can only be sold in these markets when associated with an approved Forest Practices Plan.

The VCS methodology states:

*“Ex ante estimation shall be made of illegal logging in the with project case. If the belief is that zero illegal logging will occur within the project boundaries then this parameter may be set to zero if clear infrastructure, hiring and policies are in place to prevent illegal logging.”*

For the reasons outlined above, the threat to the Project Area from illegal logging is negligible within Tasmania; while the threat to native forests from legally permitted logging is significant.

|                                                                  |                       |
|------------------------------------------------------------------|-----------------------|
| Data Unit / Parameter:                                           | Illegal logging rates |
| Data unit:                                                       | N/A                   |
| Description:                                                     | N/A                   |
| Source of data:                                                  | N/A                   |
| Description of measurement methods and procedures to be applied: | N/A                   |
| Frequency of monitoring/recording:                               | N/A                   |
| Value monitored:                                                 | N/A                   |
| Monitoring equipment:                                            | N/A                   |
| QA/QC procedures to be applied:                                  | N/A                   |
| Calculation method:                                              | N/A                   |
| Any comment:                                                     | N/A                   |

### **Natural Disturbance**

|                        |                |
|------------------------|----------------|
| Data Unit / Parameter: | $A_{burn,i,t}$ |
| Data unit:             | Ha             |

|                                                                  |                                                                                                                                                                                                  |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description:                                                     | Area burnt in stratum i at time t                                                                                                                                                                |
| Source of data:                                                  | GPS coordinates and/or remote sensing data                                                                                                                                                       |
| Description of measurement methods and procedures to be applied: | Spot Imagery to determine area burnt, field inventory to determine stock changes. Fire reports by the Tasmanian Fire Service which defines location and extent of fire can be used if available. |
| Frequency of monitoring/recording:                               | Biennially                                                                                                                                                                                       |
| Value monitored:                                                 | Ha Burnt, stock changes (in the event of a wildfire)                                                                                                                                             |
| Monitoring equipment:                                            | ARC GIS, measuring tapes for field work                                                                                                                                                          |
| QA/QC procedures to be applied:                                  | Standard quality control / quality assurance (QA/QC) procedures for forest inventory including field data collection and data management shall be applied                                        |
| Calculation method:                                              |                                                                                                                                                                                                  |
| Any comment:                                                     |                                                                                                                                                                                                  |

### Leakage

|                                                                  |                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data Unit / Parameter:                                           | Leakage                                                                                                                                                                                                                                                                                                  |
| Data unit:                                                       | Ha, harvested, annually from private land within Tasmania                                                                                                                                                                                                                                                |
| Description:                                                     |                                                                                                                                                                                                                                                                                                          |
| Source of data:                                                  | Private Forests Tasmania, and Tasmanian Forest Practices Authority, Annual reports                                                                                                                                                                                                                       |
| Description of measurement methods and procedures to be applied: | Using the annual report from the Tasmanian Forest Practices Authority, figures on extraction rates and harvesting methods can be obtained and compared annually. Figure No. 01 shows a steady decline in extraction rates from native forests across Tasmania (i.e. excluding the first two treatments). |
| Frequency of monitoring/recording:                               | Harvesting rates are assessed at biennial monitoring events.                                                                                                                                                                                                                                             |
| Value monitored:                                                 | Harvesting rates of native forest from private land within Tasmania                                                                                                                                                                                                                                      |
| Monitoring equipment:                                            | Private Forests Tasmania, Annual reports.<br><a href="http://www.privateforests.tas.gov.au/publications/annual_reports">http://www.privateforests.tas.gov.au/publications/annual_reports</a>                                                                                                             |

|                                 |                                                                                                                     |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------|
| QA/QC procedures to be applied: | Comparison of annual report data is cross checked by technical staff members of the TLC                             |
| Calculation method:             | Comparison of annual harvesting native forest harvesting rates using Microsoft Excel, conducted on a biennial basis |
| Any comment:                    |                                                                                                                     |

### 3 CM. COMMUNITY IMPACT MONITORING PLAN

The activities listed below are justified in the PDD section 6. The activities put forward for monitoring are based on the objectives and the expected outputs and outcomes.

| Activity                                                                        | Outputs                                                                                                                                                                           | Outcomes                                                                                                            | Impacts                                                                                      | Monitoring Frequency |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------|
| <b><i>Creating Economic Opportunities</i></b>                                   |                                                                                                                                                                                   |                                                                                                                     |                                                                                              |                      |
| Provide economic opportunities for the community                                | Members of the community derive work opportunities and income from the project<br><br>Members of the community are directly or indirectly employed in the delivery of the project | Members of the community supports the project and communicates this to others' within the community                 | The community supports the project because members derive economic benefits from the project | 2 years              |
| <b><i>Promoting Community Engagement &amp; Institutional Cooperation</i></b>    |                                                                                                                                                                                   |                                                                                                                     |                                                                                              |                      |
| Provide opportunities for community involvement in planning and land management | Participation of the local and indigenous community, volunteers and other stakeholders in planning and land management activities                                                 | Land management reflects local community values and aspirations                                                     | The community supports land management                                                       | 2 years              |
| <b><i>Encouraging Education and Research</i></b>                                |                                                                                                                                                                                   |                                                                                                                     |                                                                                              |                      |
| Provide education and research opportunities                                    | Participation by educational institutions and individuals in monitoring, research and education                                                                                   | Students, teachers researchers and the community develop a better understanding of conservation and land management | Community engagement and knowledge is increased                                              | 2 years              |
| <b><i>Enhancing Recreational Activities</i></b>                                 |                                                                                                                                                                                   |                                                                                                                     |                                                                                              |                      |

| Activity                           | Outputs                                      | Outcomes                                             | Impacts                                                             | Monitoring Frequency |
|------------------------------------|----------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------|----------------------|
| Provide recreational opportunities | Participation by the community in recreation | The community derives access, enjoyment and exercise | Community wellbeing and connection to the project area is increased | 2 years              |

## 4 B. BIODIVERSITY IMPACT MONITORING PLAN

### 4.1 Measuring Outputs, Outcomes and Impacts

The activities listed below are justified in the PDD section 7.

| Activity                                           | Outputs                                                                                 | Outcomes                                                                                               | Impacts                                                 | Monitoring Frequency |
|----------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------------|
| <b>Long-term ecosystem monitoring</b>              |                                                                                         |                                                                                                        |                                                         |                      |
| Monitoring of conservation significant species     | Records of conservation significant species sightings and abundance in the project area | Understanding of population viability and threatening processes                                        | Adaptive management of conservation significant species | 2 years              |
| Monitoring of habitat condition                    | Records of habitat condition in the project area                                        | Understanding of the impact of natural process and human activities on habitat quality                 | Adaptive management of habitat values                   | 2 years              |
| Monitoring of landscape scale ecological processes | Measure changes in vegetation patterns and extent                                       | Understanding of landscape scale processes of ecosystem change                                         | Adaptive management of ecosystems                       | 2 years              |
| <b>Management effectiveness monitoring</b>         |                                                                                         |                                                                                                        |                                                         |                      |
| Fire management                                    | Fire management strategy is implemented                                                 | Fire is managed to minimise negative impacts on ecosystems, and particularly fire sensitive vegetation | Ecosystems are not perturbed by inappropriate fire      | 2 years              |
| Weed management                                    | Weed management strategy is implemented                                                 | Weeds are controlled and monitored                                                                     | Impact of weeds on native ecosystems is reduced         | 2 years              |

| Activity                | Outputs                                      | Outcomes                                                      | Impacts                                                    | Monitoring Frequency |
|-------------------------|----------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------|----------------------|
| Feral animal management | Feral animal strategy is implemented         | Feral animals are reduced to low numbers                      | Impact of feral animals on native ecosystems is reduced    | 2 years              |
| Access management       | Access management strategy is implemented    | Access to project area by visitors is regulated               | Impact of human activities on native ecosystems is reduced | 2 years              |
| Livestock management    | Livestock management strategy is implemented | Access to project area by neighbouring livestock is prevented | Impact of livestock on native ecosystems is prevented      | 2 years              |

## 5 REPORTING

Consistent with the VCS, climate activity reporting is conducted biennially. For all other activities, a biennial report will be developed. This will be based on the joint VCS-CCB “Monitoring and Implementation” report available on the CCBA website.

Activities which do not require biennial monitoring will be included in the re-calculation event outlined in the VCS monitoring plan. The monitoring plan states that all field work and calculations shall be re-visited every five years and carbon sequestration shall be checked alongside the model outputs. The model outputs shall be re-calibrated if required. In this event, a report will be issued detailing any changes found, which covers the climate activities. All community and biodiversity activities will be addressed individually, providing a statement on the current observable outputs and outcomes. Where appropriate, new activities could be suggested and included in a new monitoring structure.

## 6 MONITORING TIMEFRAME

Outlined below is the proposed timeframe for monitoring activities throughout the project lifetime. This is guide only, and modifications can be made if justified in the biennial monitoring report.

There are two reports proposed:

1. a Biennial report that tracks all the CCBA and VCS requirements except for field work regarding measurement for verification of the tree growth and carbon sequestered,
2. an Update report that completes these requirements

Thus over the project there will be 14 biennial reports and five update reports, the first of which will occur in 2014 (biennial) and 2016 (update). The PD will act as the first biennial report.

| Calendar Year               | Project Year | Description                                                                                                                                                                                                                   |
|-----------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2010                        | 0            | Project Start date. Land and legal logging rights passed to project proponent.                                                                                                                                                |
| 2011                        | 1            | Collation of field data, species, logging history.                                                                                                                                                                            |
| 2012                        | 2            | Establishment of baseline scenario, field carbon inventory, and management plans.                                                                                                                                             |
| 2013                        | 3            | <i>Validation and Verification for both VCS and CCB standards. Joint PDD, monitoring plan and monitoring report provided. Verification period to be for September 20<sup>th</sup> 2010 to 19<sup>th</sup> September 2012.</i> |
| 2014                        | 4            | Biennial Report for verification period 20 <sup>th</sup> September 2012 – 19 <sup>th</sup> September 2014 to be published.                                                                                                    |
| Future Verification Periods | Project Year | Monitoring Reports                                                                                                                                                                                                            |
| 2015- 2016                  | 6            | Update Report to incorporate field sampling in year 5                                                                                                                                                                         |
| 2017-2018                   | 8            | Biennial Report                                                                                                                                                                                                               |
| 2019-2020                   | 10           | Update Report to incorporate field sampling in year 10                                                                                                                                                                        |
| 2021-2022                   | 12           | Biennial Report                                                                                                                                                                                                               |
| 2023-2024                   | 14           | Biennial Report                                                                                                                                                                                                               |
| 2025-2026                   | 16           | Update Report to incorporate field sampling in year 15                                                                                                                                                                        |
| 2027-2028                   | 18           | Biennial Report                                                                                                                                                                                                               |
| 2029-2030                   | 20           | Update Report to incorporate field sampling in year 20                                                                                                                                                                        |
| 2031-2032                   | 22           | Biennial Report                                                                                                                                                                                                               |
| 2033-2034                   | 24           | Biennial Report                                                                                                                                                                                                               |
| 2035-2036                   | 26           | Update Report to incorporate field sampling in year 25                                                                                                                                                                        |
| 2037-2038                   | 28           | Biennial Report                                                                                                                                                                                                               |
| 2039-2040                   | 30           | Update Report to incorporate field sampling in year 30                                                                                                                                                                        |

## 7 REPORTING RESPONSIBILITIES

### Disturbances (invasive pests, fire and illegal logging)

The reporting of disturbances in the project area is the responsibility of the site manager (land owner), and ultimately, the project proponent. There are 7 site managers listed below;

| Site manager       | Company                    | Title ref             |
|--------------------|----------------------------|-----------------------|
| John Young         |                            | 101027/2              |
| Rainforest Rescue  | Rainforest Rescue          | 238246/1              |
| Ian Hall           | Existance Pty Ltd          | 248756/1 and 228177/1 |
| Charlie McGuire    |                            | 247009/1              |
| Daniel Beven       |                            | 222696/1              |
| Nick Burton Taylor | NBT Pty Ltd                | 34561/1               |
| Daniel Sprod       | Tasmanian Land Conservancy | All other titles      |

The project proponent and the site manager are responsible for managing, monitoring and reporting on disturbances that are observed. Third parties using the area will be required to report evidence of disturbances to the site manager, the site manager will then be responsible for gathering information on this either through a site visit or taking information directly from the reporting third party. Information to be recorded for each reporting should be;

- Area affected and location;
- Reporting third party;
- The date of reporting and the estimated date of disturbance;
- Nature of the disturbance plus any relevant details
- Supporting reports (e.g. fire report from the Tasmanian Fire Service, including spatial fire footprint maps);
- Any responses to manage the disturbance if required, or mitigate the risk in the future.

### Carbon Stock Changes

The project proponent is responsible for organising appropriate field survey work to take place every five years to record changes in the carbon stock within the project area. The proponent has been provided with all standard operating procedures to ensure that all future field work is undertaken to the same standard as the original work and any diversions in converting the merchantable volumes of the trees into carbon stock will be appropriately identified.

The responsibilities will include;

- Preparing and briefing an appropriate field survey team;
- Report any inconsistencies such as missing plot waypoints or reference corner posts;
- Assigning an appropriate person to conduct the carbon stock calculations and compare these to the FullCAM projections;
- Describe how the projections differ from the most recent field inventory and describe any changes to be made to the calculations as a result of this.

### Leakage

The project proponent is responsible for reporting any information which appropriately records legal harvesting from within property managed by them which is not in the project area. It is also

the responsibility to show that if any harvesting does occur in these properties it is not a result of the activity shifting and is following prescribed and historic trends.

## 8 DATA MANAGEMENT

### 8.1 Data Processes

Data obtained through the monitoring processes will be generated and stored in the following manner;

| Data Required                                                                                         | Method of generating data                                                                                                                                                                                                                                                                         | Method of storing data                                                                                                                       |
|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Aboveground biomass carbon stock of project area                                                      | Field inventory including species, DBH and height taken every five years using fixed sampling plots allocated upon the validation of the project.                                                                                                                                                 | Field work datasheets provide hard copies of the plot records. Data is entered electronically into an excel spreadsheet for storage.         |
| Areas of illegal logging and disturbances in the project area                                         | Site visit and record affected area using GPS tracks OR use reports issued by relevant authority.                                                                                                                                                                                                 | Place KML of areas and any notes required into annual folders for referencing in the biennial monitoring report.                             |
| Logging events on site managers' (non-project) properties to determine activity shifting.             | Use FPPs and Weighbridge records to determine whether logging trends have increased in areas not in the project area, but managed by project proponent. Determine whether there has been an increase in logging activities outside the project boundary due to project forest becoming protected. | Events to be logged in folders annually along with a short discussion on private land logging trends.                                        |
| No. of staff engaged                                                                                  | Use HR records from the project proponent and site managers.                                                                                                                                                                                                                                      | List the numbers of people engaged, and their project activities.                                                                            |
| List of education events: workshops, training events, research and survey activities and publications | Provided by the project proponent who keeps records of when these occur.                                                                                                                                                                                                                          | Lists of events and attendees kept by project proponent annually, along with a brief description of achievements.                            |
| Data on recreational activities                                                                       | Recorded by project proponent (site manager, third party) of date, nature of event and level of participation.                                                                                                                                                                                    | Lists of events and attendees kept by project proponent annually with a brief description of their achievements.                             |
| Species present in and surrounding the project area                                                   | Use Natural Value Reports (annually to identify any new records)<br><br>Survey project site as described above.<br><br>Collect any sightings from stakeholders using the project site.<br><br>Record any findings from recent publications.                                                       | Lists of new species biennially.                                                                                                             |
| Habitat quality and extent                                                                            | Site visits to assess the vegetation quality.<br><br>Remotely sensed data to assess extent and vegetation type.                                                                                                                                                                                   | Save any locally or remotely sensed data acquired and any commentary made about vegetation condition for reference in the monitoring report. |

The following filing structure for storing data and reports specific for the project design and implementation is as follows;

- Ownership
  - Title Documents
- Stratification
  - GIS Layers
  - Strata Maps
  - Winrock Sampling Calculator
- Fieldwork
  - Data Sheets
  - Waypoints
  - Plot Maps
- VCS
  - Baseline
    - FullCAM files
    - Logging compartment maps
    - FPPs
    - Weighbridge Records
    - Timber Harvest Plan
  - VCU Calculations
- CCBA
  - Community Documents
  - Biodiversity Documents
- Validation Files
- Monitoring Documents

## 8.2 Internal Auditing and non-conformities

All files are stored for up to at least two years after the crediting period, as required by the VCS.

Procedure for handling internal auditing and non-conformities is as follows;

Project Manager is the responsible and principal contact point. Documents are prepared by the Project Manager and reviewed by the Science and Monitoring team prior to issuing. Non conformities are reviewed by the Project Manager and allocated according to the following process;

- Technical / calculation non conformities are allocated for correction to the Science and Monitoring team member/s
- Management / procedural non conformities are allocated for correction to the Project Manager.

All documents are reviewed by a staff member independent of the project prior to issuing.

## 9 ADAPTIVE MANAGEMENT PLAN

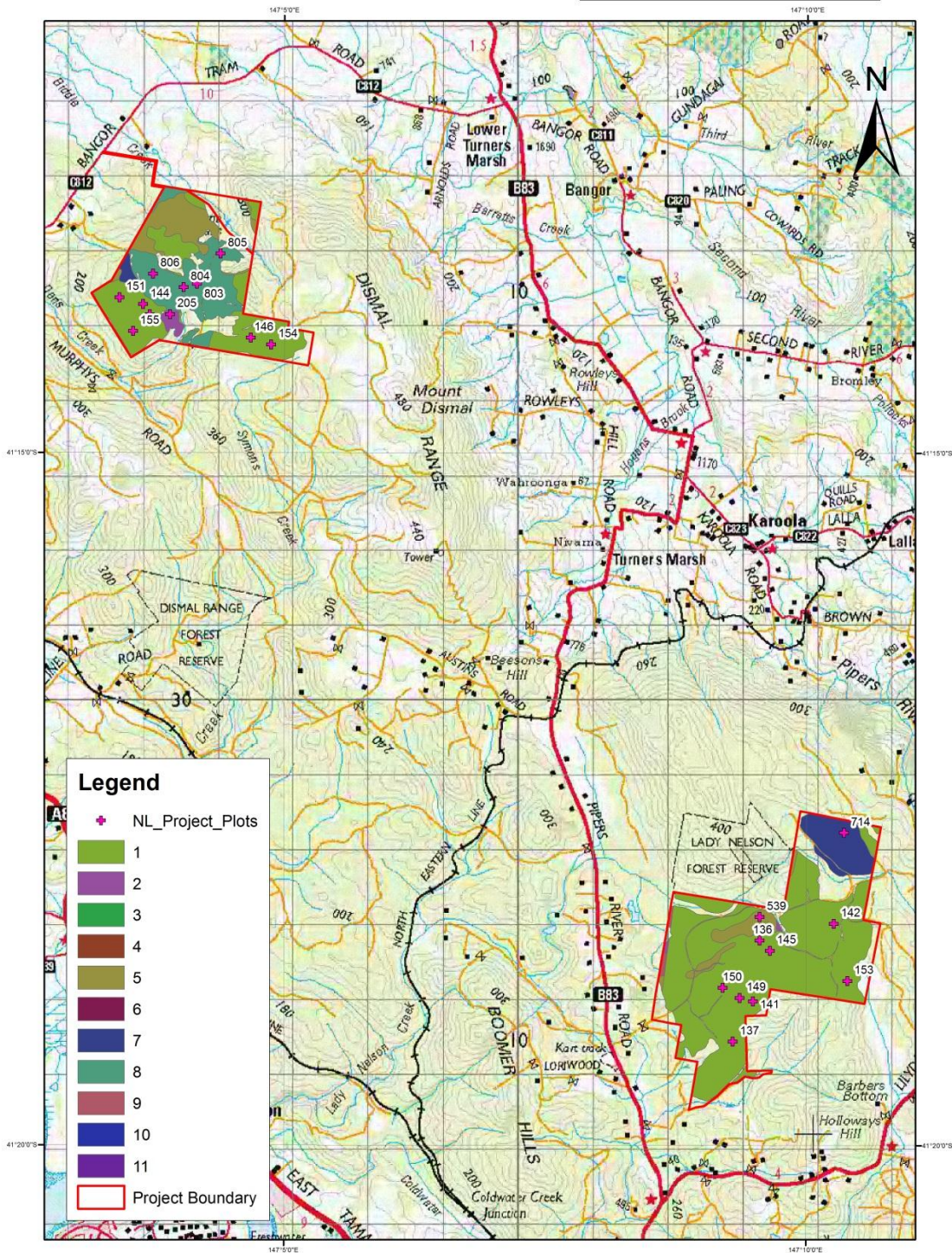
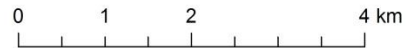
As part of the non-permanence risk assessment and report to be submitted with each monitoring report, an “Adaptive Management Plan” must be submitted which identifies all the risks to the ongoing implementation of the project and any activities required to mitigate these risks from occurring. The management plan shall take the following table format;

| Risk                                                                                     | Consequence level            | Mitigation                                | Monitoring                                              | Lessons                                                                                          |
|------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Identify the risks here (could be natural disturbance, political, financial failure etc) | Extreme, high, moderate. Low | Describe the risk and how it is mitigated | Describe where possible how this risk will be monitored | Describe any lessons learnt from past experience or experience during the project implementation |

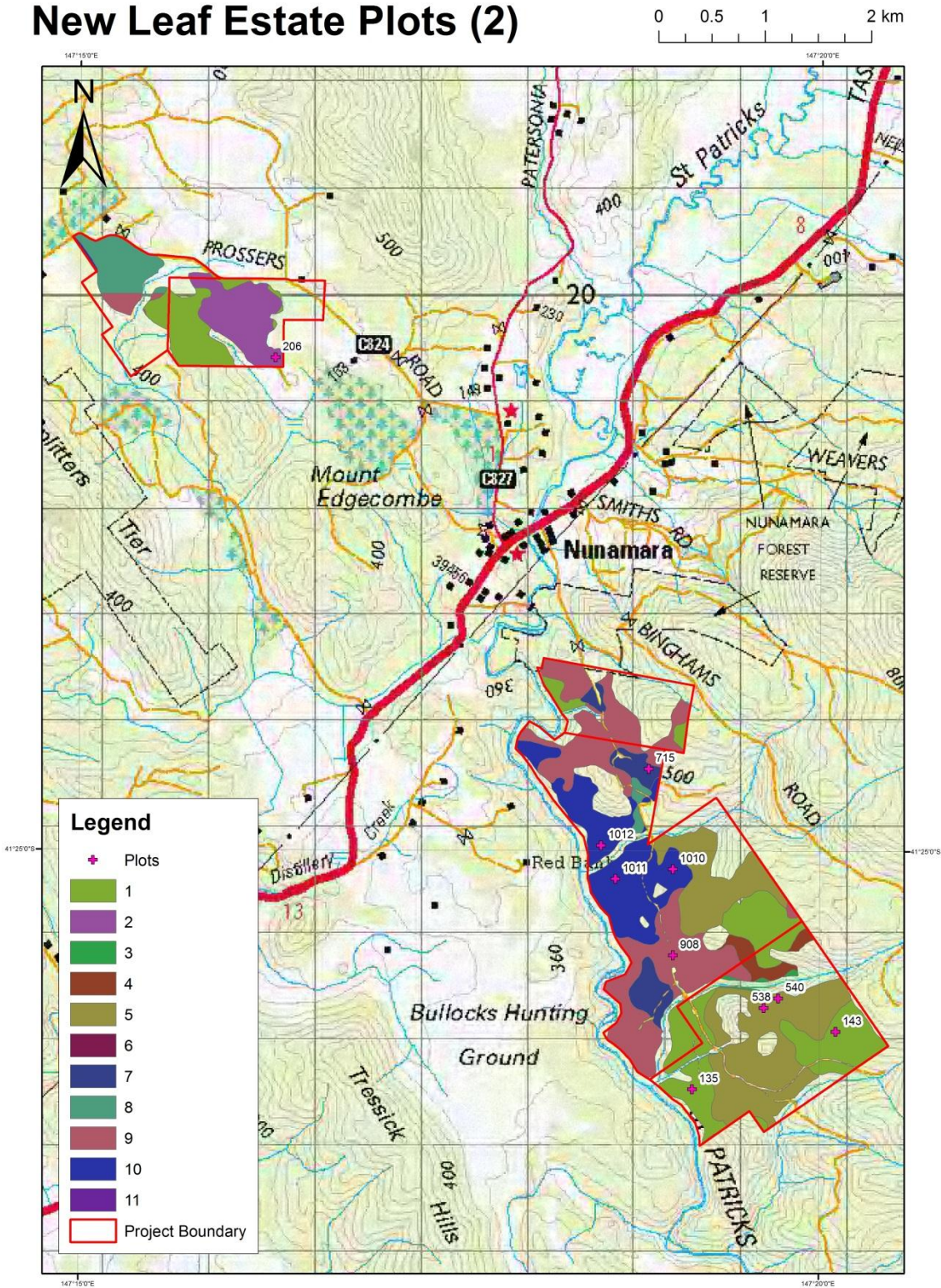
The non-permanence risk assessment will be submitted along with the non-permanence risk buffer calculations and report and a thirty year project financial assessment.

**10 APPENDICES**

**New Leaf Estate Plots (1)**



## New Leaf Estate Plots (2)

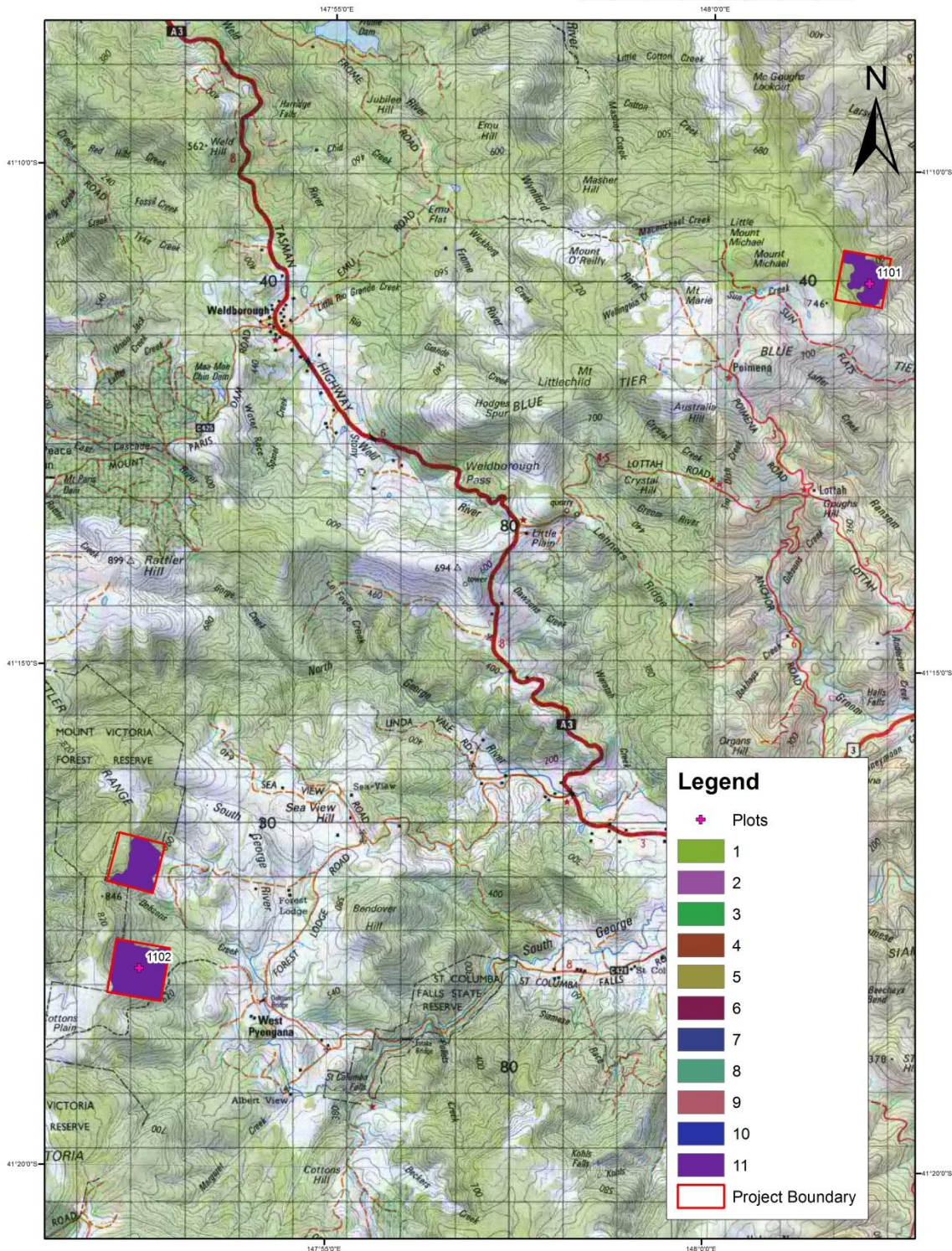


0 0.5 1 2 km

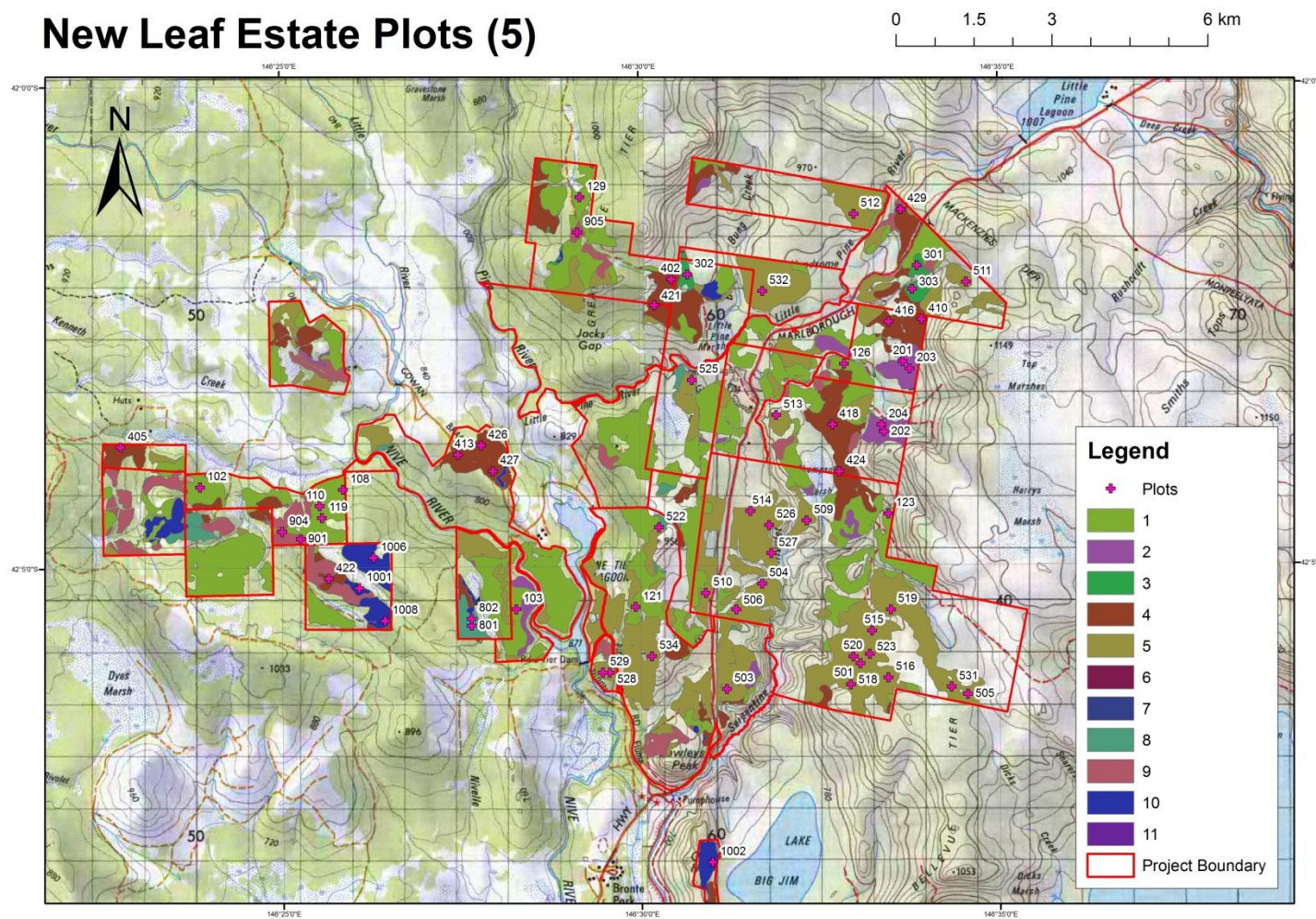


## New Leaf Estate Plots (4)

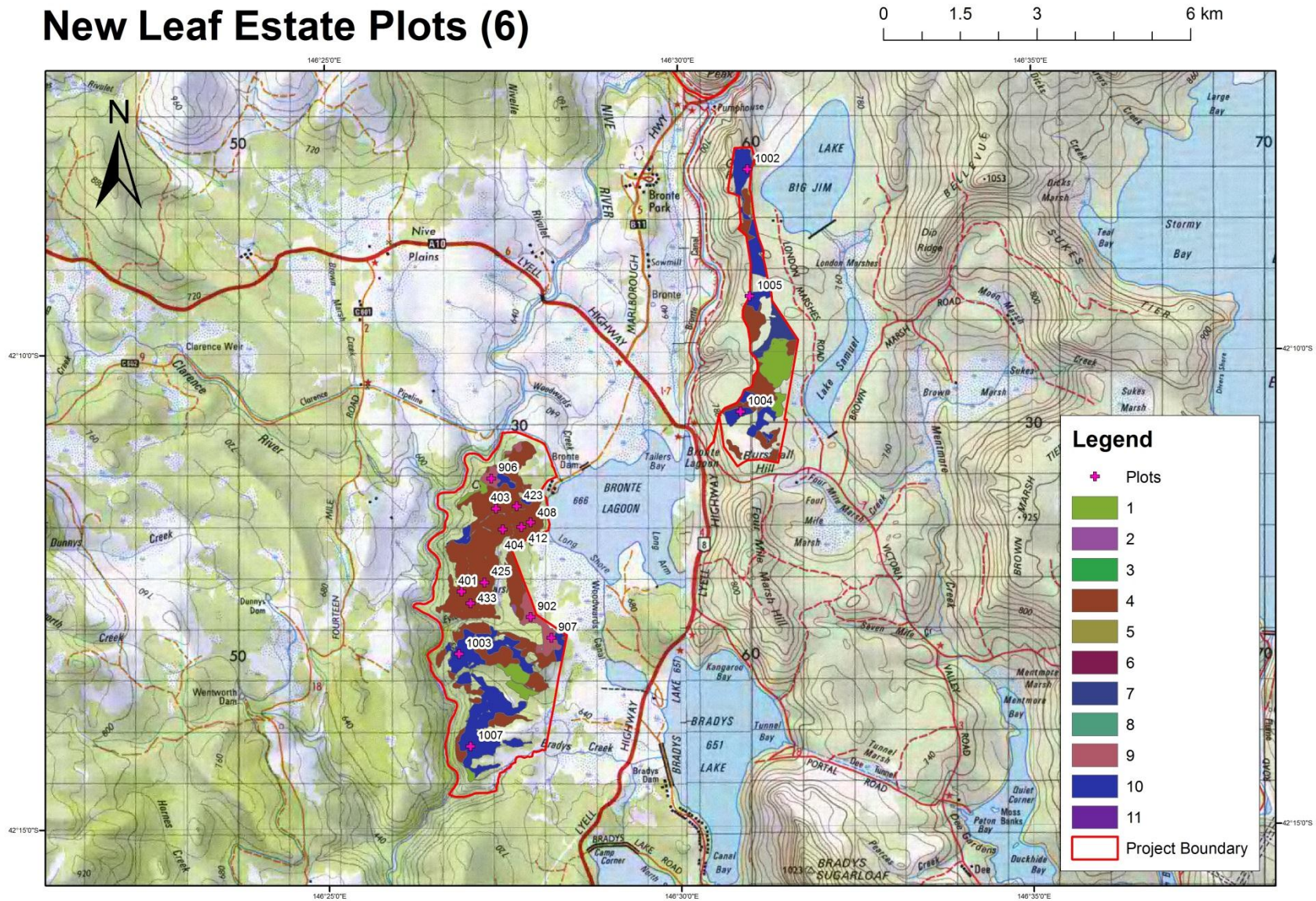
0 1.25 2.5 5 km



## New Leaf Estate Plots (5)

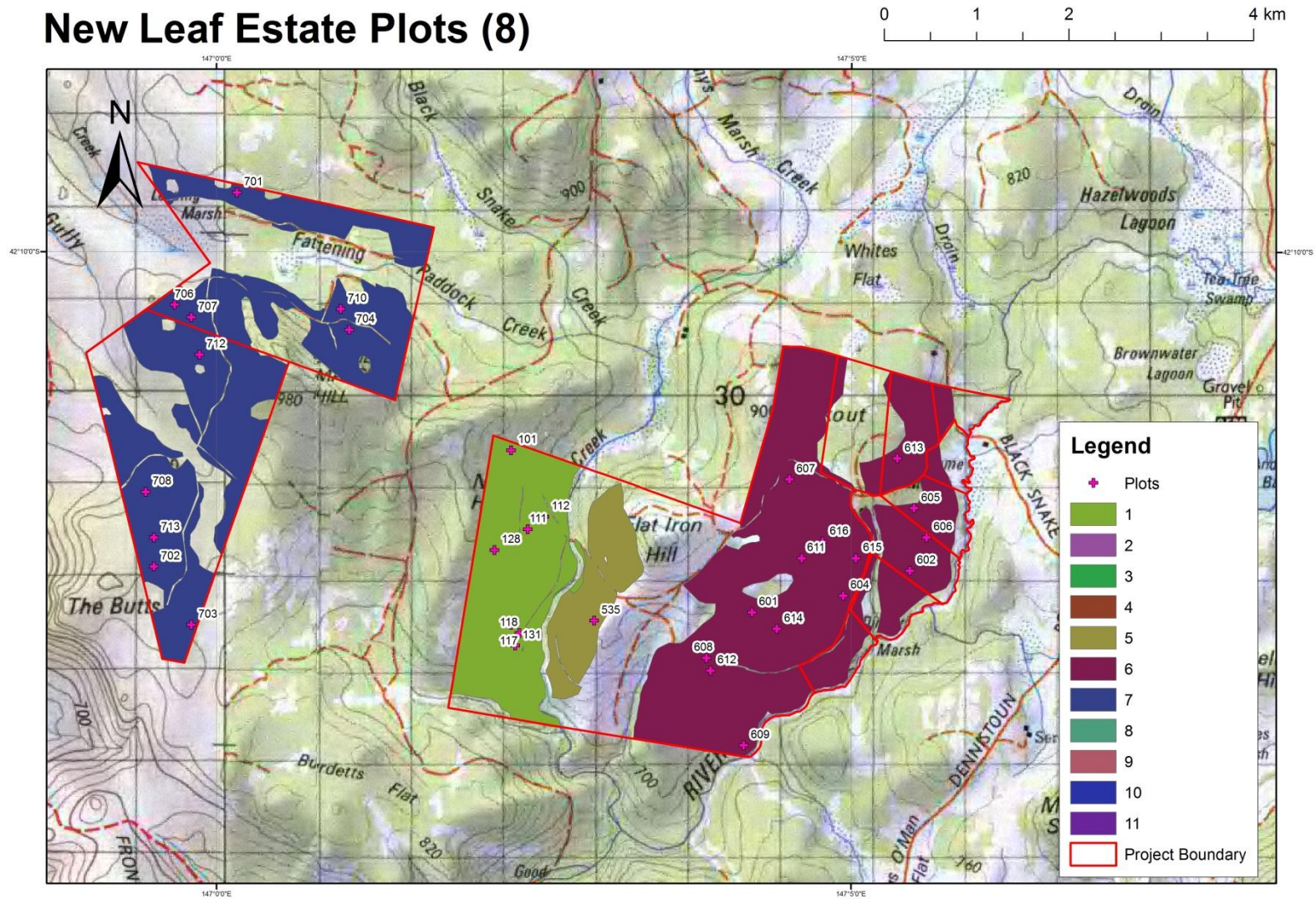


## New Leaf Estate Plots (6)





## New Leaf Estate Plots (8)



## New Leaf Estate Plots (9)

