



PROTECTION OF A TASMANIAN NATIVE FOREST (PROJECT 3: PETER DOWNIE)



**Redd Forests' Monitoring Report
for verification under the Voluntary Carbon Standard
March 2011**

General Information

The project is designed to protect 7 666 hectares of native Tasmanian forest which would, if not for the project, continue to undergo selective logging or be clear-felled and converted to pasture.

The project is located near the towns of Bothwell, Hermitage and Waddamana in the Central Highlands of Tasmania, Australia.

The Redd Forests project area (RFPA) includes 7 666 ha of native forest, including vegetation communities dominated by *Eucalyptus delegatensis*, *E. pauciflora*, *E. viminalis*, *E. rodwayi*, *E. amygdalina*, *E. dalrympleana* and *E. ovata*. All of this forest has been selectively logged in the past (see Table No. 05 for past concessions), under Forest Practices Plans issued by the Forest Practices Authority of Tasmania. With no change in regulation since those harvests, the re-growth remains available for logging. A combination of selective logging and clearance and conversion to plantation or pasture is planned in the absence of finance from any carbon trade scheme.

The landowner is the project proponent

Contact person: Peter Downie
Title: Landowner
Address: 3289 Lakes Hwy, Bothwell, TAS 7030
Telephone number: 61 (3) 6259 6192
Email: dungrove@activ8.net.au

Redd Forests Pty Ltd is acting as project developer on behalf of the landowner, and is responsible for the development, validation and first verification of the project. Redd Forests is a leading forestry carbon project developer in Australia.

Contact person: Stephen Dickey
Title: Managing Director
Address: 11 Renfrew Street, St. Andrews, NSW 2566
Telephone number: 61 (0) 421 670 567
Email: stephen@reddforests.com
Website: <http://www.reddforests.com>

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Monitoring Plan

Consistent with the requirements of the Voluntary Carbon Standard and in accordance with the Monitoring Plan for the Redd Forests Project Area, the landowner and Redd Forests have undertaken site monitoring.

This Monitoring Report presents the findings of the first monitoring period for Project 3: Peter Downie. It achieves this by examining trends and changes in:

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

Under these headings, the following parameters are addressed as required in the methodology:

1. Illegal logging PRA;
2. Result of limited illegal logging survey;
3. Area potentially impacted by illegal logging in stratum i (ADIST_IL, i);
4. Total area of illegal logging sample plots in stratum i (APi);
5. Area burnt in stratum i at time t (Aburn,i,t);
6. Merchantable biomass as a proportion of total above-ground tree biomass for stratum i (PMPi);
7. Area covered by stratum i (Ai); and
8. Diameter at breast height of tree (DBH).

This project is located in Tasmania, Australia. The nearest urban areas to the RFPA are Hermitage (approximately 3km from Dungrove and Southernfield, and 6.5 km from Weasel), Waddamanna (approximately 8km from Lake Echo) and Hunting Ground (approximately 4 km from Mount Vernon).

Table No. 01. Properties with forested area included in the Redd Forests' project.

Name of property	Name of owner	PID	Years of ownership	Hectares
Lake Echo	Tasberry Holdings PL	2189572	11	3508
Interlaken	Tasberry Holdings PL	7612624	5	3799
	Interlaken Estates PL			
Weasel	P J Downie	2538314	102	849
Cluny (next to Dungrove)	I K Downie	7271452	102	709
Southernfield	P J Downie	5014153	33	1750
Lagoon of Islands	P J Downie	5005599	152, 68	5920
Kemps Tier (part of LoI)	Tasberry Holdings PL	1798288	152, 68	805
Dungrove	Dungrove CO PL	2538306	143	3013
Mt Vernon	Tasberry Holdings PL	5465149	20	875

Of the nine properties listed in Table No. 01, the forested areas which are available for logging (7 666ha) are included in the project. The remaining areas consist of grazing areas, streamside buffers, conservation covenants and other land uses.

The project boundaries are defined by the above cadastral boundaries, with the forested area mapped in the attached KML and SHP files (see Figure No. 01). The forests are bordered by a combination of roads, pastoral land and plantations. All the land is under the ownership and management of the project proponent.

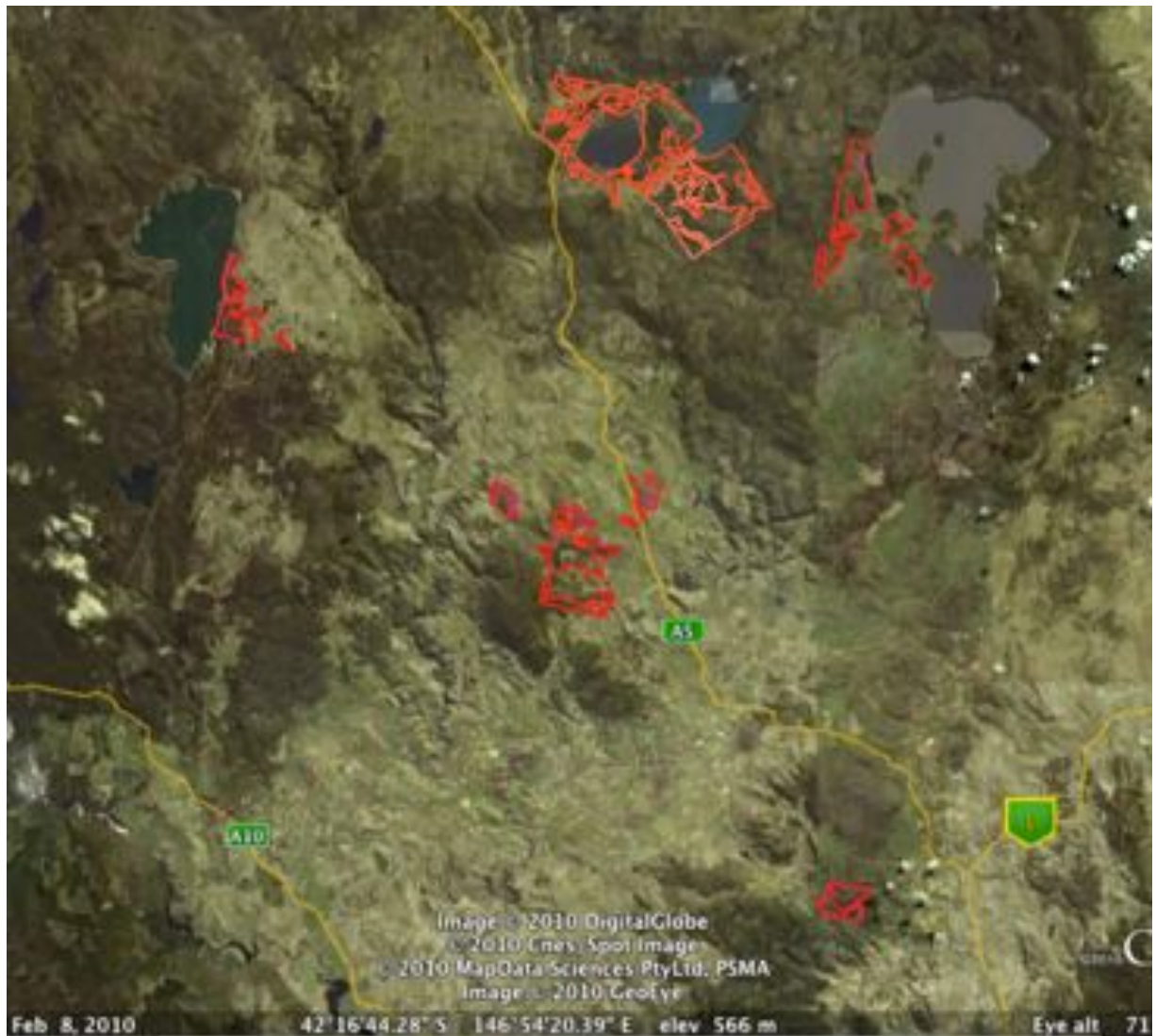


Figure No. 01. Map of the Redd Forests Project Area (Source: Google Earth©). The road marked as 1 is Dennistoun Rd, A5 is Lake Highway and A10 is Lyell Highway.

Monitoring Period

This document is intended to enable the verification of the project by an external party for the period 1 March 2010 to 28 February 2011. This monitoring report will

be based on the original fieldwork, a site visit, a comparison of satellite imagery and extrapolation of sequestration trends from FullCAM. Monitoring of the carbon stocks through fieldwork must be completed by the end of 2015, and thereafter at five year intervals until the project's conclusion on 28 February 2034.

Monitoring Activities

Project area

Task Number	Activity description	Indicator	Frequency
1	Determination of uncertainty in project area. Calculated by comparing cadastral parcels.	Change in project area	Every year

On 8 December 2010, the Redd Forests' Project Manager overlaid the cadastral boundary layer available through the Tasmania Government property database, www.thelist.tas.gov.au with the Redd Forests project boundary. No changes of property boundaries or the forested area have occurred. This was confirmed through discussion with the landowner to confirm that no boundary adjustments to their properties have occurred within this period.

On 8 February 2011, the Redd Forests' Technical Consultant overlaid the original KML files outlining the forested area in the project on the new satellite images. These were 10m, multispectral images obtained from SPOT and acquired midmorning local time: 29-Nov-2010, 00:06:09 UTC and 09-Jan-2011 00:17:25 UTC, for the eastern and western images respectively (see Appendix 1). This image provided a cloud free view of the project sites at Lake Echo, Lagoon of Islands and Interlaken. A recent, cloud-free image of the Mount Vernon and Southern Central strata was unavailable. The areas of land obscured by cloud were identified and translated into KML files. The Redd Forests' Project Manager conducted a site visit to confirm no change in forested area.

Carbon stock

Task Number	Activity description	Indicator	Frequency
2	Determination of uncertainty in the forest inventory.	Sampling error	Every 5 years
3	Determination of carbon stock in aboveground trees per unit area per stratum. Calculated from plot data.	Carbon stock	Every 5 years
4	Determination of carbon stock change in aboveground trees. Extrapolated from FullCAM modelling and past plot data.	Carbon stock change	Annually
5	Determination of carbon stock change in aboveground trees. Calculated from plot data.	Carbon stock change	Every 5 years

6	Determination of uncertainty in carbon sequestration projections.	Difference (as a percentage) between FullCAM projections and field measurements	Every 5 years
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A carbon stock review, based on a forest inventory, will not be conducted until the monitoring events including fieldwork in 2015, as detailed in the monitoring plan and PDD. Current projections of the carbon stock are based on the original field data (i.e. the parameters ‘diameter at breast height of tree’ and ‘merchantable biomass as a proportion of total aboveground tree biomass’, collected and calculated in 2010) and FullCAM projections for one year of growth. This extrapolation of trends between monitoring periods is consistent with the endorsed monitoring plan and GreenCollar IFM Methodology. At this point in the project’s lifetime, therefore, there is no difference between projected and actual emission reductions.

The original field data results, PLO files generated using FullCAM and the calculations of VCU are available for review by the validator.

Natural disturbance

Task Number	Activity description	Indicator	Frequency
7	Determination of the presence and extent of natural disturbance. Assessed by comparing satellite imagery.	Deforestation in hectares from natural disturbances	Annually
8	Site visit to assess natural disturbances.	Deforestation in hectares from natural disturbances	Annually
9	Determination of carbon stock change in the carbon pools by natural disturbances.	Carbon stock change.	Annually

The landowner lives on the property and regularly visits the forested area included within the RFPA. Fire (specifically the parameter ‘area burnt in stratum i at time t ’), pests and disease are therefore monitored through ongoing surveillance.

On 8 February 2011, the Redd Forests’ Technical Consultant compared the original satellite image of the project site (cloud-free summer images acquired midmorning local time: 10-Jan-2010, 23:56:34 UTC and 15-Dec-2009 00:15:21 UTC, for the eastern and western images respectively) to the more recent images obtained from SPOT (acquired mid-morning local time: 29-Nov-2010, 00:06:09 UTC and 09-Jan-2011 00:17:25 UTC, for the eastern and western images respectively). The SPOT images from both timeframes were analysed for vegetation coverage with an [ISOCCLASS] unsupervised classification into 30 classes. The classification was based on a composite image formed from all four SPOT bands plus the digital elevation model (DEM), topographic aspect and topographic slope. The topography was included to counteract differentiation due to, for example, sun angle, while still

allowing topographic effects on biomass or vegetation type to be differentiated through the SPOT radiances. Of the thirty classes, trees were typically in classes < 9, bare soil in classes > 25 and grass cover between these two. Classes greater than nine were therefore removed from the data array for clarity. These images were examined and contrasted at a zoom level of 1:10 000 to confirm that there has been no perceptible deforestation during the monitoring period (see Appendix 2).

Cloud-free images were unavailable for the project area at Mt Vernon and Southern Central. Thus, the image analysis was substantiated by a site visit by a Redd Forests Project Manager. The tracklogs from this visit are available for review.

These findings were confirmed by passive monitoring from the landowner, who reported that no fire events have occurred since the project's beginning. This was also supported through advice from the Tasmanian Fire Service.

To further check these reports, a site visit was conducted through the RFPA on the 9 November 2010 with Redd Forests and the landowner. This site visit confirmed no fire events have occurred during the project period commencing March 2010. In addition to fire monitoring, there is no evidence of any damage from other forms of natural disturbance such as insects.

There was therefore no need to further calculate deforestation and associated carbon stock changes from natural disturbance.

Illegal logging

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.

This was confirmed by the completion of a Preliminary Rural Appraisal. Between November 16 and 26 2010, key stakeholders in the timber industry were contacted (see the results in Table No. 02) and absolutely ruled out any risk of illegal logging. According to the Monitoring Plan, there is no further need for additional PRAs at future monitoring events.

Table No. 02. Key stakeholders' response to the question: *Is there potential for illegal extraction of trees from the project area?*

Name of participant:	Name of organisation:	Date:	Means of communication:	Response:
Mark Cornelius	Landowner TOG representative	24 – 11 – 2010	Face to face	None whatsoever – there is no illegal logging in Tasmania.
John Cameron	Landowner	25 – 11 – 2010	Telephone	No potential – not an issue in Tasmania
Roderic O'Connor	Landowner Director of The Land Conservancy	24 – 11 – 2010	Telephone	Only firewood collection – no logging
Bric Milligan	Forestry Tasmania	16 – 11 – 2010	Face to face	No illegal logging ever

				recorded
Andrew Morgan	Director, SFM	26 – 11 – 2010	Telephone	Unheard of in Tasmania – no potential

A site visit to through the Redd Forests Project area with the landowner on 9 November 2010, revealed no evidence of any timber extraction. Therefore, there was no need to determine an area potentially impacted by illegal logging or conduct any sample plots to quantify the figures. There will be no future monitoring of illegal logging parameters beyond comparison of satellite images to ensure that the forested area in the project remain intact.

Leakage

For this project, leakage is not a significant risk. This is based on an assessment of both activity shifting and market leakage, in accordance with Step 5 of the methodology.

Activity Shifting:

The landowner does not hold any other forested properties in Australia, and therefore there is no opportunity for leakage through activity shifting.

Market Leakage:

Using the annual report from the Tasmanian Forest Practices Authority, figures on extraction rates and harvesting methods can be attained and compared annually. Figure No. 02 shows a steady decline in extraction rates from native forests across Tasmania (i.e. excluding the first two treatments).

Figure No. 02. Forest area under different harvesting regimes (2000 – 2010)¹.

¹ Tasmanian Forest Practices Authority Annual Reports, www.fpa.tas.gov.au<accessed 11/3/2011>

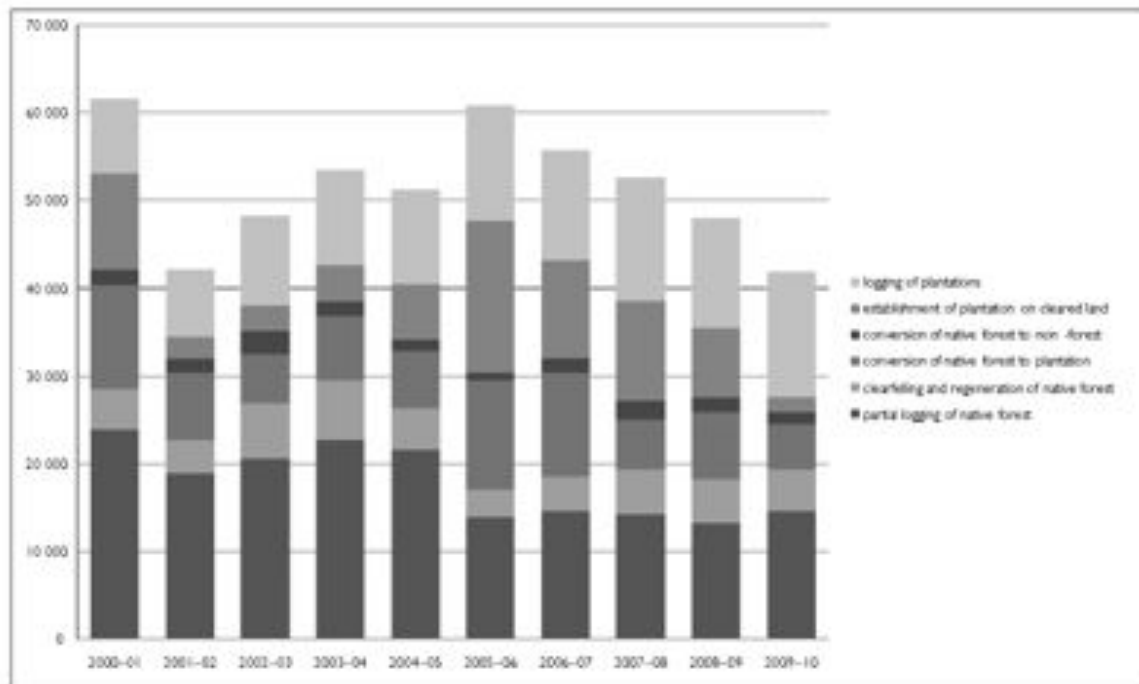


Figure 1.3.1 Area of forest (hectares) by various treatments from 2000–2010

Data from Private Forests Tasmania further confirms that there is a downward trend in harvested volumes from native forests on private land in Tasmania. This is the most likely area for market leakage from the project to occur, due to the quota-oriented harvesting on public land and the sawlog-oriented harvesting on the mainland (see PDD for more details). Figures No. 3-5 demonstrate and quantify the declining timber volume extracted from private native forests in Tasmania.

Figure No. 03. The volume of native hardwood extracted per year declined by an average of more than 15% between 2000 and 2005.²

² Private Forests Tasmania, annual reports,
http://www.privateforests.tas.gov.au/publications/annual_reports <accessed 11/3/2011>

	2000-01	2001-02	2002-03	2003-04	2004-05
NATIVE HARDWOOD			no fuelwood	no fuelwood	no fuelwood
Hardwood Sawlogs, Veneer & Ply Logs	125,923	140,972	100,970	119,551	96,816
Hardwood Pulpwood	1,912,616	1,669,348	1,792,636	1,668,762	1,628,739
Minor Log Products inc Fuelwood	14,550	2,551	591	814	446
Total	2,053,089	1,812,871	1,894,197	1,789,127	1,726,001
PLANTATION HARDWOOD					
Plantation Hardwood Sawlogs, Veneer and Ply Logs	-	-	-	6,851	3,408
Plantation Hardwood Pulpwood	238,104	511,436	628,921	549,988	799,280
Minor Log Products	-	-	-	-	-
Total	238,104	511,436	628,921	556,839	802,688
PLANTATION SOFTWOOD					
Softwood Sawlogs, Veneer and Ply logs	97,323	166,455	110,619	146,681	133,422
Softwood Pulpwood	286,642	189,462	205,887	247,273	170,701
Minor Log Products	136	1,198	-	54	415
Total	384,101	357,115	316,506	394,008	304,538
GRAND TOTAL	2,675,294	2,681,422	2,839,624	2,739,974	2,833,227

Comments for 2004-05 data

1. Information has been sourced from over 70 producers throughout the State.
2. Data has been aggregated to maintain the confidentiality of individual's information.
3. Fuelwood information is now not included because of the difficulty of obtaining enough data from the many producers.

4. There is an increasing amount of hardwood plantation resources being harvested.
5. Native forest products make up about 60% of the private wood harvest.
6. Hardwood plantation products make up about 30% of the private wood harvest.
7. Softwood plantation products make up about 10% of the private wood harvest.
8. Private property forests provided 39% of the State's total wood products, with the majority of hardwood plantation harvest occurring from private plantations.

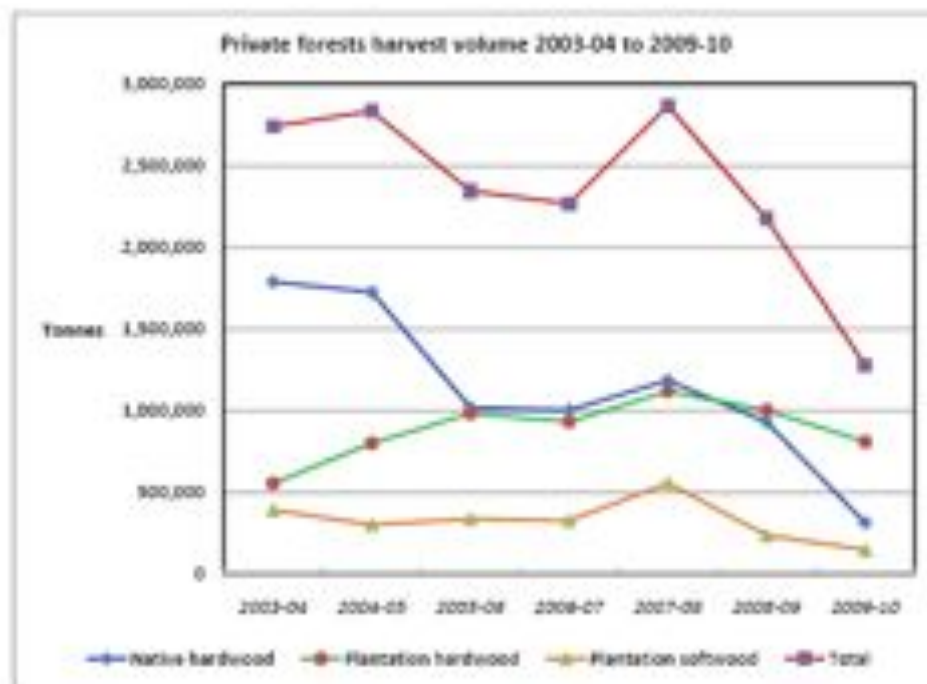
Figure No. 04. The quantity of native hardwood extracted per year fell by more than 60% in 2010, after experiencing relatively constant levels for the previous four years.³

Private forests harvest volumes 2005-06 to 2009-10 (tonnes)

	2005-06 No Fuel wood	2006-07 No Fuel wood	2007-08 No Fuel wood	2008-09 No Fuel wood	2009-10 No Fuel wood
NATIVE HARDWOOD					
Hardwood Sawlog, Veneer & Ply	69,507	49,762	51,300	35,405	52,343
Hardwood Pulpwood	944,095	955,879	1,134,115	991,541	989,343
Minor Log products	3,472	470	478	912	2,420
Total	1,017,074	1,006,111	1,185,893	927,858	1,044,106
PLANTATION HARDWOOD					
Hardwood Sawlog, Veneer & Ply	11,498	11,987	14,800	4,977	3,712
Hardwood Pulpwood	473,208	621,879	1,403,394	999,512	907,415
Minor Log Products	--	--	--	--	--
Total	484,706	633,866	1,418,194	1,004,489	911,127
PLANTATION SOFTWOOD					
Softwood Sawlog, Veneer & Ply	121,381	198,965	201,371	48,184	64,991
Pulpwood	217,903	128,964	354,290	192,378	85,899
Minor Log Products	38	1,181	3,871	3	359
Total	339,322	329,110	559,532	240,565	151,249
GRAND TOTAL	1,356,396	1,335,281	1,745,425	1,168,912	1,195,355

³ Private Forests Tasmania, annual reports,
http://www.privateforests.tas.gov.au/publications/annual_reports <accessed 11/3/2011>

Figure No. 05. The quantity of native hardwood extracted per year has fallen steadily over the past decade.⁴



Using the data from the Tasmanian Forest Practices Authority, the average area of native forest subjected to ‘partial logging’ on private land was 9840 hectares per annum between 2000 and 2009.

Using data from Private Forests Tasmania, the average harvest volume for native hardwood (including sawlog, veneer, ply, pulp wood and ‘minor log products’) was 1,373,233 tonnes per annum for the same period.

In the year 2009-2010, the total volume of extracted timber was 1,104,911 tonnes. This reflects a 19.5% decline from the average volume of 1, 373, 233t for the last ten years. This volume was extracted from 6 865ha, i.e. a 30% decline from the average area of 9840ha over the previous decade. These figures demonstrate that there has been no shift in timber harvesting due to market leakage, and a leakage factor of zero was still considered appropriate.

The FPPs issued over the year 2010-2011 will not be available until after the end of the financial year. These figures will be used for assessment at the next monitoring event.

Uncertainty

Estimates of uncertainty have not changed during the first monitoring period.

⁴ Private Forests Tasmania, annual reports,
http://www.privateforests.tas.gov.au/publications/annual_reports <accessed 11/3/2011>rec

The main source of uncertainty in the baseline scenario derives from uncertainty surrounding projected harvest levels. The landowner has an excellent understanding of the land's productivity; has maintained good records throughout his ownership; and has closely supervised harvesting operations in the past. It was therefore possible to develop a very precise baseline scenario for the property and be confident in the proponent's ability to define and implement these plans in the absence of IFM project activities. This suggests that uncertainty surrounding harvesting projections is as low as 2%. However, because this is the first IFM project in the world and there are therefore limited precedents or guidelines in developing a baseline scenario, a more conservative estimate of 5% uncertainty was utilised. In the early years of project activities, such conservatism remains justified.

Uncertainty from sampling carbon stocks is based upon the original fieldwork, with the variance calculated by using the Winrock Sampling Calculator. The uncertainty remained below 10% (within a 90% confidence interval) for all strata. This is the main source of uncertainty in the project scenario. As detailed in the PDD, uncertainty is effectively non-existent with respect to project area, as GIS programs are used to truth the PI layer and cadastral parcels against satellite images obtained from GoogleEarth and SPOT (or a close equivalent).

The total uncertainty for the project was calculated by summing the uncertainty levels within the project and baseline scenarios respectively. These values were squared, added together and the square root calculated (in accordance with Equation 25 of the methodology). At the end of this monitoring event, net uncertainty remains below 10% within a 90% confidence interval, i.e. within the parameters identified in the VCS 2007.1 Guidelines.

Site visit and assessment

Jarrah Vercoe, who holds the position of Project Manager with Redd Forests, has completed the following monitoring tasks on behalf of the project proponent:

Task:	Status:
Recent cadastral parcels were compared to the original files to ensure that the property boundaries have not been changed	Yes (08-12-2010)
If changes in project area were detected, the calculations were adjusted accordingly (Equations 5, 8, 9, 16, 25, 26).	N/A
The KML/KMZ files outlining the forested area were imposed on a recent satellite image and compared to the original files to ensure that forest boundaries and aboveground biomass have been maintained (subject to availability of a suitable image) OR A site visit through all forested areas of the property was completed to detect any natural disturbance in the forested area	Yes (08-02-2011) Yes (08-11-2010)
If natural disturbance was detected, the calculations were	N/A

adjusted accordingly (Equations 17, 19, 20).	
A forest inventory was developed to assess changes in carbon stocks within a 90% confidence interval (every five years). Any changes and uncertainty were incorporated in the calculations (Equation 1, 3, 4, 25 and 26).	N/A
The fire plan was checked and updated	Yes (01/12/2010)
Market leakage was assessed by comparing timber extraction rates from private native forests over time.	Yes (15/03/2011)

Ex post estimation of GHG emissions and removals

The project start date was 1 March 2010. Therefore, on 28 February 2011, the project proponent and developer are seeking to have one year's worth of GHG emissions and reductions verified.

The project avoids 86, 404 tCO₂-e being emitted each year compared with the business-as-usual conditions of ongoing selective logging. In this way, it prevents net emissions of 2,160,098 tCO₂-e by the project's completion in 2034. The annual avoided emissions and the corresponding VCU's being claimed per strata are detailed in Table No. 03.

Table No. 03. GHG emission reductions for the project area per year.

Stratum:	Carbon emissions avoided by the establishment of an Improved Forest Management project (tCO₂-e/year):	Voluntary carbon units generated once uncertainty and the VCS buffer have been considered (tCO₂-e/year):
Interlaken	15, 168	12, 893
Lake Echo	6, 189	5, 260
Lagoon of Islands (high biomass)	29, 228	24, 844
Lagoon of Islands (low biomass)	21, 900	18, 615
Mt Vernon	4, 994	4, 245
Southern Central	8, 925	7, 586
Total:	86, 404	73, 443

The monitoring report, related site visits and desktop assessments have been undertaken in accordance with the endorsed monitoring plan for the project area.

Dated:

Signed:

Appendix 1: Satellite images used to assess deforestation during the monitoring period.

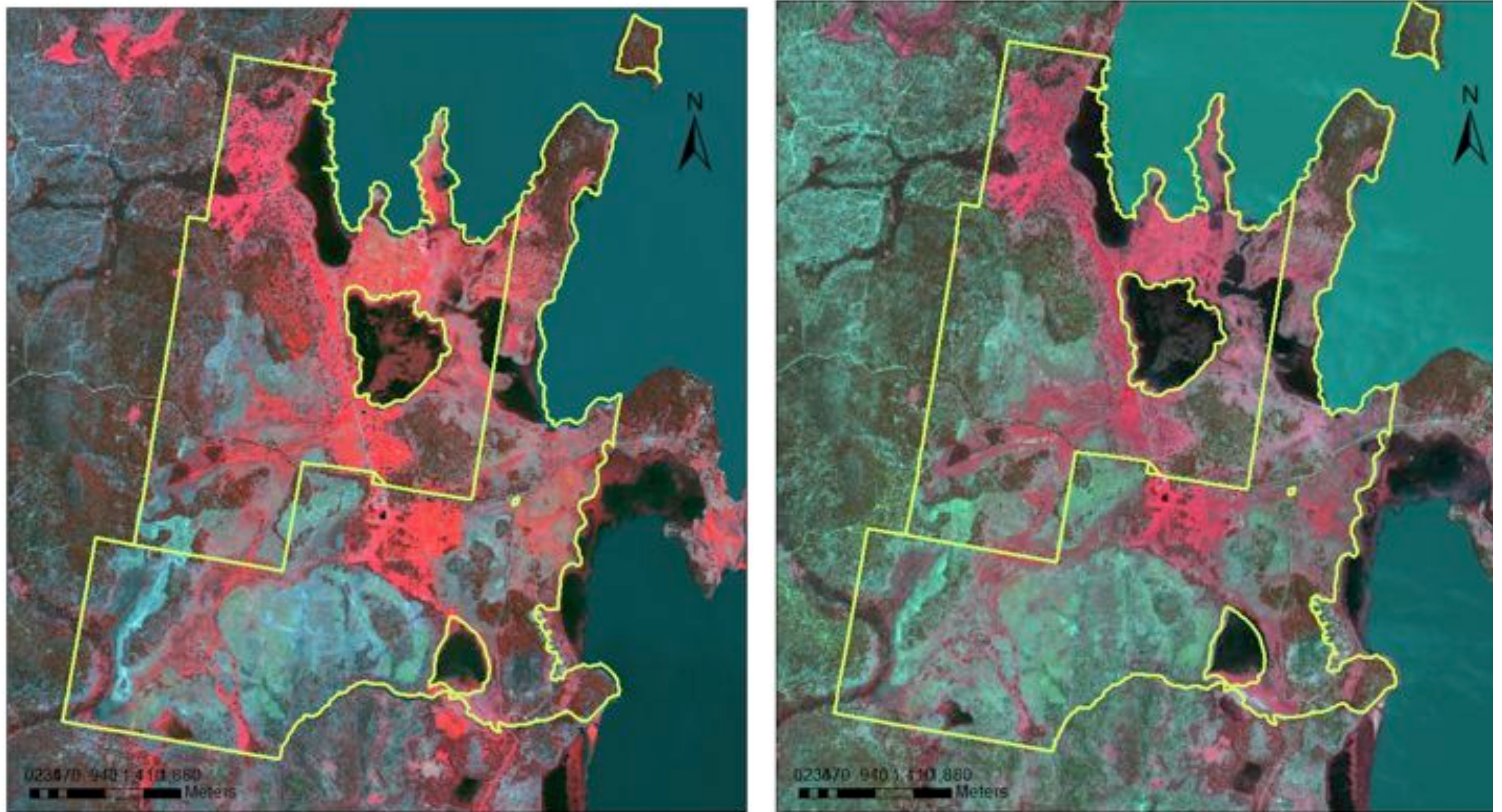


Figure No. 02. Satellite images taken of Interlaken on 10 January 2010 (left) and 9 January 2011 (right).

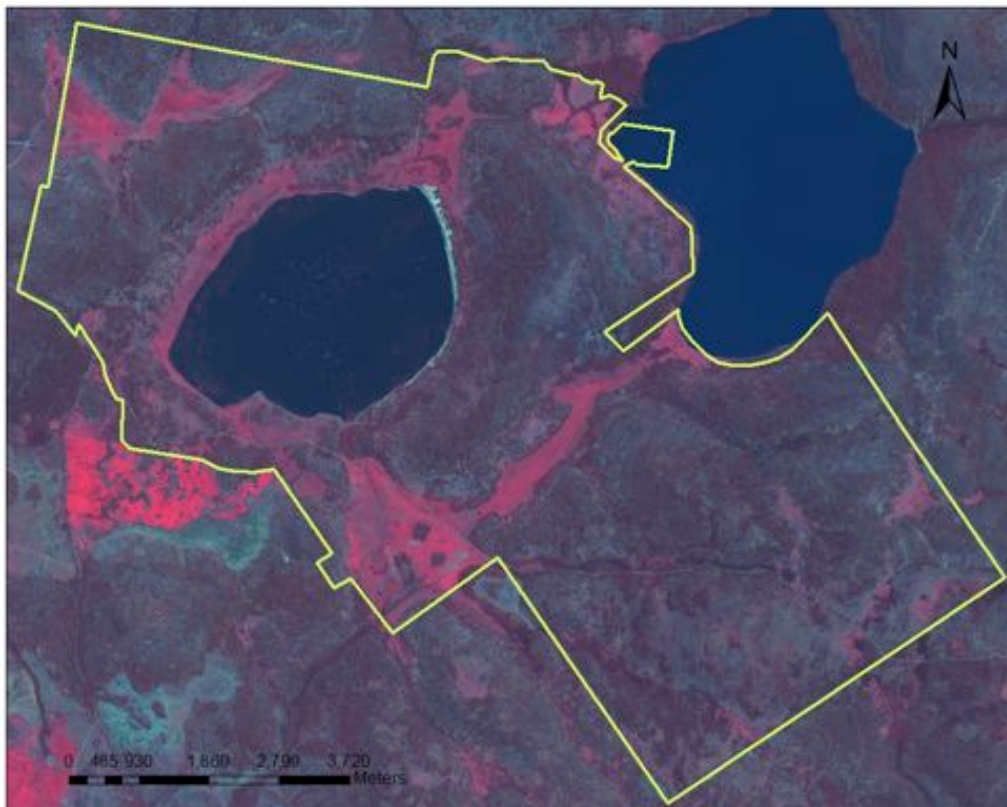


Figure No. 03. Satellite images taken of Lagoon of Islands on 10 January 2010 (above) and 9 January 2011 (below).





Figure No. 04. Satellite images taken of Lake Echo on 15 December 2009 (above) and 9 January 2011 (below).

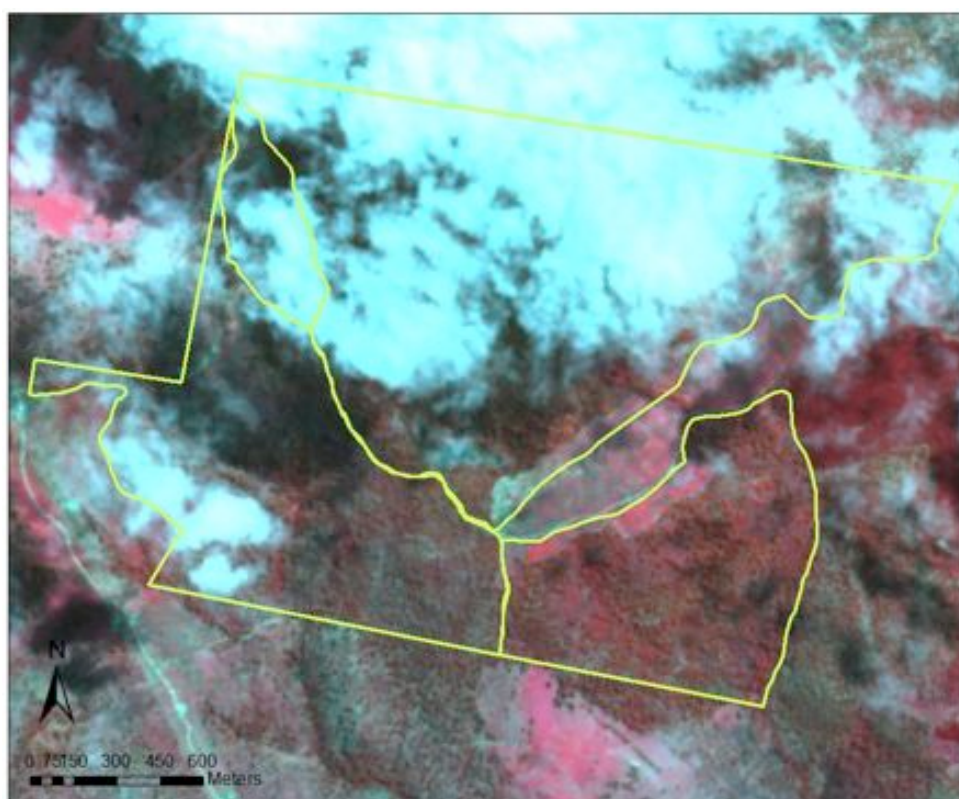
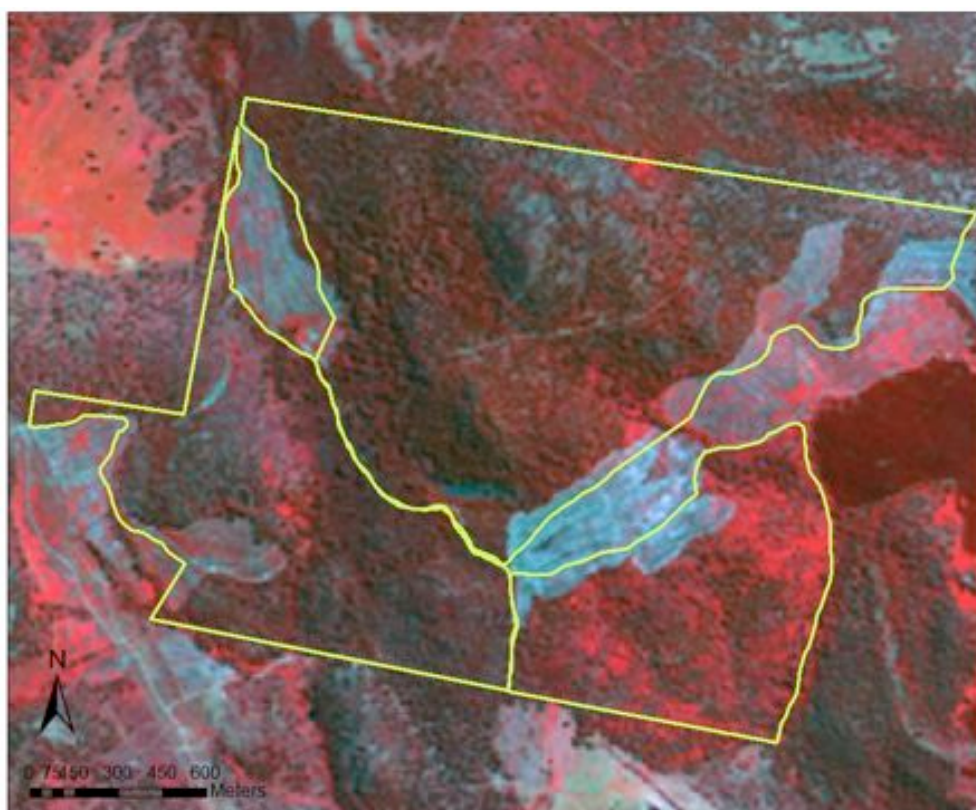


Figure No. 05. Satellite images taken of Mt Vernon on 10 January 2010 (above) and 9 January 2011 (below).

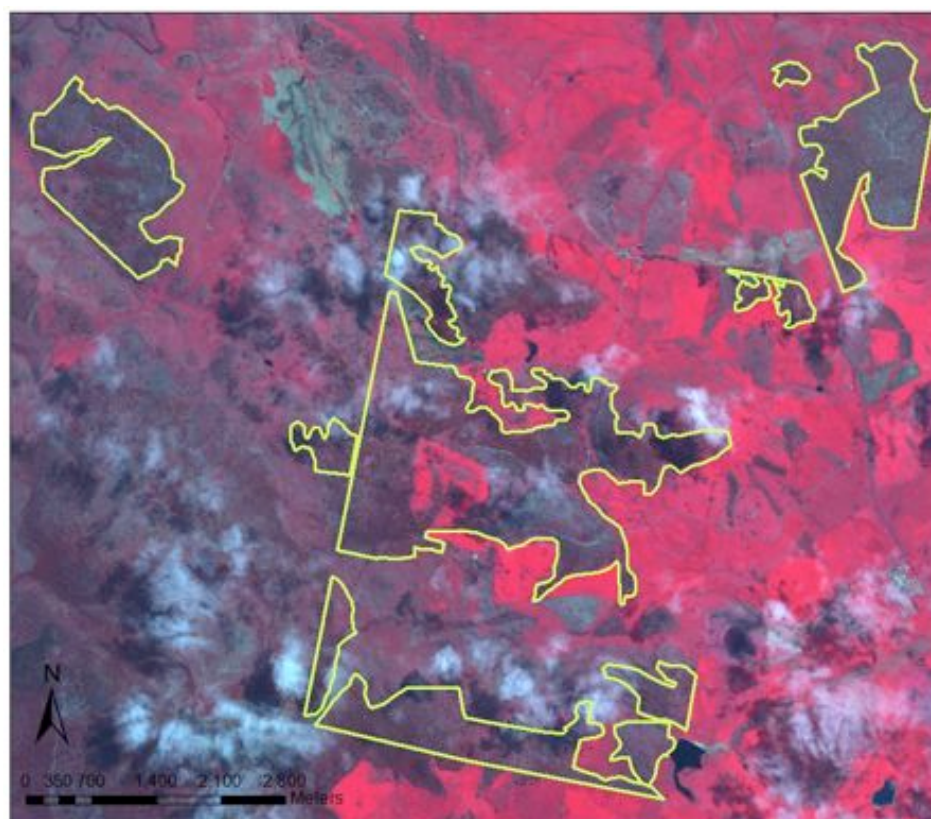
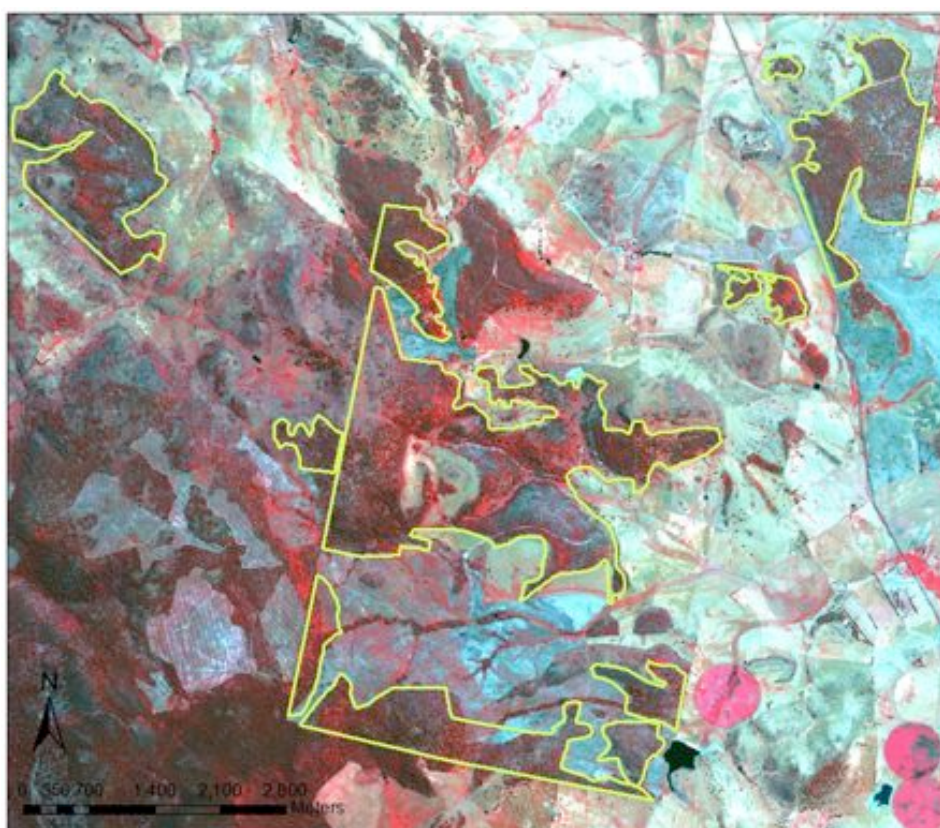


Figure No. 06. Satellite images taken of Southernfield on 10 January 2010 (above) and 9 January 2011 (below).

Appendix 2. Iso Cluster unsupervised classification of satellite images was used to assess deforestation during the monitoring period.

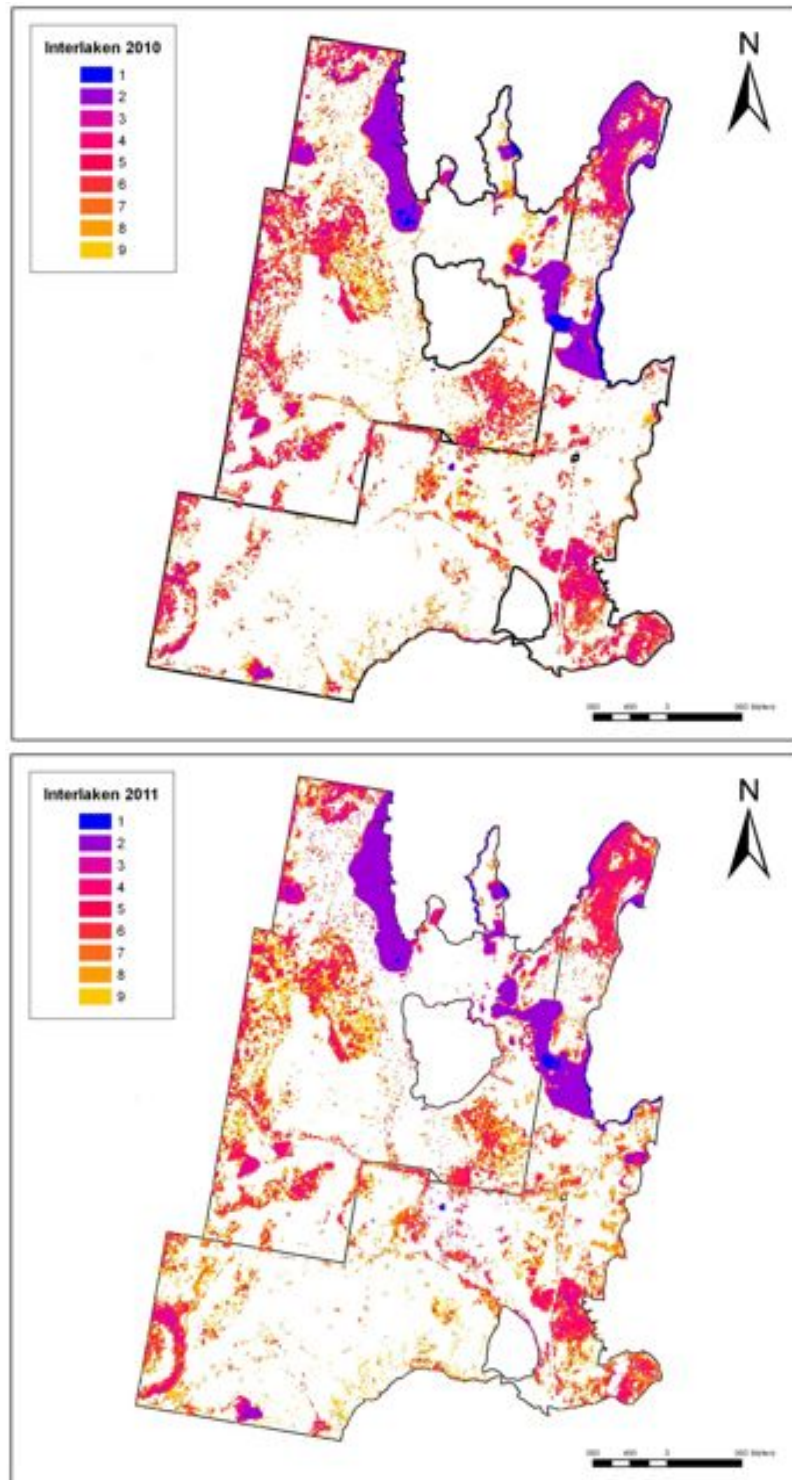


Figure No. 07. Satellite images taken of Interlaken on 10 January 2010 (above) and 9 January 2011 (below) were compared using vegetation classification systems, confirming that there has been no deforestation since the project's start date.

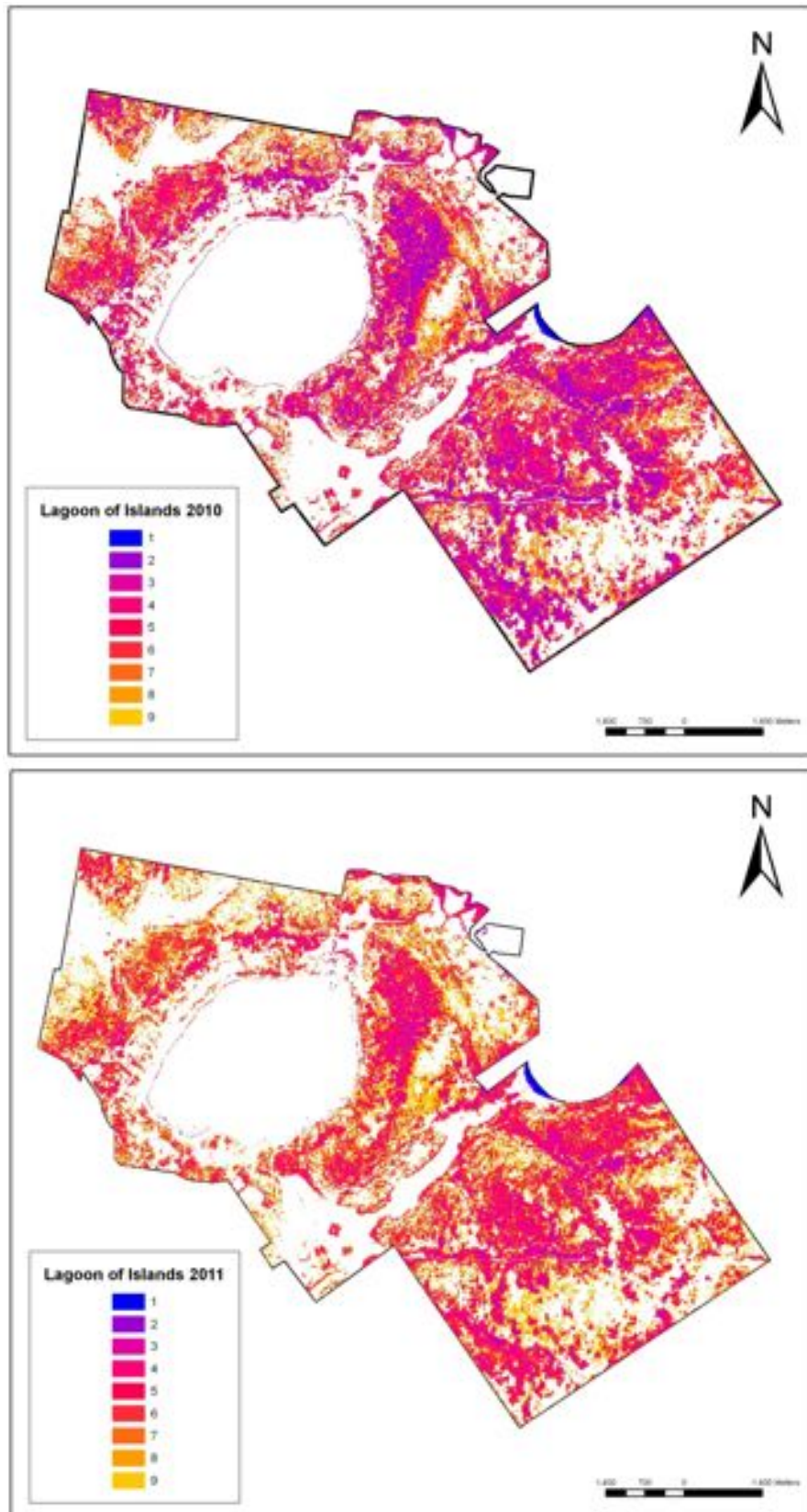


Figure No. 08. Satellite images of Lagoon of Islands on 10 January 2010 (above) and 9 January 2011 (below) were compared using vegetation classification systems, confirming that there has been no deforestation since the project's start date.

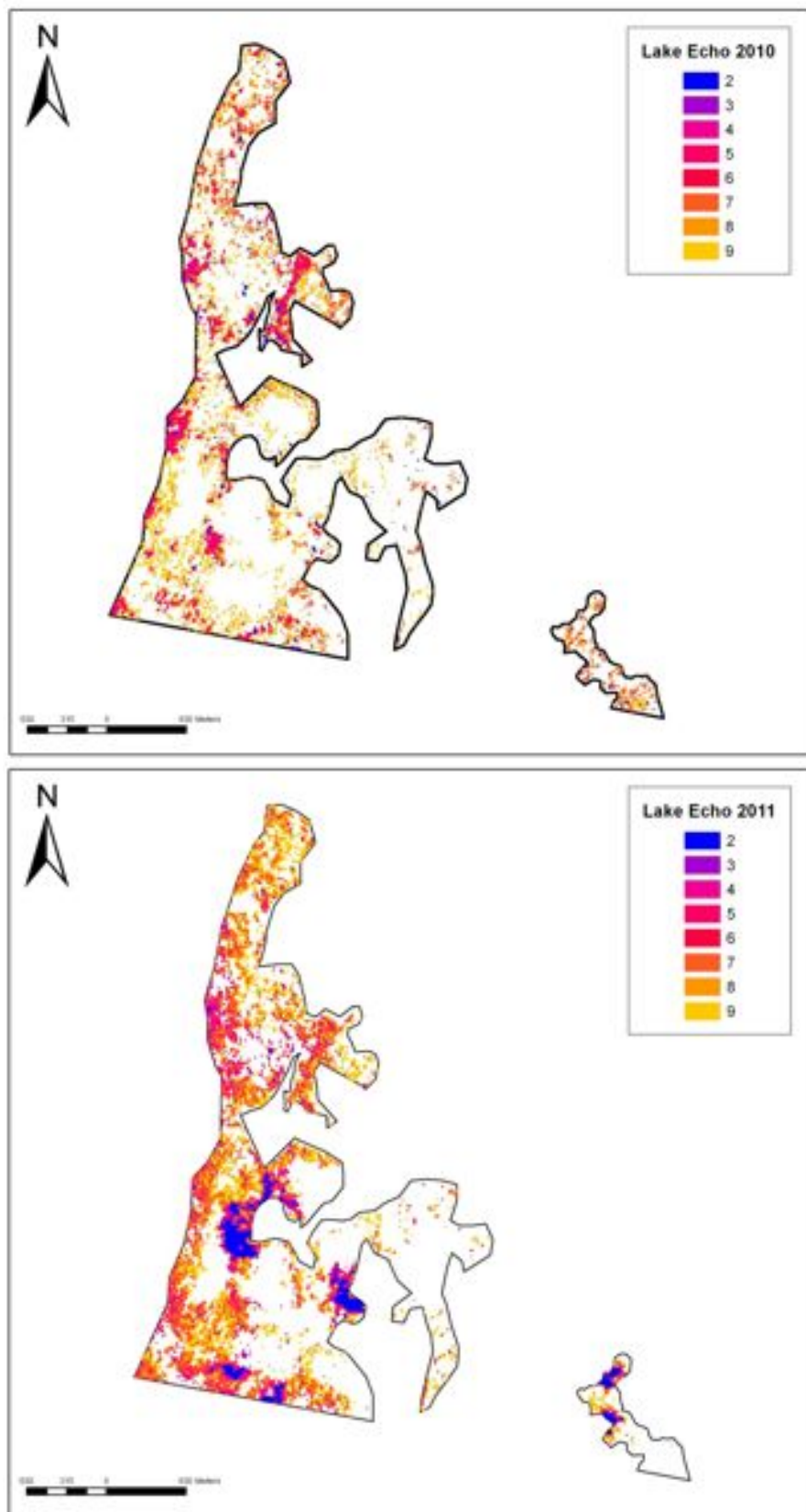


Figure No. 09. Satellite images taken of Lake Echo on 15 December 2009 (above) and 9 January 2011 (below) were compared using vegetation classification systems, confirming that there has been no deforestation since the project's start date.

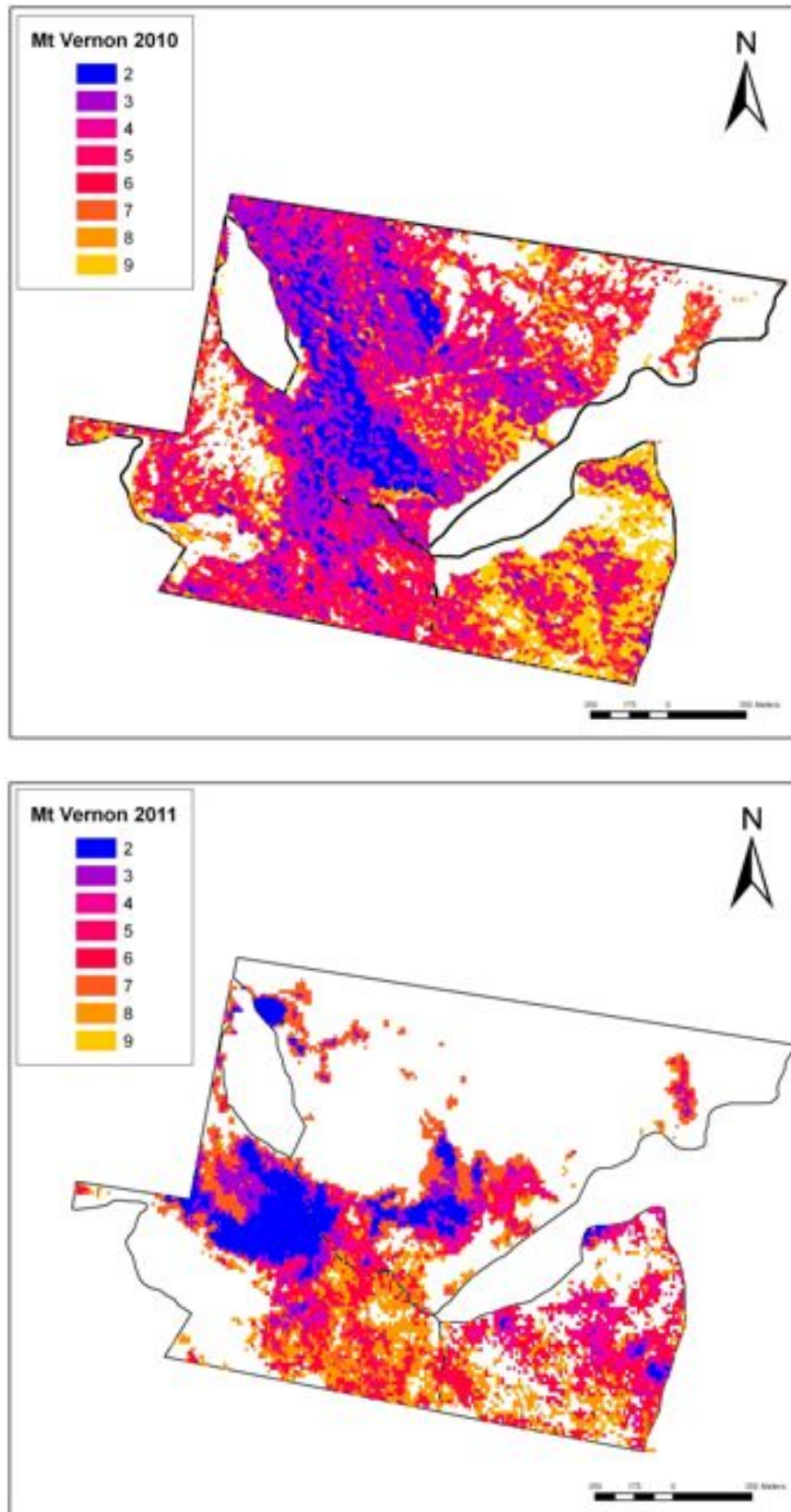


Figure No. 10. Satellite images taken of Mt Vernon on 10 January 2010 (above) and 9 January 2011 (below) were compared using vegetation classification systems, confirming that there has been no deforestation since the project's start date. Tracklogs from the site visit (to assess cloud-covered areas) are available for review.

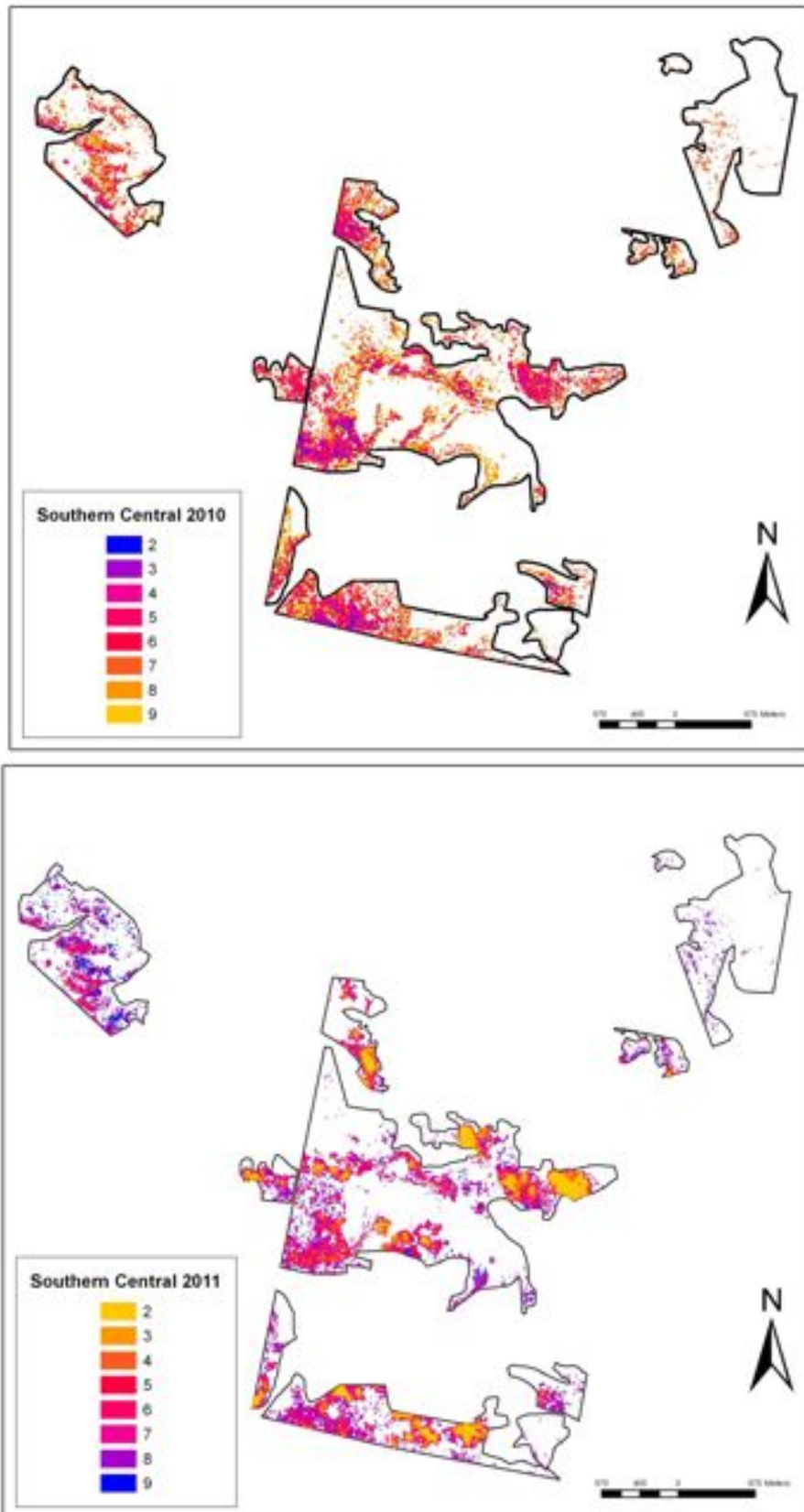


Figure No. 11. Satellite images taken of Southern Central on 10 January 2010 (above) and 9 January 2011 (below) were compared using vegetation classification systems, confirming that there has been no deforestation since the project's start date. Tracklogs from the site visit (to assess cloud-covered areas) are available for review.