



**rainforest
rescue**
Protect Rainforests Forever

RESTORATION JOURNAL

Joe Reichl

Land Manager, Rainforest Rescue

*A restoration project from the heart
for the heart of the Daintree*



Practical - grass roots - direct action!

Hi I'm Joe Reichl, Rainforest Rescue's Land Manager in the Daintree.

Rainforest Rescue focuses on protecting high conservation value rainforest with critical biodiversity, and restoring land that provides habitat corridors for native species under threat.

In the Daintree lowlands we have bought (or are in the process of buying) 26 properties*. All are protected forever except one - Lot 46 Cape Tribulation Road, Diwan.

For the last four years, I have been working alongside a team of dedicated staff and volunteers to restore Lot 46's rainforest. And I'm proud to say, each month, hectare by hectare, we are closer to that goal.

However, my biggest concern right now is that we cannot protect this amazing place.



My hope is that as you read about how we have transformed the future of Lot 46 and consequently all the rainforest that surrounds this land, you will be as moved and motivated as we are to help protect it forever.

Joe Reichl

* as at November 2014

Background to this transformative tale

This story starts in 2010 when Lot 46 Cape Tribulation Road was offered for sale on the open market. Our buy-back strategy had previously identified this 27.66 hectare property, among others, as a vital nature corridor needing protection within the Daintree lowlands.

Each time I drove past the 'for sale' sign my heart filled with dread. My biggest concern was the possibility that private investors would buy and destroy the remaining rainforest on the property.

Having lived in the Daintree lowlands for many years, I was, and continue to be, shocked and horrified by the ongoing destruction of rainforest for development and agriculture. Rainforest that we work so hard to protect!

Unquestionably Lot 46 was a significant area in need of urgent defence. Being listed for sale on the open market meant we simply had no time to lose. We had to act quickly.

Fortunately, at this crucial time the purchase was approved and we were able to successfully secure the property and take it off the open market through a bank loan.

Now we urgently need to raise funds to protect Lot 46 forever. We need to repay the loan to protect Lot 46 in perpetuity and make it the Reserve it deserves to be.

But first, let me share my story of the restoration at the heart of the Daintree...



The heart of the Daintree lowlands

What makes Lot 46 Cape Tribulation Road, Diwan so important?

Every time I stand on Lot 46, I marvel at the incredible opportunity I have been given to restore a small but vital piece of rainforest with ancient connections to Gondwana – changing not only its future, but protecting its past and the biodiversity of the area.

Lot 46 is in the heart of the Daintree lowlands rainforest and is an incredibly special piece of land.

It sits at the base of the spectacular Thornton Peak, and provides an important link between the upland and lowland rainforest.

Surveys of the rainforest on and adjoining Lot 46 have recorded 14 rare, three endangered and two vulnerable species.

And if that isn't enough reason to protect Lot 46, it also provides critical habitat and connectivity for the endangered southern Cassowary, and other species including the Pygmy possum and Bennett's tree kangaroo.



An abused and neglected past

When we purchased Lot 46 the future of the rainforest on and near it was forever changed; however the absolute impact we would make is something we only gradually came to understand.

We had a good knowledge of its history - in the late 1960s, 20 hectares had been cleared and an attempt made at farming bananas and pineapples, and in the 1980s an oil palm plantation further degraded the land.

But the weeds and tree-high bramble meant we couldn't really appreciate the level of destruction for some time.

As we progressively cleared the brambles and moved deeper into the property, it became apparent just how much rainforest had been cleared and the scale of restoration ahead.

To be honest at times I felt totally overwhelmed by the enormity of the task, and at others totally excited by the opportunity to transform Lot 46's future.



BEFORE: Some of the 20 hectares of cleared area overgrown with weeds and bramble.

Planning the restoration

In October 2011 we completed a comprehensive management plan to guide our activities.

We divided the property into six zones and each zone was further divided into plots. This meant the property could be strategically tackled in manageable chunks.

The plan included annual monitoring and measuring of planted trees; ensuring an adaptive management approach.

We estimated 89,600 trees would be established. Around 30,600* to be planted and, as weeds were removed, another 59,000 would naturally regenerate.

All trees would have local provenance and be grown in our own Daintree rainforest plant nursery from seeds we collected on nearby Rainforest Rescue properties.

Plants include a mix of pioneer and mature phase species, with many being Cassowary food plants. This in turn promotes natural regeneration as Cassowaries eat the fruits and disperse the seeds (the reason they have a reputation as the rainforest gardener!).



* We have already passed that goal. Our revised forecast is around 37,000 trees.



An avenue of 10 metre high oil palms lined the driveway, along with another row extending to Coopers Creek. (This photo was taken after all the weeds around the driveway were removed).

I was anxious to remove the oil palms from near the creek as quickly as possible as they had already begun proliferating downstream as far as the mangroves. My concern was that this weedy species would quickly become a monoculture in the mangrove areas and I was determined to prevent this.

We've destroyed all 120 mature oil palms on the property and are gradually working to remove all regrowth.

*Aerial views of the property:**



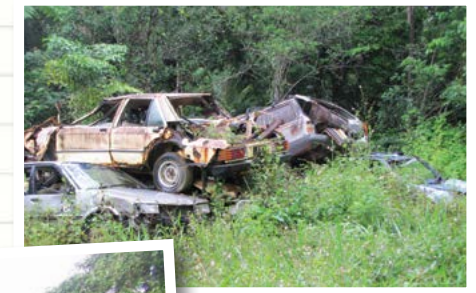
* the boundary markings are guides only

180 tonnes of rubbish was removed



The bramble was so thick and deep in places it hid whole car bodies.

Car bodies, rubbish and derelict farm buildings littered the site.



Re-planting the rainforest

Over time we have fine-tuned our planning, planting designs, and methods. In the early days it took five people a day to plant 300 trees (mostly because we hand dug holes and planted big trees). Now, with our new methods, two people plant 500 trees in the same time (our record is 850 trees in one day).

Through measuring and monitoring we've also pioneered new planting regimes. We observed that closer plantings led to more competition for light among the trees, faster growth, fewer weeds, and less tree losses. As seedlings were forced to grow straight up to compete for light (like they would in a naturally regenerating and growing rainforest), essential leaf litter accumulation and canopy closure sped up.

I've been working with noted Rainforest Ecologist, Dr Robert Kooyman (right), to annually measure tree growth rates.



The foreground seedlings were planted nine months earlier. In the background is naturally regenerated forest.

Robert with Edie Beitzel, Daintree Nursery Manager, measuring seedlings planted in 2012.

Before we began planting, my wife Sandy (who works in the nursery), and I walked the length and breadth of the property noting all tree species growing. This helped us identify those we didn't need more of.

We planned accordingly for the appropriate species to be propagated in the nursery.



All seeds are collected on our properties.

Our nursery grows over 20,000 seedlings each year. All are provincial species and are planted on our properties.



June 2014



June 2014

We've planted nearly 37,000 trees with a survival rate of 98%!

I was itching to start!

Three days after we settled the purchase of the property our work began! We immediately started slashing and preparing the land for planting, and within one week I had already planted my first seedling... Very satisfying!



October 2010



Zone 1 (the first area we tackled) before weeds and rubbish were removed.

October 2010



In the first wet season we planted 3,000 trees completing Zone 1! A great sense of achievement and the perfect boost to keep up the morale for the tough times ahead!

Now those trees are over eight metres tall with a fully enclosed canopy and a beautiful carpet of leaf litter.

November 2014



One of many exciting tree species on Lot 46, *Idiospermum australiense* (Idiot Fruit) was believed extinct until 1971. It's only found in the few square kilometres around Lot 46 and on the foothills of Mt Bellenden Ker and Bartle Frere. The fruit is poisonous and can't be dispersed by most animals, so we do our bit to ensure its local survival by including them in our planting program.



To date we've planted 146 tree species



Zone 2

April 2012

The Cassowary is standing alongside a Cassowary Plum tree planted minutes earlier!



I estimate the juvenile was 12 months old as his colours had developed. He is now a resident on the property and regularly checks out our latest restoration works. I've recently seen him accompanied by two chicks.

October 2014



Zone 2 is looking just brilliant! Leaf litter covers the ground, the canopy has closed and naturally occurring regrowth has begun. Birds and animals have returned to the area and have begun dispersing seeds across the property.

Zone 6

2010



2014



...this planting is taking place slightly to the right of the top photo.

June 2014



Over four years and 1,000s of hours have been spent so far restoring this rainforest - much of it by volunteers who have travelled great distances to be involved in the restoration of the land in the heart of the Daintree.

We must protect the heart of the Daintree lowlands forever

When I'm asked why I've worked so hard to restore this land, my response is 'why wouldn't I be passionate about restoring and protecting this vital piece of rainforest?'.

The Daintree rainforest has such ancient connections and contains the most incredible diversity of plants and animals; yet it is only such a small part of Australia's total land mass. I feel very protective of it and want to save every little piece of it I can.

For the past four years I have watched the rainforest return to Lot 46 and this has brought me joy and incredible satisfaction.

Each time I return I can see the difference we are making - I can practically watch the trees grow before my eyes!

We will continue to put our heart and soul (and sweat and tears) into restoring the rainforest on Lot 46.

Please visit us any time you are in the Daintree - come and see and feel what makes Lot 46 so special!

I really believe there is something about this land that inspires people to toil on its behalf, rain or shine!



Now I need your help, please...

Back in 2010 we acted fast on the opportunity to purchase Lot 46. We have spent years reversing its destruction.

Now we must repay the loan in order to continue our work and create the Reserve that will protect the 27.66 hectares of Lot 46, and the rainforest on it, forever.

Please join me in becoming a Guardian of Lot 46.



*Our first planting four years on. Leaf litter - 8+ metre high trees
- naturally occurring regrowth - canopy closure ...perfect result!*

Protecting the heart of the Daintree for future generations



I always feel hope when I see the younger generation excited about rainforest.

Children like four year old Rowan accompany their parents volunteering for tree planting

days. Rowan and his older brother were fascinated by the seedling sprouting from a Cassowary Plum seed. I use these moments as an opportunity to teach the kids about protecting our special flora and fauna.

We are creating their future - let's create one where our ancient rainforest thrives and is protected forever.



Rainforest Rescue is a small, grass-roots conservation organisation with a simple mission - to buy rainforest under threat, and restore and protect it forever.

Volunteers and Rainforest Rescue staff - tree planting in June 2014



*please share this
with a friend*

Rainforest Rescue is a registered not-for-profit organisation with Deductible Gift Recipient status. All donations over \$2 are tax-deductible.

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