Report from the

Waikato Biodiversity Forum

held at Kinleith Forest, Tokoroa
on Friday 1 December 2017

Purposes of the day

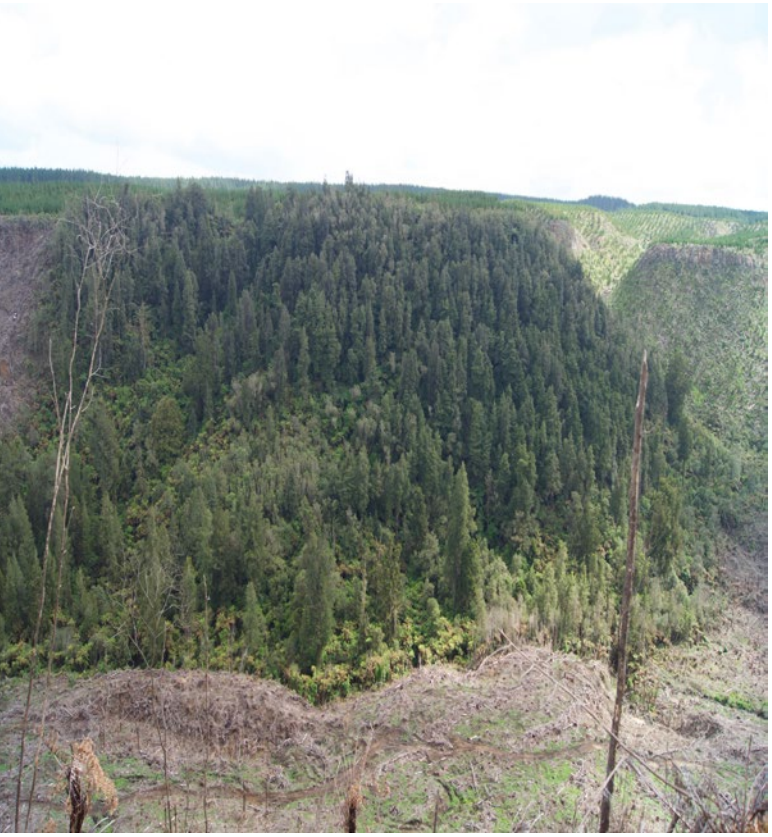
to investigate;

- Biodiversity value of pine forestry, as a productive land use.
- Tangata whenua's relationship with this forest historically and today.
- FSC (Forest Stewardship Council), and other certification's role in setting high standards for biodiversity protection and enhancement.
- Carbon accreditation in plantation forest.

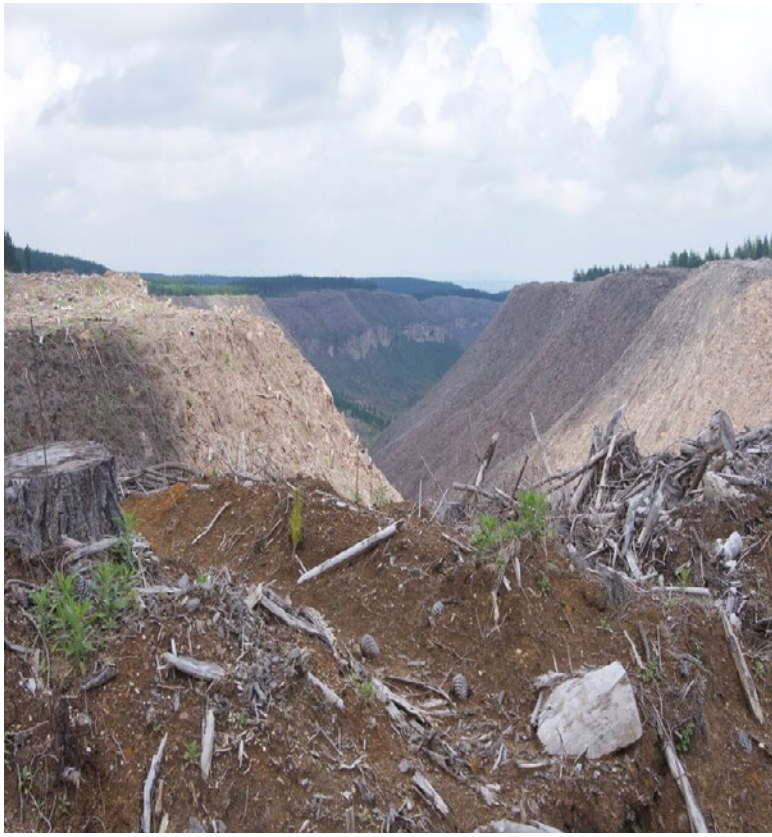
This Biodiversity Forum event was for the first time, an entirely field based day. The event was held in Kinleith Forest, Tokoroa and was focused on the many possibilities for biodiversity enhancement and protection in plantation forest. The day would be led by Robin Black and Sally Strang of Hancock Forest Management, as well as Anaru Begbie of the Raukawa Charitable Trust. After meeting for a 9am registration at our Mossop Rd rendezvous point in Tokoroa, we began the day most appropriately with a karakia from Anaru. This would help to ensure our safety and importantly to set our intentions clearly for the day in an area that was formerly occupied by Ruakawa Tupuna (ancestors). After an H&S talk and briefing from Sally, we were then ready to convoy off to our first site.

Once we arrived at the first site, we were presented with two contrasting landscapes, one being a remaining stand of mature podocarp forest and the other; a landscape of recently clear felled and replanted pines. Historically, the area now known as Kinlieth Forest, was entirely covered in native Podocarp Forest. Then from 1924, when most of the easily fellable trees had been exhausted from the area, it was planted in exotic species, namely Radiata Pine. The reason for this particular stand of climax native forest being spared of the saw, like other similar clusters in the forest, still remains un-known. It may have been deemed to difficult to fell due to steepness, or perhaps it was considered wise to leave examples of the native forest stands of the area for future propagation? Thankfully now, areas of indigenous forest within Kinlieth are protected as both an SNA (significant natural area) and as part of the 10% reserve area which is required to gain FSC (Forest Stewardship Council) certification. Further protection to native forest stands over 5Ha is also offered in plantation forest zones through the New Zealand Forest Accord (1991).

In terms of the physical interventions to protect ecologically and culturally sensitive areas such as, native forest stands, riparian zones, steep slopes and wāhi tapu. A far greater level of care is now taken during harvesting and planting. Harvesting crews now operate with almost surgical like care within Kinlieth



Remanent podocarp forest, Pokaiwhenua Catchment



Harvesting site, Pokaiwhenua Catchment

Forest. This is achieved by setting up large 100' high skyline haulers to extract trees from steep faces, lifting them over riparian vegetation and landing them on constructed skid sites, rather than the traditional method of dragging logs on the ground. This greatly reduces erosion risks and damage to protected zones, while also greatly reducing safety risks for the harvesting crews. The example we viewed, as seen in the accompanying photo had no visible erosion or vegetation damage to the adjacent riparian and native forest areas.

Although this particular harvesting operation was of a very high standard, the quality operations are not all equal and can vary significantly depending on the level of concern taken by harvesting crews and forest managers. Grant Blackie, WRC manager of Waipa zone, commented to the group that this site had been particularly well managed in his opinion. This is testament to the fact that the harvesting crew on this site, Sinton 14, had recently received an environmental award from HFM for its environmental performance in minimising erosion and protecting biodiversity values. The certificates were awarded on site to all crew by SWDC staff and councillors.

The potential or perceived erosion resulting from "clear felling" of trees is of-course a major public concern. Clear felled sites often appear to us as ticking erosion time-bombs, with exposed soils and debris waiting for the next storm to flush them into adjacent waterways. But as mentioned above, the utilization of more environmentally friendly harvesting techniques can greatly lesson erosion.

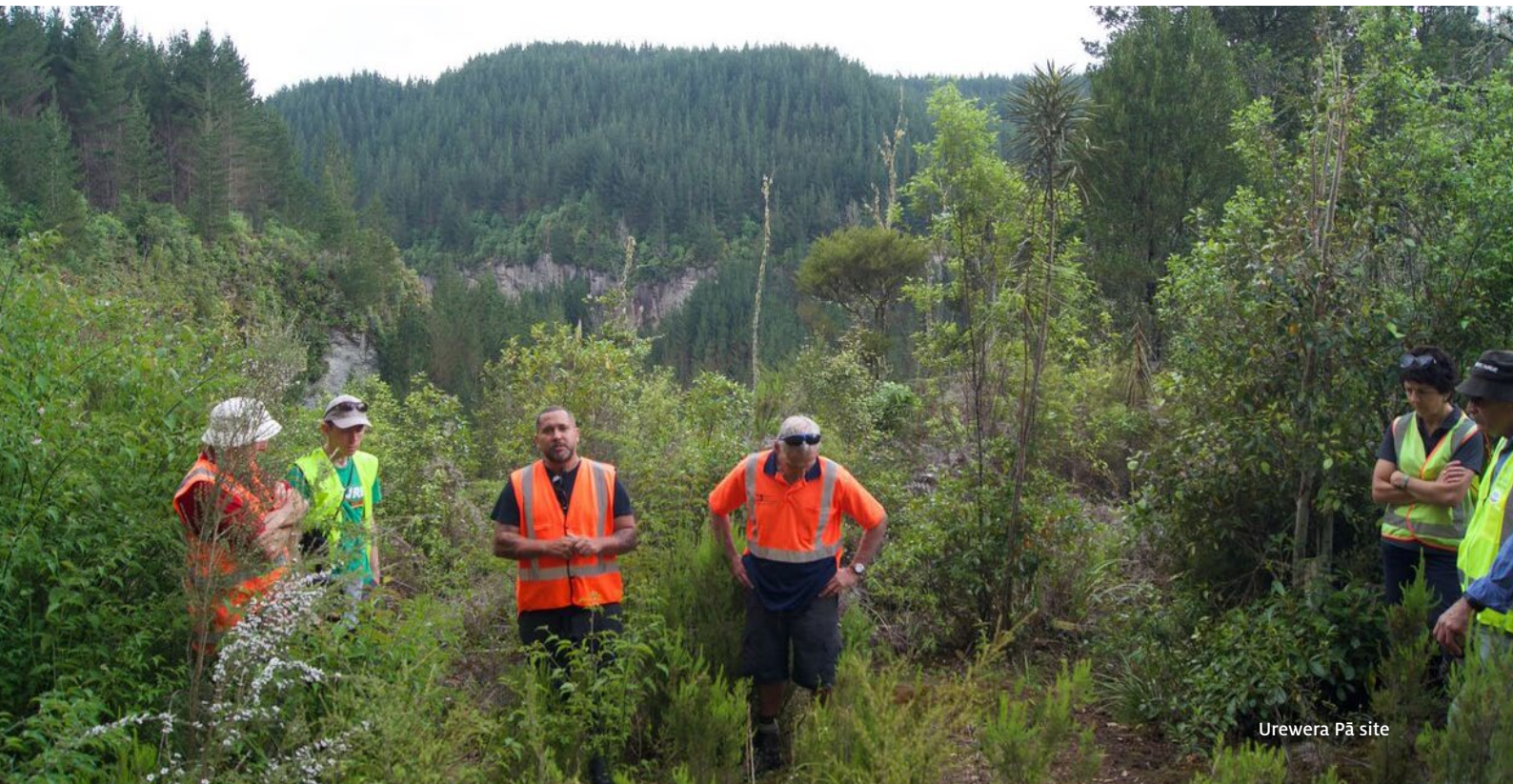
An equally important consideration affecting erosion which can literally be over-looked, is that remaining root systems of trees are still left in-tact underground post harvest. The root systems anchor soils for several years before rotting and counter a lot of potential erosion, which hillsides are far more prone to once converted to pasture, due to the shallow nature of it's root-structure.

This has been demonstrated by the fact that Oji pulp mill, which sources water from the Pokaiwhenua stream, had never needed to stop water extraction due to quality issues in over 50 years, until dairy farming operations began within the upper catchment. Since this time in the mid-2000's there has been a string of operation stoppages due to severe erosion.

HFM NZ is committed to managing the forests to maintain a diversity of indigenous flora and fauna species. This is driven by both HFM's sustainable approach to forestry management, as well as by the same certification and legislative frameworks already mentioned. HFM NZ has undertaken a review to identify all rare, threatened and endangered species either confirmed or suspected to be present in the estate. Management Plans are progressively developed for all species confirmed to be present, focusing initially on those areas where harvesting is imminent. Management plans are prepared with input from Department of Conservation (DOC) and other recognised technical specialists. Any permanent habitat for rare, threatened and endangered species is recorded in the GIS mapping layer as ecological restrictions and taken into account during planning of operations to ensure compliance with the Management Plans.

HFM NZ in conjunction with other forestry companies has also supported two threatened species projects researching the NZ bush falcon and long-tailed bat in plantation forests. In both cases the research is aimed at gaining a better understanding of how those species use plantation forest habitats and developing management recommendations to further enhance their success.

Alongside these projects, crews on the ground are trained by Robin Black to identify threatened species and to record their presence. These are of course the people who are spending more time than any other in the forest, so by developing their skills in this area, it is possible to collect much larger data sets than would otherwise be possible. It also provides the opportunity for workers to gain valuable ecology skills and have a more varied work day while developing a deeper understanding of their environment.



Urewera Pā site

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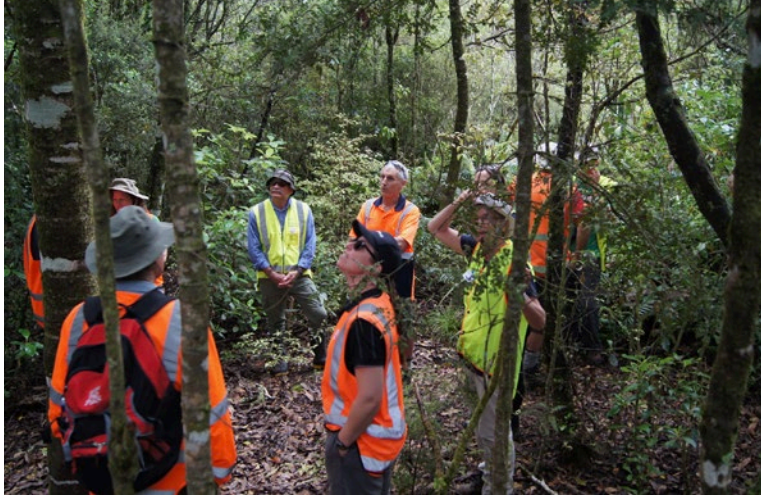
At around 10:30 we arrived at our second site; Urewera Pā. This defensive Pā, is the only Pā site within the Kinleith forest which has never been planted in Radiata Pine, and is therefore very well preserved. Urewera Pā has actually only very recently been reinstated with its original name. Prior to then, it had been known for some time as "Kangaroo Pā", as it lay adjacent to a forestry road bearing the same name. The renaming process was led by the Raukawa Charitable Trust with close support from HFM.

The Raukawa Charitable Trust was set up to manage assets and realise the aspirations of the Raukawa iwi, of who hold Mana Whenua over much of the area now known as Kinleith forest. Anaru Begbie, who whakapapa's back to Raukawa Iwi, has taken on the Ngā wāhi tūturu programme for the Trust. This programme focuses on working closely with Raukawa uri (decedents) and other stakeholders such as Hancock Forest management, to identify, inform, protect, document, and manage sites and areas of importance for the Iwi.

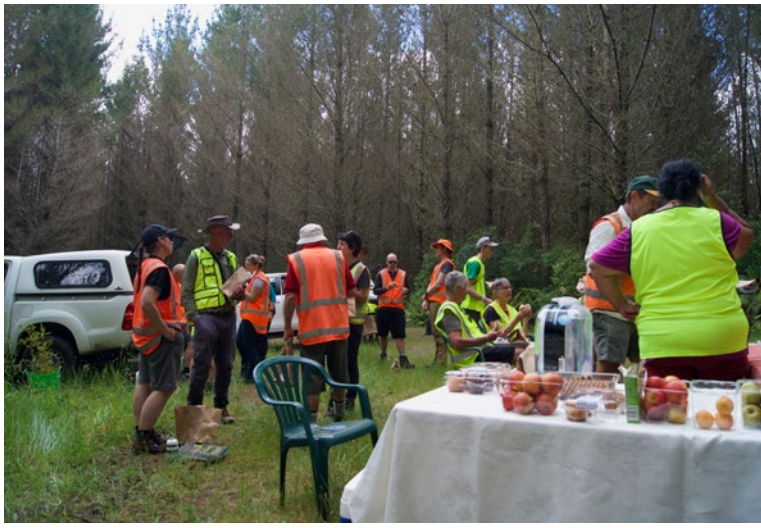
Anaru described the name "Kangaroo Pā", most understandably as being "very offensive" to his people. Consequently, Anaru and his team deemed it to be of upmost importance to restore the original name for the Pā. This was a task that required Anaru to delve into archived maori land Court records and vitally also, kōrero from Raukawa Kaumātua. After this process, the conclusion was made that this site was definitely Urewera Pā. After which a naming ceremony took place at the site in mid 2017.

Anaru explained that forestry workers had been aware of Urewera Pā for several decades before it had been recognised officially by the historic places trust in the mid 90's. Both Anaru and Robin emphasised that the forest workers play a very important role in the identification of historic sites, as they do in the identification and protection of indigenous flora and fauna. Forest workers are encouraged to alert HFM if they come across sites which look like they could have historical importance, even if they just have a "feeling" that a site may be important.

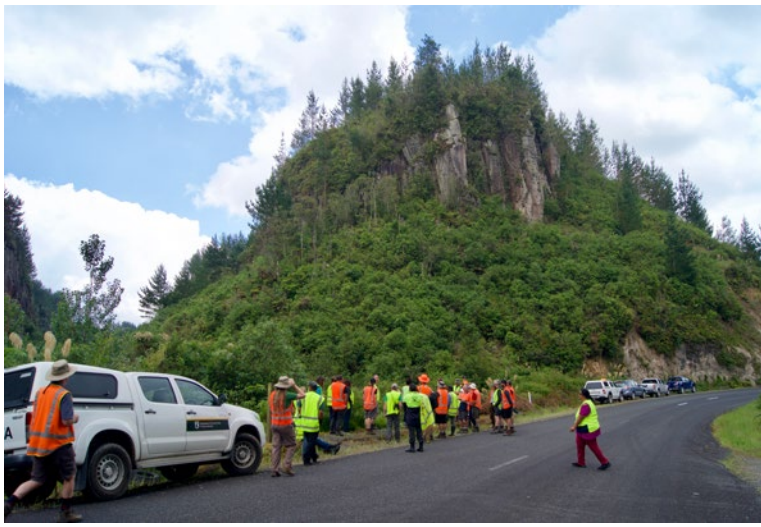
After Anaru's kōrero, we were led on to the Pā with a very beautiful and moving karanga from Gloria Koia, a proud Raukawa descedant and representative of the Kokako Land Trust. The entrance to the Pā was very narrow and steep on each side. There was also a deeply excavated defensive ditch that had to be crossed. Once on the site we were able to see how difficult access was, with very steep drop offs surrounding the site on all sides, aside from the narrow entrance we had crossed. These natural aspects of the site had made it extremely suitable as a defensive Pā, which required a minimal amount of earth works. Robin pointed out to us many archaeological features which had identified Urewera as a Pā site. These included rua pits, earth wall, whare sites, gardens and a single large hangi stone and wooden slab which were also found on the site.



Urewera Pa



Lunch



The group viewing a site of 6-8 year old regenerating native forest

Regenerating Natives and Carbon Credits

After visiting the Pā, we took a break for lunch under the cover of forest on this hot and humid day. This tranquil setting provided the rōpū (group) with an ideal opportunity to connect with new and old faces and to talk about all things bio-diversity. Following our tasty packed lunch, we stopped at stand of regenerating native bush that was part of a retired pine forestry block, which had been sold by Carter Holt Harvey and converted into dairy pasture. The regenerating area was regarded as being too steep to farm and so following the final pine harvest, it was then left to its own device. From the photos you can see that the area is now flourishing with a range of pioneering native species. There has been no management of the site to achieve this regeneration. This provides us

with a valuable insight into what is possible when choosing sites to regenerate. Plantation forests which contain healthy understory's of native vegetation, such as in Kinleith are can be very a good choice, because as many of us have experienced, planting and continued maintenance can potentially be resource hungry exercises. When possible, choosing sites which are adjacent to existing native forest will also have positive effects on the speed and amount of input put into a restoration project.

Sally Strang of HFM talked about what influence carbon credit schemes have had on forest management. As dairy farming became highly profitable in terms of the tax free capital gains, Carter Holt Harvey started converting forestry blocks into dairy in the early 2000's. Then after carbon credits were introduced in 2008 to counter the loss of forestry as a carbon sink, conversions became suddenly became unprofitable. Since that time carbon prices have continued to fluctuate greatly, resulting in conversions being profitable or unprofitable depending on carbon prices at that time. The lessoned learned from this process is that market based strategies are not always reliable as interventions for biodiversity protection, and that non-economic instruments must also be present to ensure protection of land and water.

Totara Plantation

Our next stop was the Totara legacy project, which is a joint initiative between Raukawa and HFM. The project is aimed at providing Raukawa with long-term cultural resilience. Costs of the project will be shared equally by HFM and the Raukawa Charitable Trust, with management of the plantations to be undertaken by HFM forest expertise. Crown forest research agency SCION has also been involved in project planning and sourcing and growing the totara seedlings. This small plantation will provide research opportunities that will be of benefit to other groups that wish to embark on similar ventures.

This project very much an intergenerational one, as the trees being planted over the next five years will not be ready for harvest until the first decade of 2100. The project seeks to make Raukawa self-sufficient in its Totara needs for whakairo (carving), repairs of existing wharenui and new building projects. The first major undertaking, aside from initial planning, was the planting of a Kanuka and Manuka nursery crop. The idea is that by planting the Totara between Kanuka (planted at 5 metre spacing's), the trees will develop long straight trunks, ideal for milling. The planting of Kanuka took place in August 2015. HFM and Raukawa Charitable Trust staff, Kaumātua and a large group of Tamariki all pitched in on the day. The growth of the Nursery crop has perhaps not been as prolific as hoped for, but Raukawa and HFM are in it for the long haul and we will all be watching with interest as this innovative project progresses.

Site 5 - Nationally Significant Lake Reserve

Our last stop took us to a beautiful lake and wetland, which has been harvested of pines from the riparian margin. This has allowed natural regeneration of Kahikatea forest. This area is protected as a nationally significant SNA and as part of the forests reserve network required under FSC certification. The lake is a naturally occurring wetland which contains indigenous water fowl, including Spotless Crake (Puweto) and NZ Dabchick (Taratimoho). Because of the rarity of such habitats in modern times, the lake has been classed by WRC, as being of National Ecological Significance.

On this hot December day after our epic journey through Kinleith Forest, we were finally ready to conclude the day. Sam, the Biodiversity Forum Coordinator gifted a Koha of a Totara tree to Robin, Sally and Anaru, who were vigorously applauded in gratitude for their knowledge and guidance, which we were all extremely lucky to receive on this day.

Totara plantation site

Kanuka and Manuka nursery crop