Sustainable. Profitable.

CASE STUDY 5

Private Native Forestry

Tree Alliance

Blackwood Creek

Tasmania's extensive private native forests have a long history of active management for timber production. With our changing climate and an expanding bioeconomy, Private Forests Tasmania has identified strong opportunities to boost the health and resilience of these forests, while generating income and other ecosystem benefits through silvicultural treatments such as thinning. This private native forest management series is designed to assist forest owners to successfully plan and carry out active management for beneficial outcomes. It includes fact sheets on relevant topics, a detailed how to guide and case studies demonstrating how active management techniques are being applied to achieve various land management and financial objectives in five private native forests. This fifth case study features a planned thinning operation in a moderately high quality regrowth stand in northern Tasmania.

Summary

Set within a large forested property, the 170 hectare Blackwood Creek thinning coupe is part of a long term family forestry venture. The site features 50 year old predominantly dry regrowth forest of medium to high productivity. Thinning will accelerate sawlog production across the site and produce a short term return to the owner. Up to 110 tonnes per hectare of logs are expected to be produced from the thinning operation. The site supports economic road haulage with major sawlog and pulplog processing facilities located within 100 kilometres of the site. Haulage access and harvesting will be straightforward due to existing infrastructure and moderate terrain. The site features potential habitat for threatened wildlife, including an eagles nest and there are numerous minor streams and tributaries. Thinning will be timed to avoid the eagle nest during nesting season and streamside reserves will apply to all watercourses.

Site description

The area of native forest identified for thinning is 170 hectares of regrowth forest situated within a large forest block on the eastern edge of the Western Tiers. The site was previously clearfelled in the 1970s.

The forest is predominantly dry *Eucalyptus obliqua,* mixed with *E. viminalis, E. amygdalina* and *E. ovata* in damper areas. Overall the forest is medium to high quality with a height of around 30 metres.

Areas of hardwood (*Eucalyptus nitens*) and softwood (*Pinus radiata*) plantations are also situated on the property, adjoining the native forest.

Key Operational Features

- **High volume**
- **Moderate distance and low difficulty haulage**
- **Moderate terrain**
- **Wedge-tailed eagle nest**
- **Several streamside reserves**

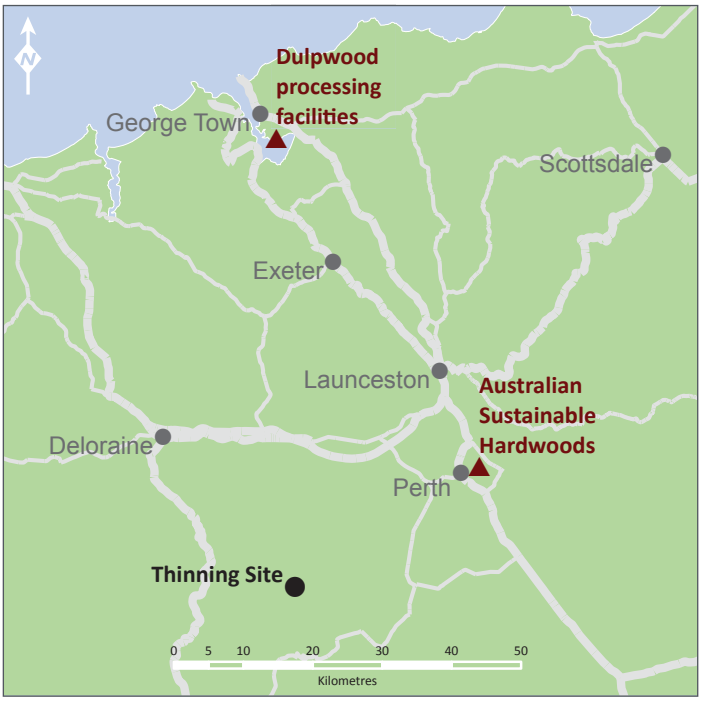
Landowner objectives

The Blackwood Creek native forest thinning coupe is owned by an active proponent of private forestry in Tasmania. Located 25km south west of Longford, the 750 hectare property is a mixed family farming and forestry enterprise. The owner John Lord is focussed on balanced, long-term environmental, social and economic outcomes from the forest.

The forest has been managed for multiple uses, including timber production for many decades. A selective harvesting strategy is being used to develop a multi-aged forest structure and generate timber to feed the growing bio-economy. Income from harvesting provides useful periodic returns that are used to pay for educational and other major family farm expenses. Mechanical disturbance from the harvesting helps to manage forest fuels and reduce bushfire and associated environmental risks. The forestry enterprise benefits the community by providing employment and access for recreational activities such as horse riding, walking and mountain biking.

Private Forests Tasmania

Fifty year old regrowth, Blackwood Creek



Blackwood Creek site location and processing facilities

Planning and monitoring

A Forest Practices Plan has been completed in preparation for the thinning. The plan specifies how all aspects of the operation will be conducted, including management of environmental and social values identified during planning.

The Blackwood Creek site's moderate terrain supports year round thinning operations. Significant environmental values on the site include minor streams and tributaries to the Bullock Holes and Brumbys Creeks, an eagle nest and potential habitat for threatened wildlife. Streamside reserves will apply along the waterways. Harvesting is not permitted within 40 metres of the main permanent stream and 10 metres of the tributaries.

Outcomes

Markets and products

John has engaged AWT Forest Management to carry out thinning on the site and purchase the logs. Harvestable volumes are anticipated to be high, in the order of 90-110 tonnes per hectare, or around 17,000 tonnes total volume. At least 90 percent of logs produced from the operation will be of pulp log quality with a small proportion potentially suitable for sawlogs.

The Blackwood Creek site is within moderate distance of pulplog processors, the sawlog processor is located nearby and haulage is mostly of low difficulty.

Wood chip processing facilities at Bell Bay are approximately 100km from the site. The nearest sawmill is at Western Junction, about 40km from the site.

Income

Good returns are anticipated due to the scale of the operation, high productivity of the site and moderate proximity to processing facilities.

Operations

About 170 hectares of forest will be selectively thinned, leaving 22 hectares unharvested. The contractor will carefully remove the smaller and poorly formed trees throughout the forest, leaving valuable growing resources for the largest and best quality trees. Moderate thinning will reduce the forest density by around 50 percent, which is optimal for forest health. The basal area[1] of the forest will be thinned from its current level estimated at 20-25m^2/ha to about 12m^2/ha.

Trees will be felled using a mechanical harvester and pulled to landings within the coupe using skidders where they will be processed to log specifications. Log trucks will use existing tracks to access the landings directly from the Musk Valley and Spring Roads. The existing tracks are of reasonable quality, requiring minimal work to be suitable for log trucks.

The operations are expected to start in 2024. During the thinning, AWT Forest Management will closely monitor the operation to ensure the plan is followed, damage levels are minimal and stocking adequate to maintain a fully occupied site.

1 Basal area is the unit used to express forest density. It is measured in square metres per hectare and represents the cross sectional area of trees at 1.3 metres above ground.

Forest Health

The timely and careful thinning at Blackwood Creek is expected to promote healthy growth and productivity in the retained trees and understorey and improve their resilience to environmental stress. Healthy trees are less susceptible to insect and disease damage and there is strong evidence that thinned forests suffer less tree death under drought conditions due to increased water availability. Regrowth thinning also reduces potential damage from wildfire by reducing the quantity and continuity of elevated fuels. It is expected that fire risk will be reduced for many years because of this operation.

Carbon

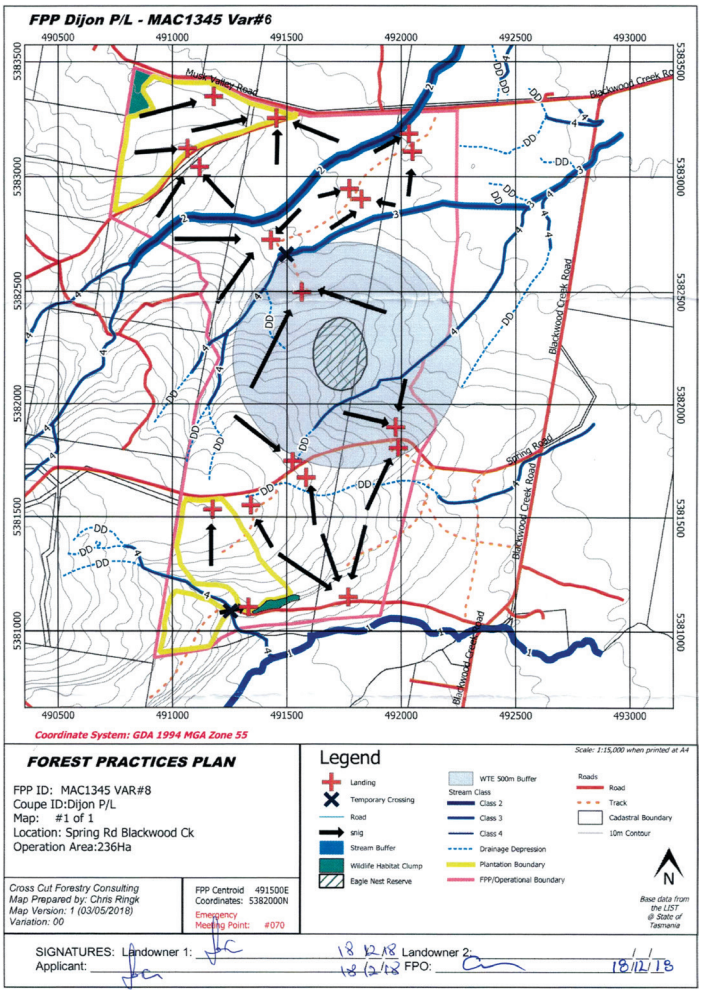
Through thinning, the Blackwood Creek regrowth stand is sequestering more carbon than it would have as an unmanaged stand. As an unmanaged stand, competition would have progressively killed the suppressed trees, causing them to decompose and release carbon. Through thinning, the carbon from these stems is now stored for the long term in wood products. Meanwhile, the remaining trees are growing faster than they would otherwise, increasing the rate of carbon accumulation and storage at the site.

Environmental outcomes

One aim of the Blackwood Creek thinning operation is to create a multi-aged forest structure, which will increase the diversity of habitat at the site as well as accelerating the development of wildlife habitat characteristics of older forests such as large tree canopies and hollows. Water runoff, groundwater recharge and streamflow is expected to be elevated for the next decade, benefiting aquatic biota and increasing water yields.

Post harvest activities

If required, following harvesting the bark heaps on the landings will be burnt. The landowner, John Lord, is an advocate of using cool burning across the property to reduce fire risk and manage forest health and will most likely apply burning in future years to reduce fuel levels and fire risk.



Forest Practices Plan map, Blackwood Creek

References

Fact Sheet 1: Commercial management of private native forests

Fact Sheet 2: Getting ready to harvest

Fact Sheet 3: Native forest silvicultural systems

Fact Sheet 4: Non-timber products and values in private native forestry

Fact Sheet 5: Timber products, markets and supply chains for private native forests

Fact Sheet 6: Risk management for private native forestry

Fact Sheet 7: Financial analysis for private native forestry

More information

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Tasmania is one of the best places in the world to manage forests for sustainable and profitable outcomes. To learn more about your options for renewable native forest management, contact the team at Private Forests Tasmania on their Tree Alliance hotline or through their general enquiries.

Private Forests Tasmania — Tree Alliance

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