

Canoe Creek Conservation Project (CCCP)

Planting Plan

1st April, 2026

Background

1. CCCP is a native forest restoration project on a 36ha rural block located along the Barrytown Flats, 10 kms south of Punakaiki on the West Coast of Aotearoa/New Zealand. The overarching plan is to protect and enhance the existing vegetation and at the same time plant thousands of native trees and shrubs in those areas of river flats that are currently covered in deteriorating pasture. This is a privately funded and managed project.
2. The block is bordered by conservation estate to the north and east. There is a wide and regenerating riparian strip running west/east on the boundary with Canoe Creek. Hillsides to the south and east are in regenerating native vegetation where the dominant species are kamahi and rata. There are likely small pockets of primordial bush. Other notable species surveyed include totara, rimu, matai, miro, kaihikatea, horoeka, and nikau. Beech, kotukutuku (tree fuchsia) and puawhananga (native clematis) are also present.
3. This is an extremely bio-diverse area and is at least as bio-diverse as the upper reaches of the Punakaiki and Pororari rivers to the north.

General Approach

4. Restorative afforestation of permanent native forest is intended to protect and enhance native vegetation and establish a conducive habitat for birds, assist in soil conservation, protect watersheds and improve stream water quality, and provide for carbon sequestration, at scale. Overall, it will enhance biodiversity outcomes. This is a very long-term endeavour.
5. Restoration at this site is ever more crucial given recent and continued efforts to begin large-scale strip-mining of the Barrytown coastal flats and the inevitable destruction of native flora and fauna that such activity will facilitate.
6. Active restoration through planting will be concentrated on the river flats, front paddocks and small portions of the conservation estate which run along the Canoe Creek boundary. This area

comprises about approximately 6ha and is demarcated across 4 active blocks. The remaining area of established (re-generating) forest totals 30ha.

7. These 'active' blocks are predominantly in pasture which has been previously used for farming, grazing and haymaking. It now comprises areas of overgrown and rank grass and invasive weeds (such as gorse, blackberry, ragwort, gunnera). It is deteriorating pasture. There are also small pockets of regenerating bush and wetland areas across these 4 blocks.
8. Regeneration and planting will be of species that naturally occur in the prevailing ecological area (the Punakaiki Ecological District). This is broadly defined as the area of the Paparoa National Park together with the contiguous coastal strip running between Charleston and Greymouth. Planting will be of those species that are currently observable in the area and/or those that have historically existed. An ecology survey of native species has been completed and an exhaustive species list compiled (which is available for review).
9. Protection under QEII Trust Deed of Covenant is agreed and is fully in place. This will ensure that protection for native flora and fauna is in perpetuity.
10. A new-build cabin has been built providing on-site accommodation. This is a simple and robust structure intended to support restoration activity. The overarching aesthetic is as a tramping hut.

Planting Plan

11. The planting plan is based around the establishment of a limited number of intensively planted seed islands. These will be combined with linear plantings in seed corridors linking established bush on the south and east sides to the regenerating riparian strip along Canoe Creek to the north. Planting along wetland borders will also provide for protection and demarcation of those areas.
12. All plantings will be native and which are botanically indigenous to the area. The only exception is karaka plantings which are culturally indigenous. We have planted a very small plot of Tasmanian Blackwood and kanuka for future use as locally sourced fuel for the cabin log-burner. These are planted outside of the covenant area.
13. In all cases, initial plantings will be of species that will establish quickly and provide abundant sources of food for native birds over the establishment period. Canopy cover is expected to fill-in over the first 5 to 10 years - this will provide protection of tall trees (podocarps) planting and to control for grass growth.

14. Canopy species include (but are not limited to) ... akeake, mingimingi, karamu, kawakawa, makomako, mahoe, manuka, horopito, ti kouka, kapuka, hebe, pittosporum (eugeniodes and tenifolium), broadleaf, and flax.
15. Planting is also underway around wetland areas and along fence lines. Typically, such bordering species include harakeke, hebe, toetoe, ti kouka, tutu, and various native species grasses (carex secta, carex virgata). These species are used to demarcate wetland areas and boundaries, and to provide shelter against damaging winds (especially the easterly).
16. Other at scale plantings include ribbonwood, lacebark, tree fuschia, red beech, pigeonwood, putaputaweta, toro, red mapou, kowhai, lancewood, and kamahi.
17. The expectation is that over time, these seed sources will attract increasing numbers of birds (particularly kereru) which will be integral to seed dispersal on a wider area and on a long term basis.
18. Additionally, a number of 'specimen' podocarps and other species are being planted as successional species. These tall tree species include (but are not limited to) miro, totara, kahikatea, rimu, matai, nikau, and native cedar. Specimens of these current plantings might be expected to remain even in 1000 years time.
19. The minimal target is to plant 14,000 stems. This is a rate of approx 2,400 stems per hectare (about 1400 per year to 2030). About 60% of plantings will be 'tall trees' (species that have a capacity to grow in excess of 5m high). The remainder will be canopy cover, bordering and wetland vegetation, and other species attractive to bird life.
20. Specific locations of seed islands and corridors can be provided as and when necessary. Generally, these locations are in blocks defined by reporting milestones as set down in One Billion Trees Scheme funding as has been agreed.
21. Funding has also been secured from Project Crimson through Trees That Count which has contributed approx 4000 stems over the 2022, 2023, 2024 and 2025 planting years.

Progress to Date

22. A total of about 11,600 trees and shrubs have been planted to this point. A survival rate of 70% to 80% is estimated. This is based on Trees That Count monitoring methodology.
23. This is very good progress and is promising in terms of achieving the overall target of 14,000 stems. That target is calculated on a planting density that is intended to ensure for a rich, diverse

and self-sustaining successional forest. Previously, the valley would have comprised a lush, kahikatea-dominant lowland rain forest and so this is the over-riding vision for future succession.

24. Canopy cover and 'tall trees' are being planted simultaneously.

Practical Issues

25. A plant compound has been set up. This is an accessible storage location for plants that have been delivered to site and are ready for planting out. An adjacent shipping container provides a base for planting and storage of equipment and materials.

26. Gorse is accepted as an invaluable nursery crop, particularly given its nitrogen fixing properties and as it provides protection against wind and browsing mammals (goat, deer, hare, rabbit, etc). Blackberry is present and will be removed on an ongoing basis. Gunnera has been identified and will be actively controlled through ongoing removal of seed pods. Ragwort will be removed on an ongoing basis.

27. Grass growth is a challenge and left uncontrolled will tend to choke off new plantings. Control for grass growth is threefold ... (i) seed islands and corridors will be mowed or cut and then sprayed using herbicide prior to planting out, (ii) plant protection will be employed, incl use of coir mats to suppress grass growth on a stem by stem basis, (iii) new plantings will be 'released' regularly over the first 2 to 3 years.

28. The Canoe Creek catchment is a critical element in restorative afforestation - this is in terms of both water quality and flow and will be monitored. Any potential for interference in the natural functioning of this ecosystem will need to be resisted.

29. Browsing animals (such as weka, pukeko and hare) can be very destructive of new plantings. Plant protection is used to deter this (staked 300mm and 450mm high treated cardboard sleeves and coir mats). Additionally, a natural repellent spray is applied to all sleeves.

30. Goats and deer are present and pose a major obstacle. In both cases, shooting is the best solution. This also applies to hare which pose a threat to newly planted species. Additionally, the strategic use of fencing is intended to provide protection, particularly in Blocks 3 and 4.

31. The site is exposed to damaging south easterly and easterly winds. Topography, gorse and plant protection provides some amelioration of this, but constant tending of newly planted species will be required.

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