

# Mckenzie Reserve: a Prospect

C.P.

1. Ultimate goals - given general agreement among interested parties - could be one or other (or a combination)  
of  
① a native botanical reserve with an educational as well as passive recreational function or,  
② A mixed-use scenic plus recreational reserve with the latter function more prominent & developed than in ①.
2. A botanical reserve could incorporate picnic areas and, say, a children's adventure play ground (with a difference!). A more explicit recreational emphasis would still have to respect the limitations imposed by the physical features of the area & the need for most of it to be stabilised & protected by suitable revegetation.
3. Both options would require the eventual felling of all the Pinus radiata, and both options invite generous extension of well-graded tracks with boardwalks where appropriate.
4. A botanical reserve would aim at representing all native Waitakee and Haukei Gulf species including those which have been close to extinction in latter years. It would include several fairly typical habitats & these already suggested by existing land-form, soil type, watercourses, (small) wetland area and the range and progress of naturally regenerating native species.  
[See Appendix A].
5. We are aware that any development toward these ends would need to be undertaken in a planned series of steps or stages, each appropriately timed, careful,

considered for its environmental impact, and adequately funded.

6. Practical considerations and financial stringency would demand a block-by-block (area-by-area) development, each proceeding through weed-plant eradication, through clear-felling of the pines to initial track formation to planting and after-care. A 3-phase sequence could take 9 to 10 years, a 4 phase sequence 12 years given sufficient funds and the organization of volunteer labour. This is a minimum, optimistic time frame.

7. The contribution of voluntary labour from the neighbourhood and community would be critically important to the success of the enterprise, and the organization of that labour a vital ongoing task. Only initial weed-control (mainly the chemical spraying of climbing agave, pampas and Kahili ginger) and clear-felling of the pines would necessitate professional, paid labour contracts. All aspects of planning, the development and the construction of walkways etc could utilize voluntary local expertise and experience. ~~When~~ Planting and subsequent tending (weeding etc) could, of course, be ~~with~~ done by volunteers.

8. Weed-plant eradication is the first practical task. Because this ~~has~~ to be very thorough before pines are felled in any one area, two consecutive summers may be needed before, say, an autumn clear-felling of the pines. This would reduce the incidence of regrowth of the worst perennial weeds before <sup>a</sup>winter planting of native trees and the subsequent - and inevitable - ~~with~~ invasion by other, more light-loving, weed species.

9. The pine trees present the most ~~of~~ costly and overall constraining feature of the whole enterprise. All must be felled (block-by-block & see 6. above) and all logs would remain on site to minimize damage to the

land and soil profiles, prevent silt transfer into Enclosure Bay, allow the return of organic matter to help sustain a rich native flora and provide shelter and ~~approximate~~ micro-habitats for ferns, mosses etc. Portable logs and branches could be offered for firewood (self-help). The remaining slash could be mulched and/or broken up and left to rot.

10. The area-by-area pine felling sequence <sup>and the choice of</sup> ~~A~~ where best and safest to begin, was at first thought to be constrained more severely, by the prevailing lean or angle of growth of the trees, than now appears to be the case. A site-visit arranged with <sup>a</sup> qualified and experienced arborist and tree-feller, Barry Monks, on 6 July, was a necessary step before we could recommend, with assurance, the merits of beginning a clear felling regime at the southern ~~downhill~~ (or uphill) portion of the reserve.  
 [See Appendix B for more on Arborist's site visit]

11. There are advantages in starting development from the south and/or south west (ie. the upper) sectors of the reserve, with a second stage concentrating on the eastern sector between Great Barrier Road and the existing pedestrian path through the reserve. This sequence would <sup>continue to</sup> give protection from northerly winds to newly planted areas until the very last pines are felled. And it would see the higher-ground pines, which ~~were~~ <sup>appear to be</sup> more generally vulnerable to rogue winds, felled first.

12. A first stage then, could be <sup>to prepare</sup> either the southwest steep upland sector (much of it fairly weed-free and under only a sparse pine cover (40-70 trees depending on how far downhill and eastward one defines the area))

or, the deep gully carrying the main watercourse and ends just beneath the top of Great Barrier Road. Depending on how far downhill this area is defined (and the 40 metre contour is one choice), ~~the~~ felling may involve between 300 and 400 pines.

Ideally both areas would be worked together through the whole sequence from weedplant eradication to planting (see 8, above) over the just 3 year period. Although contiguous, they are sharply contrasting sites in several respects. Progress in these areas would demonstrate, very conspicuously, the reserve's potential. (See also Appendix A).

Appendix A. A cursory evaluation of the reserve suggests 5 more or less distinct (or at least definable) habitat zones each <sup>supporting</sup> ~~supporting~~ its appropriate range of <sup>native</sup> plant species. From north to south i.e. from "downstream" to "upstream" on the west side of the walkway we have a sequence or ecotone from a small wetland area near the end of Empire Road through a ~~wide~~ broad basin-like gully which receives almost the entire ground water flow of the catchment (McKenzie Reserve <sup>covering</sup> ~~being~~ approximately  $\frac{3}{4}$  of the catchment) This relatively large area begs regeneration into what it must have been originally, an exceedingly rich mixed coastal broadleaf rainforest complete with giant black tree ferns (mamaku), nikau and lianes such as kareas (supplejack). No now rare maire-tawaki (swamp maire) and ~~the~~ puketea could once again grace the ~~wet~~ wet northern margin of this area. Where the land begins to rise more sharply to the southwest ~~and~~ ~~at~~ about the 30 to 45 metre contours this more

dense rainforest could give way to a predominance of podocarp pine and kauri beginning with rimu and miro then kauri, matai, tanekaha will take along the more <sup>steep</sup> exposed margins. ~~There~~ The choice of appropriate sub-canopy species, from trees to ground-cover herbs is a large ~~area~~ and interesting one, in this zone.

On the higher and drier reaches of these slopes there would be a somewhat different species range, with Pohutukawa and Ngai as the larger trees with akeake, karo, akepiro, kohukia, tangata, kumerahou and many other trees, shrubs & ground cover species.

To the east of the main public walking track, from north to south we have, first, a less well defined botanical zone but very versatile. These gentler and moderately moist slopes below Great Barrier Road could support almost the entire range of northern coastal broadleaf, with associated kauri and podocarp pines. Puriri, titoki, mangas, <sup>hinaki</sup> porokaiwhiri, rewarewa, tauwape and many other fine major ~~canopy~~ species, some becoming exceedingly rare on Waitaki, should thrive in this area.

and finally, the deep southern gully that lies beyond these gentler slopes has the ~~potential~~ same dense, species-rich rainforest potential as the wider, basin-like gully downstream. Already it has regenerated fine specimens of mamaku, some robust young nikau and several karaka as well as many kawakawa - all in fierce competition with kahiki ginger, climbing aroids and a host of woody exotic trees and shrubs.

### Appendix B

On-site will be arborist, Barry Monks: Don Chapple and Penny Ericson met with B.M. on 6 July. to discuss practicable options for a pine felling regime - in particular, the choices for beginning such a regime. Barry is well acquainted with McKenzie pines, having the contract with A.C. to inspect the

trees periodically for public safety and fell those that present a risk. With the help of his practiced eye we noted that there was no prevailing lean to the trees and in some areas the ~~direction~~ <sup>direction</sup> of lean was very various. Because of this he saw no reason why felling could not begin (other factors being taken into account) wherever an opening and felling front could be made. ~~impossible~~. With due regard for wind strength and direction on any one day, and with help of winch-lines where necessary, a skilled operator can ensure a line of fall with ~~to~~ a fair degree of accuracy - even to the avoidance of existing desirable trees - at least the larger specimens - in the understory.

For safety reasons - to avoid rolling - the general pattern of fall would need to be against and not with the contour, especially on the <sup>moderate to</sup> steeper slopes (which is most of reserve!).

B.M. could see no reason why a first block-felling could not begin east and/or west of the ~~main~~ walking track as it descends below the relatively exposed south west sector. Direction of felling would be uphill and could extend laterally west to fully expose the south west sector (under pines) or east into the deep south gully and up to Great Barrier Road. (see text items 11-12).

D.L.C.  
12/4/03.

Photocopy of  
Don Chapple's plan  
for McKenzie Reserve.

[Donald Leigh Chapple  
1929 - 2005]