

TreeSpace Kāpiti

Introduction

- Formed May 2003
- Aims:
 - To promote trees and open spaces, the 3-30-300 concept
 - To protect existing trees, NTT, KITs, SNAs, QEII Covenants
 - To increase tree canopy cover, influence KCDC's Tree Policy, Environment and Climate Policy, new Urban Design Team
 - To influence developers, landscapers, private property owners
 - Increase biodiversity, bring back birds, restore natural healthy environment
 - Make appropriate submissions/representations, e.g. KCDC's LTP, MfE, developments in Kāpiti (e.g. Wi Parata, Arms Park Way)

A Tiny Urban Forest

Based on Prof. Akira Miyawaki's method

Created by TreeSpace Kāpiti

https://en.wikipedia.org/wiki/Akira_Miyawaki



Miyawaki's concept

Aims

- Restore degraded, waste or unused urban land
- Add greenery to urban areas in a short time period
- Establish urban refuges

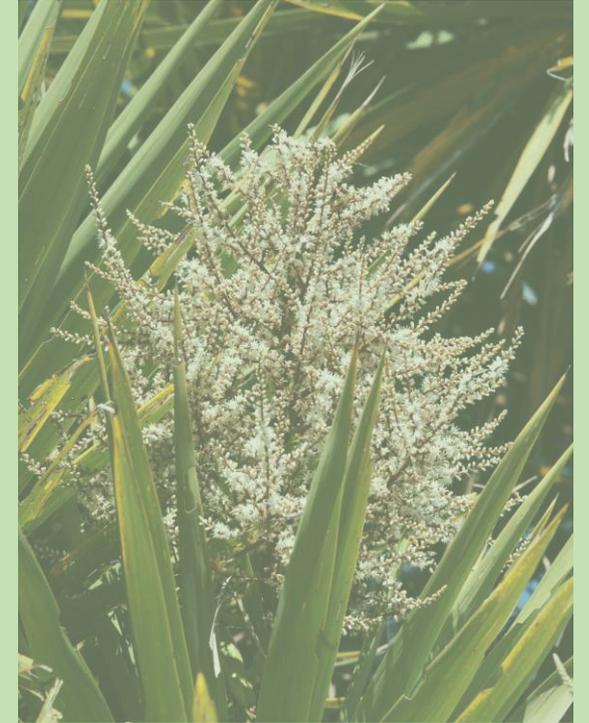
Method

- Dense planting – competition for sunlight, water, nutrients
- Variety of native trees and plants
- Mimic a natural forest structure and accelerate growth

Benefits



- Forest in 20-30 v 150-200 years¹
- Beautification
- Carbon sequestration
- Health
- Ground water control
- Temperature regulation
- Air quality
- Biodiversity



1 <https://www.creatingtomorrowsforests.co.uk/blog/the-miyawaki-method-for-creating-forests>

Layering & Conditioning

- Canopy layer
- Sub canopy layer
- Shrub layer
- Herb layer
- Ground cover layer

- Compost, biomass, mulch

Locations

- Japan '000s of tiny forests
- Malaysia
- India some large forests 50,000 trees
- Thailand
- Europe (UK, Holland)
- Scandinavia
- USA
- Brazil
- **Nelson, Palmerston North**



Our Tiny Forest

- 18 months planning the tiny forest
- We needed money - KCDC Climate Action Grant
- A site
- Manageable project size
 - Small team retirees
 - 100 m²
 - Help with some physical work



Cnr of Te Moana and Te Awa Kawakahia Rd



Money

- TreeSpace Kāpiti team members contributed \$1045
- Bequest \$3000
- KCDC August 2024 grant \$1000

Whoopie! – enough to start 😊

KCDC guidance

- Memorandum Of Understanding
 - Health & Safety
 - No powered tools
 - Records (H&S and finances)
- Contribution in kind (initial herbicide, rotavating, aurgering, mulch)
- Foxton Ecological District – a stipulation

Things to do

- Select and order 400+ plants of 33 species
- Mark plot boundary Nov. 2024
- Weed control – herbicide spring 2024, tarpaulins 17 March
- Remove tarps, spread manure-wood chip mix – June
- Rotavate – June
- Re-mark plot and dig perimeter trench – June to July
- Fence – July
- Experimental strips

Budget review Early 2025

Funds top up needed – presentation to KCDC April 2025

Total budget \$6000

(Grant pool in 2024 was \$112000.

Grant pool in 2025 was \$40000)

KCDC Climate Action Grant top up awarded \$1000

Money in pot now \$6000

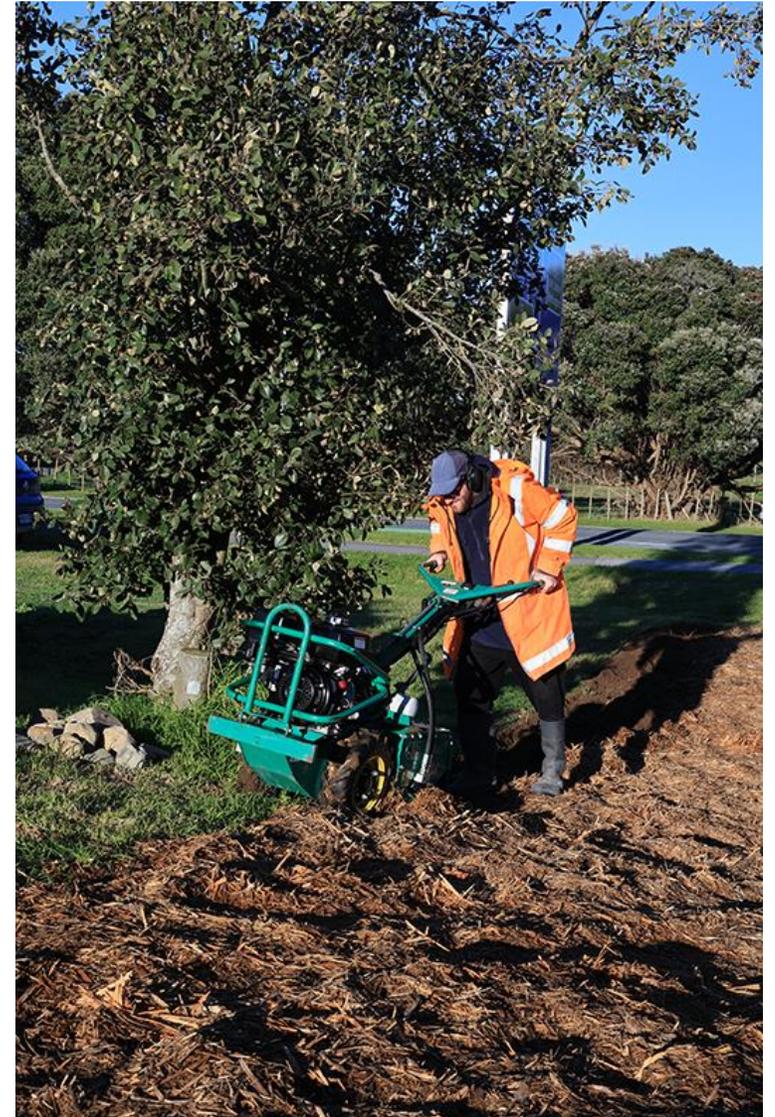


Weed control



Manure-wood chip

Rotavating



Corrections team helped to dig perimeter trench, followed by fencing by a contractor and spot marking for augering



...And more things to do...

- KCDC auger holes – July
- Prepare for staking if necessary
- Determine plant locations and add some randomness
- Hole preparation – biochar, mycorrhizal fungi
- Plant delivery and transfer to plot
- Organise plants according to plan in fours and placed at each metre square – allow for many people in small space



KCDC auger 400 x 100 mm dia. holes in 30 minutes!



CAUTION CAUTION CAUTION CAUTION CAUTION

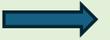
DANGER DANGER DANGER DANGER DANGER

← Te Ara Kawakahia Rd →

Te Moana Rd

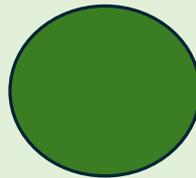
Hedge

Ngarara Estate & Waimeha stream



A1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	A20
B1																			B20
C1																			C20
D1																			D20
E1																			E20

Very approximate location of existing tree



Clear = Mycorrhizal fungi, NO biochar

Grey = Biochar plus mycorrhizal fungi

Green = NO mycorrhizal fungi and NO biochar = Control rows.

Biochar manufacture by Charpae (John Wraight)



Left – quenching
Below – before
and after
crushing





Plants taken to each metre square and placed in centre of the four holes before planting



...And yet more things to do

- Erect sign
- Mulch (5 - 6 m³ from KCDC)
- Record: photographs, actual plant positions, plants height
- Plan for watering - pump

- At each on-site activity:
 - Review H&S, record personnel, time on & time off
 - Review finances
 - Review work done and future activities



Some of the wonderful people involved

After planting

- Much rain during and the day after planting
- Followed by two weeks dry weather with frost to -3 degC
- Plants affected:
Kohekohe (8) died, all ferns and rengarenga.
- Leaves blackened on *Coprosma repens*



Ferns: Ponga and Silver ferns



Post frost recovery

- All ferns recovering slowly with new green leaves appearing from centre
- New green leaves appearing on rengarenga (now flowering)
- Kohekohe: leafless dried stems replaced with new plants. Frost cloth cover on teepees

Future

- Much interest shown by public and media
- Two people keen to explore possible tiny forests on their properties
- Possible expansion of existing plot
- Encouraging others to take up the concept (schools, businesses, councils)
- Create tiny forests in alternative environments
- Look after our present plants (2-3 years)

Acknowledgements for donations and labour

- **KCDC** for plot, grants, herbicide application, augering & mulch
- **Corrections** for trench digging
- **Lewis Farms** for calf manure-wood chip mix
- **Poulton Farms** for rabbit-proof fence at material cost only
- **Hanging Around** and **Kapiti Signs** for tarps and old signs
- **Kāpiti Quakers (Jo Moxon bequest)** and **TreeSpace Kāpiti** team donations
- **Charpae** for biochar
- **Ryobi** for submersible water pump

For more information search
Miyawaki forests

Questions

Thank you

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www.treespacekapiti.nz