ESTABLISHMENT OF AN INDIGENOUS COASTAL PLANT SPECIES SCREENING TRIAL, BUFFALO BEACH, WHITIANGA

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ABSTRACT*

The establishment of an indigenous species coastal plant screening trial at Buffalo Beach, Whitianga Beach is described. The trial evaluates the performance of a wide range of mainly woody indigenous species that have been planted on material excavated from the Whitianga harbour as part of a marina development.

The Whitianga Beach Care group and the local branch of Forest and Bird group planted the trial in April and August 1995 in collaboration with Environment Waikato and the New Zealand Forest Research Institute, Rotorua. The overall objective of this revegetation trial is to determine practical and cost effective techniques for establishing an indigenous vegetation cover on a modified back dune site.

About 7000 seedlings of 23 indigenous coastal species that occur on local sites were planted in the trial with and without various combinations of fertiliser and mulch. Results will be used to develop guidelines for coastal managers, and Beach Care and other interest groups on the most suitable species and appropriate techniques for revegetation of backdune sites.

* **Note: This material is unpublished and must not be cited as a literature reference.**

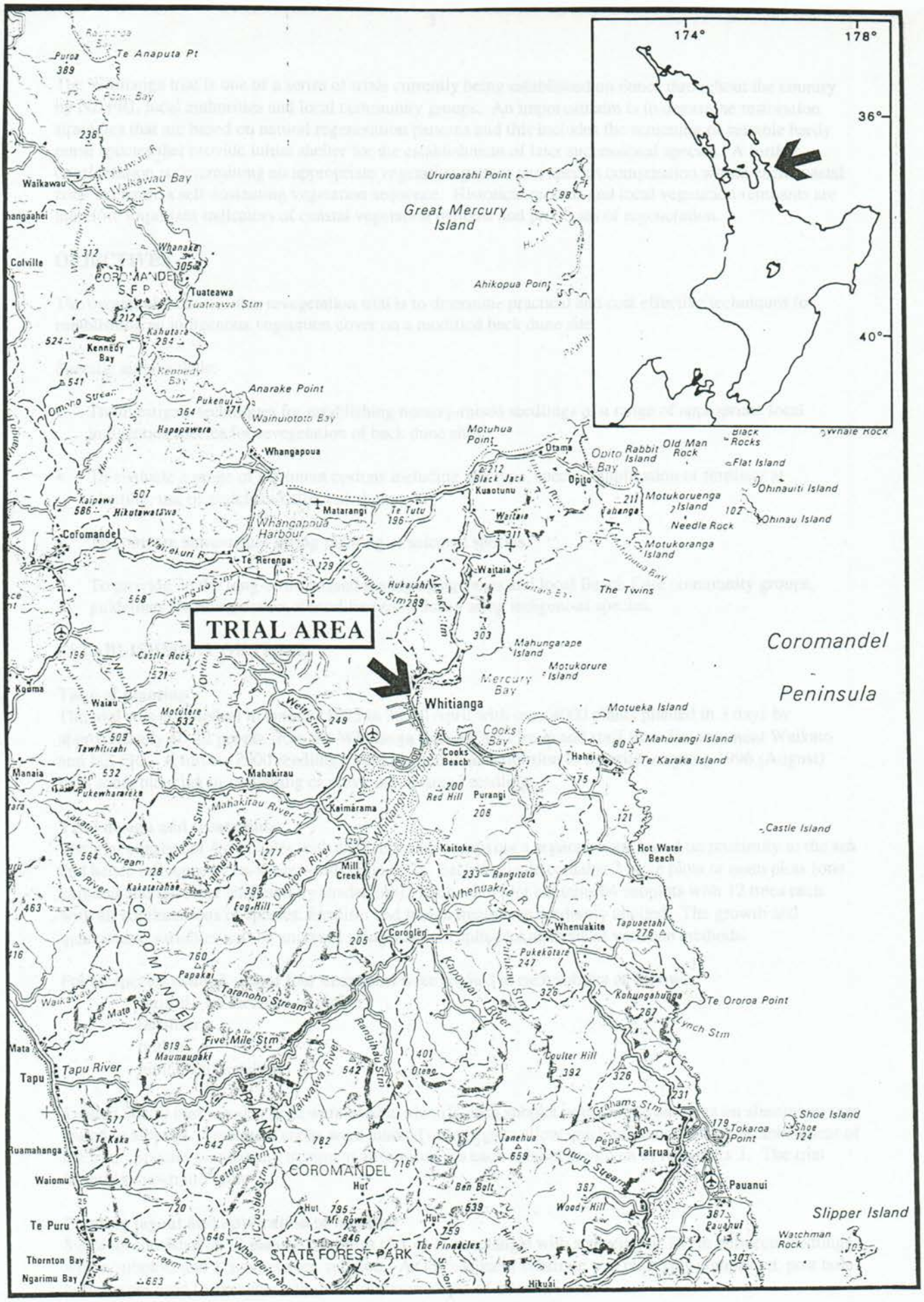
174°
178°
36°
40°
TRIAL AREA
Coromandel
Peninsula
Great Mercury Island
Whitianga
Whitianga Harbour
Whangapoua Harbour
Whangapoua
Mercury Bay
Cooks Bay
Cooks Beach
Hot Water Beach
Tairua
Pauanui
Slipper Island
Shoe Island
Castle Island
Motueka Island
Mahurangi Island
Te Karaka Island
Mahungarape Island
Motukorure Island
Motukoruenga Island
Motukoranga Island
Needle Rock
Ohinauiti Island
Ohinau Island
Flat Island
Old Man Rock
Rabbit Island
Black Rocks
Whale Rock
The Twins
Opito Bay
Opito
Ururoarahi Point
Ahikopua Point
Motuhua Point
Anarake Point
Te Anaputa Pt
Waikawau Bay
Waikawau
Colville
COROMANDEL S.F.P.
Tuateawa
Kennedy Bay
Whangapoua
Matarangi
Te Tutu
Cofomande
Te Rerenga
Hukatahi
Whitianga
Mahakirau
Kaimarama
Purangi
Red Hill
Kaitoke
Mill Creek
Whenuakite
Tapuaetahi
Pukekotare
Kohungahunga
Te Ororoa Point
Lynch Stm
Coulter Hill
Tokaroa Point
Watchman Rock
Thornton Bay
Ngarimu Bay
Te Puru
Waiomu
Ruamahanga
Tapu
Tapu River
Mata
Papakai
Taranoho Stream
Five Mile Stm
Maumaupaki
Te Mata River
Waiwaka River
Kapowai River
Rangihau Stm
Oteao
Tanehua
Ben Bolt
Woody Hill
Mt Rowe
The Pinnacles
STATE FOREST PARK
COROMANDEL
RANGE
Hikuai
Kuaotunu
Black Jack
Waitaia
Tahanga
Hahei
Tawhitirahi
Motutere
Kaipawa
Hikutawatawa
Kakatarahae
Fog Hill
Oumuhu Stm
Hukatahi
Whenuakite R
Kaimarama
Castle Rock
Kouma
Manaia
Pukewhareke
Waiau
Waikawau R
Puroa
Pohin Bay
Whanake
Kahutara
Pukenui
Hapapawera
Wainulototo Bay
Omoho Stream
Waitaia
Rangitoto
Corogleg
Papakai
Maumaupaki
Te Kaka
Settlers Stm
Crusible Stm
Whangaiterenga
Hut
Mt Rowe
Ben Bolt
Tanehua
Oteao
Pepe Stm
Grahams Stm
Oturu Stream
Pauanui
Tairua
Hikuai
Kapowai River
Pukekotare
Tapuaetahi
Kakatarahae
Mahakirau River
McLeans Stm
Dumpora River
Whenuakite
Hukatahi
Waitaia
Mahungarape
Motueka
Mahurangi
Te Karaka
Castle
Hot Water
Tapuaetahi
Kohungahunga
Te Ororoa
Lynch
Coulter
Tokaroa
Shoe
Watchman
Slipper
Pauanui
Tairua
Hikuai
Whangaiterenga
Thornton
Ngarimu
Te Puru
Waiomu
Ruamahanga
Tapu
Mata
Te Mata
Papakai
Maumaupaki
Five Mile
Taranoho
Waiwaka
Rangihau
Oteao
Tanehua
Ben Bolt
Woody
Mt Rowe
The Pinnacles
Hut
Settlers
Crusible
Grahams
Pepe
Oturu
Kapowai
Pukekotare

Plate 1: ***Material excavated from a marina development in the Whitianga Harbour was used to nourish dunes along nearby Buffalo Beach. The dune nourishment was part of the consent conditions for development of the marina imposed by Environment Waikato and was seen as the best means of protecting the excess clean sands dredged from the harbour.***

Plate 2: ***Dune nourishment along Buffalo Beach was mainly north and south of Taputaputea Stream. The indigenous species screening trial was established immediately north of the stream. To prevent wind erosion during the summer before the planting trial was established, the bare sand was sown with grass.***

Plate 3: ***In April 1995, the trial site at Buffalo Beach was firstly sprayed with herbicide. The trial consisted of four replicates with 2 mainplots each containing up to 64 subplots. Each replicate occupied a separate zone based on proximity to the sea. Numbered wooden identification pegs were placed at all subplots.***

Plate 4: ***The dredged sand containing a high proportion of shell was compacted making digging of planting holes difficult. Post hole borers with 150 mm diameter augers where used to dig the 7000 twenty cm deep planting holes required for the trial.***

Plate 5: ***The Whitianga Beach Care group were instrumental in planting the trial in April and September 1995. Most planting stock was raised by*** **Terra Firma** ***Nursery, Taupo, but some species were sourced from other North Island nurseries including the NZ Forest Research Institute Nursery, Rotorua. Seedlings were mainly 12-18 month old stock raised in PB polythene bags and rootrainers. A total of 23 coastal species were planted with a range of planting treatments imposed.***

Plate 6: ***Planting of the 7000 seedlings was carried out by the Whitianga Beach Care group over five days in April 1995 and three days in September 1995. The trial was designed to compare a range of planting treatments with treatment combinations randomly allocated to subplots. Magamp fertiliser was incorporated into the planting hole as seedlings were planted for appropriate subplots to enable comparison with unfertilised control subplots.***

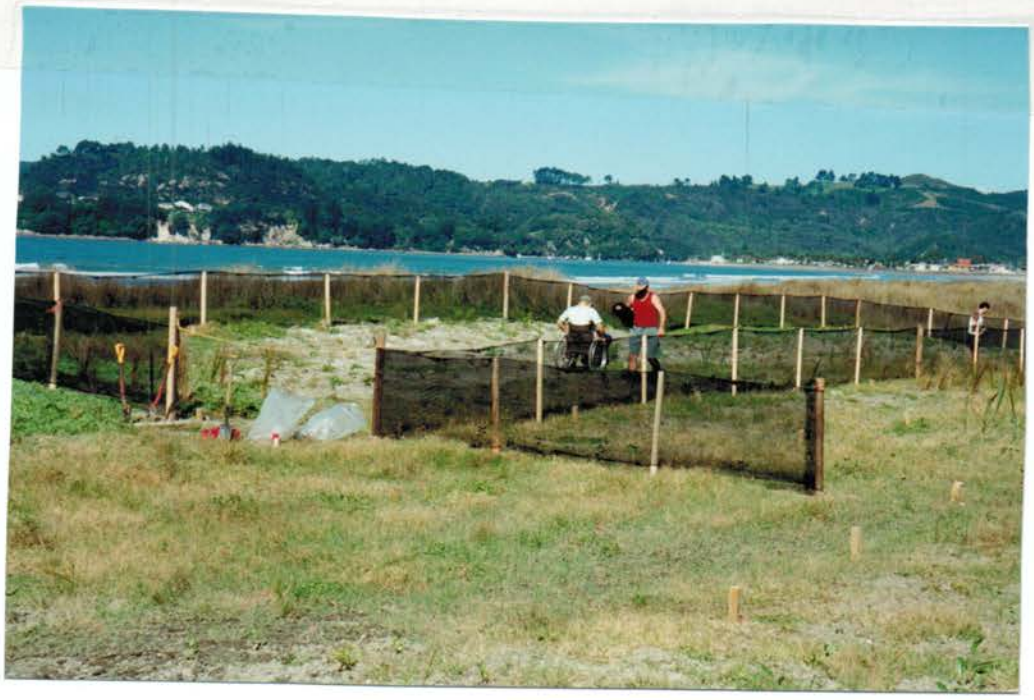

Plate 7: ***A further treatment involved evaluating performance of seedlings planted with and without shelter. Each replicate contained one sheltered and one exposed mainplot. Wind breaks consisting off 1 m high shadecloth supported by posts and wire were constructed to provide planted seedlings with shelter from onshore winds.***

Plate 8: ***A bark mulch was applied to appropriate subplots immediately after planting with other subplots left without mulch as controls. Approximately one 10 litre bucket of bark mulch was applied around each seedling. For the 23 species planted, all treatment combinations of with and without fertiliser, shelter and mulch were tested over the four zones.***

APPENDIX 1 - Treatment combinations for the indigenous coastal plant species screening trials established mid-1995, Buffalo Beach, Whitianga.

MAINPLOT 1 POSITION=Front SHELTER=No

SUBPLOT	SHELTER	MULCH	FERT	SPECIES
1	No	Yes	Yes	Isolepis
2	No	No	No	karo
3	No	Yes	No	sand coprosma
4	No	Yes	No	flax
5	No	No	No	manuka
6	No	No	No	flax
7	No	Yes	No	kanuka
8	No	Yes	No	ice plant
9	No	No	No	puriri
10	No	Yes	Yes	ake ake
11	No	Yes	Yes	ngaio
12	No	Yes	Yes	pohutukawa
13	No	No	No	taupata
14	No	No	Yes	pohutukawa
15	No	Yes	No	pohutukawa
16	No	No	No	Isolepis
17	No	No	Yes	ice plant
18	No	Yes	Yes	karaka
19	No	No	Yes	ake ake
20	No	Yes	Yes	karo
21	No	Yes	No	manuka
22	No	No	No	sand coprosma
23	No	No	Yes	manuka
24	No	No	Yes	kanuka
25	No	No	Yes	pohuehue
26	No	Yes	No	ngaio
27	No	No	Yes	flax
28	No	No	No	kanuka
29	No	No	Yes	karaka
30	No	Yes	No	Isolepis
31	No	No	Yes	sand coprosma
32	No	Yes	No	coastal 5 finger
33	No	Yes	Yes	puriri
34	No	Yes	No	ake ake
35	No	Yes	Yes	pohuehue
36	No	Yes	No	karaka
37	No	Yes	No	taupata
38	No	No	Yes	taupata
39	No	No	No	karaka
40	No	No	Yes	puriri
41	No	No	Yes	carex (6 only)
42	No	No	No	coastal 5 finger
43	No	No	No	ngaio
44	No	Yes	No	karo
45	No	Yes	Yes	taupata
46	No	No	Yes	karo
47	No	No	No	pohutukawa
48	No	Yes	Yes	carex (6 only)
49	No	Yes	Yes	flax
50	No	Yes	No	puriri
51	No	No	No	carex (6 only)
52	No	Yes	Yes	sand coprosma
53	No	Yes	No	pohuehue
54	No	Yes	Yes	coastal 5 finger
55	No	No	Yes	ngaio
56	No	No	No	ake ake
57	No	Yes	Yes	ice plant
58	No	Yes	No	carex (6 only)
59	No	Yes	Yes	kanuka
60	No	Yes	Yes	manuka
61	No	No	Yes	Isolepis
62	No	No	No	pohuehue
63	No	No	No	ice plant
64	No	No	Yes	coastal 5 finger

MAINPLOT 2 POSITION=Front SHELTER=Yes

SUBPLOT	SHELTER	MULCH	FERT	SPECIES
1	Yes	Yes	No	taupata
2	Yes	No	No	Isolepis
3	Yes	Yes	Yes	ngaio
4	Yes	Yes	Yes	karo
5	Yes	Yes	No	coastal 5 finger
6	Yes	No	No	pohutukawa
7	Yes	Yes	No	manuka
8	Yes	Yes	No	ake ake
9	Yes	Yes	No	kanuka
10	Yes	No	Yes	karo
11	Yes	No	No	karo
12	Yes	Yes	Yes	sand coprosma
13	Yes	No	Yes	coastal 5 finger
14	Yes	No	Yes	pohuehue
15	Yes	Yes	No	karaka
16	Yes	No	Yes	ice plant
17	Yes	Yes	No	flax
18	Yes	Yes	Yes	karaka
19	Yes	Yes	No	carex (6 only)
20	Yes	No	No	taupata
21	Yes	No	No	manuka
22	Yes	No	No	flax
23	Yes	Yes	Yes	pohutukawa
24	Yes	No	No	pohuehue
25	Yes	Yes	No	pohutukawa
26	Yes	No	No	ngaio
27	Yes	Yes	Yes	ice plant
28	Yes	Yes	Yes	Isolepis
29	Yes	No	No	puriri
30	Yes	No	Yes	ngaio
31	Yes	No	No	ake ake
32	Yes	Yes	No	puriri
33	Yes	No	Yes	sand coprosma
34	Yes	No	Yes	Isolepis
35	Yes	No	Yes	puriri
36	Yes	Yes	No	Isolepis
37	Yes	Yes	No	pohuehue
38	Yes	Yes	Yes	kanuka
39	Yes	Yes	Yes	pohuehue
40	Yes	No	Yes	carex (6 only)
41	Yes	No	No	ice plant
42	Yes	No	No	coastal 5 finger
43	Yes	Yes	Yes	taupata
44	Yes	Yes	Yes	flax
45	Yes	No	Yes	kanuka
46	Yes	Yes	Yes	manuka
47	Yes	No	Yes	manuka
48	Yes	No	No	carex (6 only)
49	Yes	No	Yes	karaka
50	Yes	No	Yes	flax
51	Yes	Yes	Yes	carex (6 only)
52	Yes	No	No	sand coprosma
53	Yes	Yes	Yes	puriri
54	Yes	No	No	kanuka
55	Yes	No	Yes	taupata
56	Yes	Yes	Yes	coastal 5 finger
57	Yes	No	No	karaka
58	Yes	No	Yes	ake ake
59	Yes	No	Yes	pohutukawa
60	Yes	Yes	No	karo
61	Yes	Yes	No	sand coprosma
62	Yes	Yes	Yes	ake ake
63	Yes	Yes	No	ice plant
64	Yes	Yes	No	ngaio

MAINPLOT 3 POSITION=Mid SHELTER=Yes

SUBPLOT	SHELTER	MULCH	FERT	SPECIES
1	Yes	No	Yes	pohuehue
2	Yes	No	No	ake ake
3	Yes	Yes	Yes	flax
4	Yes	No	Yes	coastal 5 finger
5	Yes	Yes	No	pohutukawa
6	Yes	No	No	ice plant
7	Yes	No	Yes	puriri
8	Yes	Yes	Yes	sand coprosma
9	Yes	No	No	taupata
10	Yes	No	Yes	ice plant
11	Yes	Yes	No	sand coprosma
12	Yes	Yes	Yes	coastal 5 finger
13	Yes	Yes	No	manuka
14	Yes	No	Yes	manuka
15	Yes	Yes	No	karamu
16	Yes	No	Yes	Isolepis
17	Yes	Yes	No	kanuka
18	Yes	No	No	kanuka
19	Yes	No	No	coastal 5 finger
20	Yes	Yes	Yes	ake ake
21	Yes	Yes	No	pohuehue
22	Yes	No	No	sand coprosma
23	Yes	Yes	Yes	karo
24	Yes	Yes	No	Isolepis
25	Yes	No	Yes	karamu
26	Yes	Yes	No	karaka
27	Yes	No	No	pohutukawa
28	Yes	Yes	Yes	karaka
29	Yes	Yes	Yes	pohuehue
30	Yes	Yes	Yes	Isolepis
31	Yes	Yes	No	puriri
32	Yes	No	Yes	pohutukawa
33	Yes	Yes	Yes	taupata
34	Yes	No	No	karo
35	Yes	Yes	Yes	kanuka
36	Yes	Yes	No	ice plant
37	Yes	No	Yes	ake ake
38	Yes	Yes	Yes	ice plant
39	Yes	Yes	No	taupata
40	Yes	No	Yes	karaka
41	Yes	No	Yes	flax
42	Yes	Yes	Yes	puriri
43	Yes	No	Yes	karo
44	Yes	Yes	Yes	manuka
45	Yes	No	No	flax
46	Yes	Yes	No	ngaio
47	Yes	No	Yes	taupata
48	Yes	Yes	Yes	pohutukawa
49	Yes	Yes	No	flax
50	Yes	Yes	Yes	ngaio
51	Yes	No	No	puriri
52	Yes	No	Yes	kanuka
53	Yes	No	No	karaka
54	Yes	No	No	karamu
55	Yes	No	No	pohuehue
56	Yes	No	No	Isolepis
57	Yes	Yes	No	karo
58	Yes	Yes	No	coastal 5 finger
59	Yes	No	Yes	ngaio
60	Yes	Yes	No	ake ake
61	Yes	Yes	Yes	karamu
62	Yes	No	No	ngaio
63	Yes	No	No	manuka
64	Yes	No	Yes	sand coprosma

MAINPLOT 4 POSITION=Mid SHELTER=No

SUBPLOT	SHELTER	MULCH	FERT	SPECIES
1	No	Yes	Yes	karamu
2	No	Yes	Yes	sand coprosma
3	No	No	No	manuka
4	No	Yes	No	flax
5	No	Yes	Yes	flax
6	No	No	No	ngaio
7	No	No	Yes	ice plant
8	No	Yes	Yes	coastal 5 finger
9	No	Yes	Yes	puriri
10	No	No	Yes	karo
11	No	Yes	Yes	kanuka
12	No	Yes	No	puriri
13	No	No	No	ake ake
14	No	No	Yes	ake ake
15	No	Yes	No	taupata
16	No	Yes	Yes	ngaio
17	No	No	Yes	puriri
18	No	No	No	ice plant
19	No	Yes	Yes	pohutukawa
20	No	No	Yes	pohuehue
21	No	No	Yes	taupata
22	No	Yes	Yes	ake ake
23	No	Yes	No	ice plant
24	No	Yes	Yes	pohuehue
25	No	No	No	karo
26	No	Yes	Yes	manuka
27	No	Yes	No	ngaio
28	No	No	Yes	karamu
29	No	Yes	No	pohutukawa
30	No	Yes	Yes	karo
31	No	No	Yes	coastal 5 finger
32	No	No	Yes	sand coprosma
33	No	No	Yes	karaka
34	No	Yes	No	manuka
35	No	Yes	No	karo
36	No	No	No	kanuka
37	No	Yes	Yes	taupata
38	No	No	No	karaka
39	No	Yes	No	pohuehue
40	No	No	No	karamu
41	No	No	No	Isolepis
42	No	No	Yes	Isolepis
43	No	No	No	flax
44	No	Yes	No	sand coprosma
45	No	No	Yes	ngaio
46	No	No	No	sand coprosma
47	No	No	Yes	flax
48	No	No	No	pohuehue
49	No	No	No	coastal 5 finger
50	No	No	Yes	kanuka
51	No	Yes	No	Isolepis
52	No	No	No	taupata
53	No	Yes	No	kanuka
54	No	Yes	Yes	ice plant
55	No	Yes	No	coastal 5 finger
56	No	Yes	No	karamu
57	No	No	No	puriri
58	No	No	No	pohutukawa
59	No	Yes	Yes	karaka
60	No	Yes	No	karaka
61	No	No	Yes	pohutukawa
62	No	No	Yes	manuka
63	No	Yes	No	ake ake
64	No	Yes	Yes	Isolepis

MAINPLOT 5 POSITION=Rear SHELTER=No

SUBPLOT	SHELTER	MULCH	FERT	SPECIES
1	No	No	Yes	Isolepis
2	No	Yes	Yes	ice plant
3	No	No	Yes	ake ake
4	No	No	No	pohutukawa
5	No	No	No	Isolepis
6	No	Yes	No	pohutukawa
7	No	Yes	Yes	karo
8	No	Yes	Yes	pohuehue
9	No	Yes	Yes	manuka
10	No	Yes	Yes	karaka
11	No	Yes	Yes	Isolepis
12	No	Yes	No	sand coprosma
13	No	No	Yes	manuka
14	No	Yes	No	manuka
15	No	Yes	Yes	tawapou (6 only)
16	No	No	No	tawapou (6 only)
17	No	No	Yes	sand coprosma
18	No	No	No	ngaio
19	No	Yes	Yes	ake ake
20	No	No	No	manuka
21	No	No	No	pohuehue
22	No	Yes	No	karo
23	No	Yes	No	coastal 5 finger
24	No	No	Yes	karaka
25	No	No	No	ake ake
26	No	Yes	Yes	cabbage tree
27	No	Yes	Yes	pohutukawa
28	No	No	Yes	karo
29	No	Yes	No	ngaio
30	No	Yes	No	ake ake
31	No	No	No	cabbage tree
32	No	Yes	No	karaka
33	No	Yes	No	tawapou (6 only)
34	No	No	Yes	flax
35	No	No	Yes	pohuehue
36	No	No	No	karo
37	No	Yes	Yes	taupata
38	No	No	Yes	kanuka
39	No	No	Yes	pohutukawa
40	No	No	Yes	taupata
41	No	Yes	No	pohuehue
42	No	No	No	kanuka
43	No	Yes	No	cabbage tree
44	No	Yes	Yes	kanuka
45	No	No	Yes	cabbage tree
46	No	No	No	flax
47	No	No	Yes	coastal 5 finger
48	No	No	Yes	tawapou (6 only)
49	No	Yes	Yes	ngaio
50	No	No	Yes	ngaio
51	No	Yes	No	kanuka
52	No	No	No	karaka
53	No	Yes	Yes	sand coprosma
54	No	No	No	sand coprosma
55	No	No	Yes	ice plant
56	No	Yes	Yes	flax
57	No	Yes	No	taupata
58	No	Yes	Yes	coastal 5 finger
59	No	Yes	No	flax
60	No	No	No	taupata
61	No	No	No	coastal 5 finger
62	No	Yes	No	Isolepis
63	No	Yes	No	ice plant
64	No	No	No	ice plant

MAINPLOT 6 POSITION=Rear SHELTER=Yes

SUBPLOT	SHELTER	MULCH	FERT	SPECIES
1	Yes	No	Yes	pohutukawa
2	Yes	Yes	No	sand coprosma
3	Yes	Yes	No	flax
4	Yes	Yes	Yes	sand coprosma
5	Yes	Yes	Yes	pohutukawa
6	Yes	Yes	Yes	kanuka
7	Yes	No	Yes	pohuehue
8	Yes	Yes	No	karaka
9	Yes	No	No	pohuehue
10	Yes	Yes	Yes	ngaio
11	Yes	No	No	karo
12	Yes	Yes	No	ngaio
13	Yes	Yes	Yes	pohuehue
14	Yes	No	No	manuka
15	Yes	No	No	Isolepis
16	Yes	Yes	Yes	flax
17	Yes	No	No	ice plant
18	Yes	Yes	No	tawapou (6 only)
19	Yes	No	Yes	karo
20	Yes	No	Yes	ngaio
21	Yes	No	No	pohutukawa
22	Yes	Yes	Yes	ake ake
23	Yes	Yes	No	cabbage tree
24	Yes	No	No	ake ake
25	Yes	Yes	No	taupata
26	Yes	No	No	ngaio
27	Yes	Yes	No	ice plant
28	Yes	No	Yes	ake ake
29	Yes	Yes	No	coastal 5 finger
30	Yes	No	Yes	ice plant
31	Yes	No	Yes	kanuka
32	Yes	No	Yes	manuka
33	Yes	No	No	cabbage tree
34	Yes	Yes	Yes	cabbage tree
35	Yes	No	Yes	tawapou (6 only)
36	Yes	No	No	flax
37	Yes	Yes	No	manuka
38	Yes	Yes	Yes	taupata
39	Yes	No	No	tawapou (6 only)
40	Yes	No	Yes	cabbage tree
41	Yes	Yes	No	Isolepis
42	Yes	No	No	taupata
43	Yes	Yes	No	pohutukawa
44	Yes	Yes	No	kanuka
45	Yes	Yes	Yes	manuka
46	Yes	Yes	No	pohuehue
47	Yes	Yes	No	ake ake
48	Yes	No	Yes	taupata
49	Yes	Yes	Yes	ice plant
50	Yes	No	Yes	sand coprosma
51	Yes	Yes	Yes	tawapou (6 only)
52	Yes	No	No	sand coprosma
53	Yes	Yes	Yes	coastal 5 finger
54	Yes	No	Yes	karaka
55	Yes	No	Yes	Isolepis
56	Yes	No	Yes	coastal 5 finger
57	Yes	Yes	No	karo
58	Yes	Yes	Yes	karaka
59	Yes	No	No	coastal 5 finger
60	Yes	Yes	Yes	Isolepis
61	Yes	No	No	kanuka
62	Yes	Yes	Yes	karo
63	Yes	No	Yes	flax
64	Yes	No	No	karaka

MAINPLOT 7 POSITION=Rear SHELTER=No

SUBPLOT	SHELTER	MULCH	FERT	SPECIES
1	No	No	No	puriri
2	No	Yes	Yes	mahoe
3	No	Yes	Yes	broadleaf
4	No	Yes	Yes	puriri
5	No	No	Yes	cottonwood
6	No	Yes	Yes	cottonwood
7	No	No	Yes	kohuhu
8	No	No	No	cottonwood
9	No	No	Yes	kawakawa
10	No	Yes	Yes	kawakawa
11	No	No	No	kohuhu
12	No	Yes	No	broadleaf
13	No	Yes	No	mahoe
14	No	Yes	No	kohuhu
15	No	Yes	No	puriri
16	No	Yes	No	cottonwood
17	No	No	No	mahoe
18	No	No	Yes	mahoe
19	No	No	Yes	puriri
20	No	No	No	broadleaf
21	No	Yes	Yes	kohuhu
22	No	No	Yes	broadleaf
23	No	No	No	kawakawa
24	No	Yes	No	kawakawa

MAINPLOT 8 POSITION=Rear SHELTER=Yes

SUBPLOT	SHELTER	MULCH	FERT	SPECIES
1	Yes	No	No	puriri
2	Yes	Yes	No	puriri
3	Yes	Yes	No	kawakawa
4	Yes	No	Yes	broadleaf
5	Yes	No	No	cottonwood
6	Yes	No	No	broadleaf
7	Yes	Yes	No	broadleaf
8	Yes	No	Yes	puriri
9	Yes	No	No	mahoe
10	Yes	Yes	Yes	broadleaf
11	Yes	Yes	No	cottonwood
12	Yes	Yes	Yes	kohuhu
13	Yes	No	No	kohuhu
14	Yes	No	Yes	kawakawa
15	Yes	No	Yes	mahoe
16	Yes	Yes	Yes	cottonwood
17	Yes	Yes	No	mahoe
18	Yes	Yes	Yes	puriri
19	Yes	Yes	Yes	kawakawa
20	Yes	No	No	kawakawa
21	Yes	Yes	Yes	mahoe
22	Yes	No	Yes	cottonwood
23	Yes	Yes	No	kohuhu
24	Yes	No	Yes	kohuhu

NZ FRI FIELD RECORD

TRIAL LOCALITY, WORK PLAN NO. WHITIANGA COASTAL PLANT COMMUNITY TRIAL

PLANTING DATE April/August 1995 OTHER:

Block No.	Plot No.	Seedling No.	DATE Ht (cm)	Spread (cm)	Vigour	Blanked	Comments	DATE Ht (cm)	Spread (cm)	Vigour	Blanked	Comments
		1										
		2										
		3										
		4										
		5										
		6										
		7										
		8										
		9										
		10										
		11										
		12										

Appendix 2: **Field record form for plant survival and growth assessment for the 12-seedling subplots for the indigenous coastal plant species screening trial, Buffalo Beach, Whitianga, Coromandel Peninsula.**