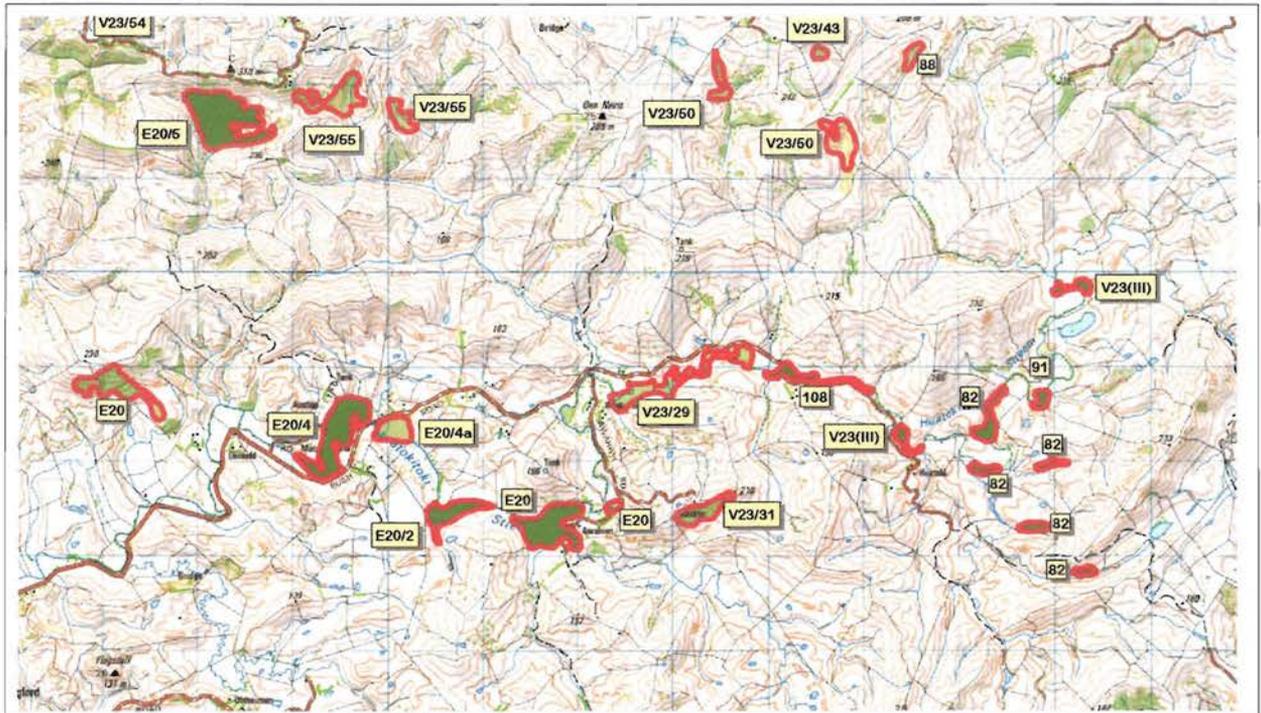


NATIVE BUSH IN CENTRAL HAWKE'S BAY

Is there a future without rules?



NATIVE BUSH IN
CENTRAL HAWKE'S BAY –
is there a future without rules?

James Hunter
Kellogg Rural Leadership Programme 2001

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Central Hawke's Bay District



INTRODUCTION

The protection of New Zealand's indigenous biodiversity of New Zealand is a significant national issue. Central Hawke's Bay (CHB) has not escaped comments about the continuing loss and degradation of native bush, and apparently slow rate of protection.

At the same time there is an increasing awareness within farming circles of the value of these remaining bush areas and an enthusiasm for voluntary protection work.

Farmers' attitudes towards environmental protection are changing. After all, where was the talk of sustainability in the 1978 to 1982 period when State sponsorship through the Land Development and Encouragement Loan scheme saw the clearing of some 940,000 hectares (Eckhoff, Kelloggs 1997) throughout New Zealand. Is 1982 that long ago?

One driver of these changing attitudes is consumers in overseas markets demanding assurances that farm production has not adversely affected the environment. Others are the work of bodies such as the Hawke's Bay Regional Council (HBRC), Department of Conservation (DoC), and the Queen Elizabeth II National Trust (QEII) and, dare I say it, noises from protest groups. Last, but not least, farmers themselves are re-ranking their priorities.

Continual pressure from livestock and pests threatens the remaining bush. Rules have been proposed to maintain this status quo, in many cases as a backstop to prevent an unknown number of landowners from hastening this decline by more deliberate means. The administration and enforcement of rules involves consents, bureaucracy and money.

To date, the CHB District Council has placed its faith in voluntary protection, rather than rules which don't offer any protection against gradual degradation.

Can this fear for the future be allayed by focusing on what is being gained? Regeneration can and does repair past damage and losses.

To answer the question of whether rules are needed in CHB, I have:

- Estimated the native bush areas remaining,
- Quantified what native bush areas have been voluntarily protected using legal covenants,
- Looked for any trends in the rate of protection, and
- Costed protection work and on-going commitments.

BACKGROUND

1. Central Hawke's Bay

- Population: 12 ,747 (2001 census, provisional)
- CHB landscapes vary from coastal hills in the east, inland plains and rolling land that rises to the Ruahine Ranges in the west.
- Most farming activities occur here including cropping, horticulture and an array of livestock operations, predominantly sheep and beef.
- NZ has been divided into 268 ecological districts, each representing a similar area of landform and vegetation type. Central Hawke's Bay's 3.26 million hectares are divided into four different ecological districts. These are approximately:
 - Eastern Hawke's Bay 49%
 - Heretaunga 39%
 - Ruahine 10%, and
 - Puketoi 2%.
- As there was no Ruahine Protected Natural Area (PNA) survey and the vegetation typical of this ecological district is well represented within the Ruahine Forest Park and Gwavas Conservation Area, this project will cover the remaining 90% of CHB, which I have called lowland CHB.

2. Native Bush

Central Hawke's Bay's bush varies from totara and podocarp forest in the wetter western areas to fire-induced kanuka stands throughout the central region to coastal forest comprised of mixed broadleaves and scrub species. There are few areas of forest on alluvial flats.

The PNA surveys looked at all the remaining natural vegetation in each ecological district, ranking the most important areas as Recommended Areas for Protection (RAPs), and also listing other areas not ranked as RAPs.

Alan Lee wrote about the Heretaunga ecological district:

"While the RAPs should be given priority for future protection, natural areas within this ecological district are so few that even less significant and smaller remnants assume greater importance. They should not be overlooked and every effort should be made to encourage the protection of these small and modified areas."
(Heretaunga Ecological District Survey, 1994).

On that basis all areas of native bush identified within the PNA surveys have been included, that is:

- Scenic Reserves
- RAPs
- Areas surveyed and not ranked as RAPs
- Areas unable to be surveyed for which hectares were estimated

Excluded from this study are:

- Lakes and wetlands
- The Tukituki and Waipawa riverbeds
- the Porangahau Recommended Area for Protection (RAP) no 22, a 1000 to 1400 hectare area of coastal sand dunes

At the time of the surveys, only 3% of Eastern Hawke's Bay (Eastern Hawke's Bay PNA Report, 1993) and 6% of Heretaunga ecological districts (Heretaunga PNA Report, 1994) was in native vegetation. Using these surveys it appears lowland CHB has less than 3% native

vegetation, making it one of the lowest native bush covers in the country.

Additionally, I anticipate the soon-to-be-released national policy statement on biodiversity will place greater value on these small remaining blocks.

3. Estimating Areas

The numbers are those recorded in the PNA surveys, of which the Eastern Hawke's Bay and Heretaunga districts were full and thorough. Despite this, I acknowledge not all areas of vegetation were recorded, as highlighted by the unidentified areas that have been protected since these reports were written. Because there is such a small percent in native cover, discovering even another third does not dramatically change the total.

Additionally, it is often not practical to protect all of an identified block. In a sample of covenants, only 72% of the area identified by the PNA survey was included in the final covenant.

4. Protected Areas

For this study these are either legal covenants or Scenic Reserves. A covenant is a legal agreement between either DoC or QEII and the landowner to protect an area. These voluntary statutory covenants on private land give protection in perpetuity as they are registered on the title of the land. Included are approvals not yet registered.

There are also many blocks which are currently fenced from stock and retired but without this legal guarantee. An attempt to quantify these was abandoned, however anyone considering the legally protected areas should bear in mind that they exist.

5. Covenant Funding

Currently DoC's covenants pay 100% of fencing, survey and legal costs of registering a covenant, and all on-going weed, pest and maintenance costs.

In Hawke's Bay, QEII covenant costs are shared as follows:

- Fencing: a third each HBRC, QEII and landowner
- Survey: two thirds QEII, one-third HBRC
- Legal: QEII
- Pest: initial HBRC; on-going landowner with help from HBRC.
- Weed: landowner
- Fence repairs and maintenance: landowner

FINDINGS

1. Total native bush areas & their protection status

Table 1: Areas of Native Bush in lowland Central Hawke's Bay

	Native Bush (ha)	Protected with QEII (ha)	Protected with DOC (ha)	Total Protected ha	% Protected
Scenic Reserves	317	0	317	317	100
RAPs	3645	118	386	504	14
Inspected but not RAPs	1983	180	8	188	9
Identified not inspected	985	28	0	28	11
Subtotal	6930	326	711	1037	15
Not identified but protected	264	267	0	267	100
Total	7194	593	711	1304	18

The main points to come out of Table 1 are:

- There are few areas of native bush remaining in lowland Central Hawke's Bay.
- Of the QEII areas, 45% were not identified in the PNA surveys. They have however been considered important enough to obtain national funding.
- DoC's focus has been on RAPs.

A total survey of CHB has been called for because we don't know what to protect when we don't know what we have. The bigger picture shows there are few representative examples of original cover.

Some of the reserves are threatened by weeds, among them Old Man's beard, tradescantia, and pests in particular possums.

Appendix A is a breakdown of the unprotected bush, showing 110 areas averaging 27 hectares, and the largest nine identified areas averaging 329 hectares. The average size of all areas is 50 ha.

2. Trends in the rate of protection

Table 2: Protected areas in lowland CHB before 1992

Pre 1992	Hectares	Numbers of Protected Areas
Scenic Reserves	317	
DOC covenants	49	2
QEII covenants	51	3
Totals	417	

Table 3: Areas protected in lowland CHB from 1992

Year	QEII		DOC		Total	
	Ha	No.	Ha	No.	Ha	No.
1992	5	1	0	0	5	1
1993	5	1	8	1	13	2
1994	12	1	0	0	12	1
1995	28	3	35	3	63	6
1996	51	3	182	2	233	5
1997	56	3	0	0	56	3
1998	12	1	0	0	12	1
1999	9	1	0	0	9	1
2000	15	2	120	1	135	3
2001*	64	4	0	0	64	4
Approved	285	16	0	0	285	16
Total	542	36	345	7	887	43

*This will increase if approved areas are registered in 2001

The main points are:

- a At the time of the PNA surveys there were very few covenants on private land.
- b The rate slowed in 1998/99. Drought and tough financial times are believed to have been influential.
- c 484 hectares, or 55% have been covenanted or approved for covenanting in the last three years.

In 1995 the HBRC included the protection of indigenous cover in their land management group's activities. Grants were included in the Regional Landcare Scheme subject to permanent legal protection through QEII or DoC covenants.

The local QEII rep has stated the financial grant offered has had a major impact on the uptake of QEII covenants in Hawke's Bay (G. Eyles, review of land management programme, internal HBRC report, 2001)

Note: DoC has not, to date, sought funding from this scheme.

- d DoC's protected area is dominated by two large covenants (280 hectares in total).
- e DoC, despite the 100% funding, has not matched QEII activity in recent years (credit should however, be given to the ripple-effect of earlier work whereby farmers' awareness was increased, and more importantly, confidence taken from seeing these areas regenerate.)

Table 4: Covenants in lowland CHB

	QEII ha	DOC
Last 10 years	537	345
Last 5 years	385	120
Last 2 years	349	0

The following helps to explain Table 4:

- DoC's priority has been RAPs
- Funding has not always been available – one RAP application was declined by the Nature Heritage Fund, DoC's principal funding source for this work, because it was seen as too expensive. This was subsequently picked up by QEII and the costs spread between QEII, the Regional Council and the landowner. Significant sums from this fund have been used on land purchases, and compensation for forestry rights on South Island Maori land
- slow response time to request for assistance
- landowners have wanted independent partners and control over their own land
- changes such as re-ranking of existing protected areas for pest control (see Appendix B) create uncertainty
- DoC's advocacy for controls and rules over private land has not won support among those with native bush, that is, those who make the decision to pursue preservation

The above are my views and do not reflect on the calibre of DoC's field staff whose skills, experience and enthusiasm are appreciated by all in direct contact.

3. Costs

No allowance has been made for staff time (HBRC, QEII or DoC) or farmer input associated with, applications, processing of costs and other incidentals, or the value of existing fencing paid for by farmers.

Table 5: Initial and on-going covenanting costs per hectare

Initial Costs	\$/ha
Fencing	1200
Survey	200
Legal	30
Pest	10
Total per hectare	1440
On-going costs (net present costs)	
Repairs & Maintenance	25
Pest	50
Weed	0
Lost income	365
Total per hectare	440
Total costs/ha	1880

The net present cost is the value of the on-going annual costs as a lump sum in today's dollars.

Table 6: Cost/ha comparison between DoC & QEII covenants

	DoC covenant	QEII covenant
National \$	1515	565
Regional (HBRC) \$	0	485
Landowner \$	365	830
Totals	1880	1880

- These numbers are a guide only, emphasising the high cost of protection.
- No allowance has been made for weed control. This will be site-specific and more obvious once stock are removed.
- All of these costs are dwarfed when better grazing land is involved eg: assume - \$500/ha economic farm surplus (EFS) and 50% grazing. The net present cost is \$3057/ha.
- Refer to Appendix C for more details.

DISCUSSION

1. Existing Protected Areas

A number of protected areas were listed as threatened by weeds and pests (DoC Conservation Management Strategy 1994-2004). To date this has not been rectified, placing at jeopardy the value of these areas. This long-term part of protection should be costed and funded.

2. Unprotected Native Bush Areas

(i) *A need for more surveys?*

It has been argued by DoC that a database identifying all vegetation is needed in order that:

- assessments of what is significant can be made

- progress in protection of this complying significant vegetation can be monitored.

DoC in a submission to the CHB District Council stated that: *“this task of identification is enormous. It may well take years.”* (G.P. Hulbert, 1998, for the Minister of Conservation). This implies a costly exercise diverting already limited funds away from protection work.

To be accurate, a full-scale survey would require landowner consent for field inspection. Is this likely when there is a fear of reclassification leading to capture within a consent process?

Once a significant area is identified in a planning process, the landowner is not obligated to undertake enhancement work such as fencing. Grazing by both farm stock and possums is likely to continue.

In summary:

- PNA reports covering nearly 90% of CHB were comprehensive
- There are few remaining areas of native vegetation
- The rate of protection is now increasing
- A full survey
 - will be expensive
 - may not be possible and
 - does not alter the rate of protection

Efforts and monies would therefore be better applied promoting awareness, helping with protection and monitoring changes. This would also allow assessment of previously unidentified areas as landowners came forward.

(ii) Enhancement – with or without rules?

There is more to be gained from enhancing the quality of native bush through regeneration than aiming to preserve the status quo. The key becomes removal of stock and control of weeds and pests.

To make this compulsory ignores existing-use rights and confirms benefits accrue to more than the landowners. This then begs the

question of why landowners should be forced to carry the public good costs as well as the loss of their own income.

The only merit of a rule that prevents immediate clearance is that it does only that. In general this threat has not been an issue since LDEL days (see Appendix D) and the drawbacks of such an insurance policy include:

- Deciding which areas to protect
- Costs are imposed on others who do not need the rules
- The rules don't necessarily alter the rate of protection and run the risk of alienating landowners.

With limited national funds and the high cost of covenanting, all parties and the environment stand to gain from voluntary protection. That landowners are increasingly willing to do so is shown in the changes since 1992 (Table 3).

For those who feel this rate is too slow, I enclose numbers for Bush Road (Table 7, and Diagram 1). Most of the bush is podocarp forest remnants on inland meandering stream flats, an extremely rare kind of system, notable for its high diversity of divaricating shrub species including some that are rare (Walls & Taylor, 1998).

Table 7: Bush Road bush areas

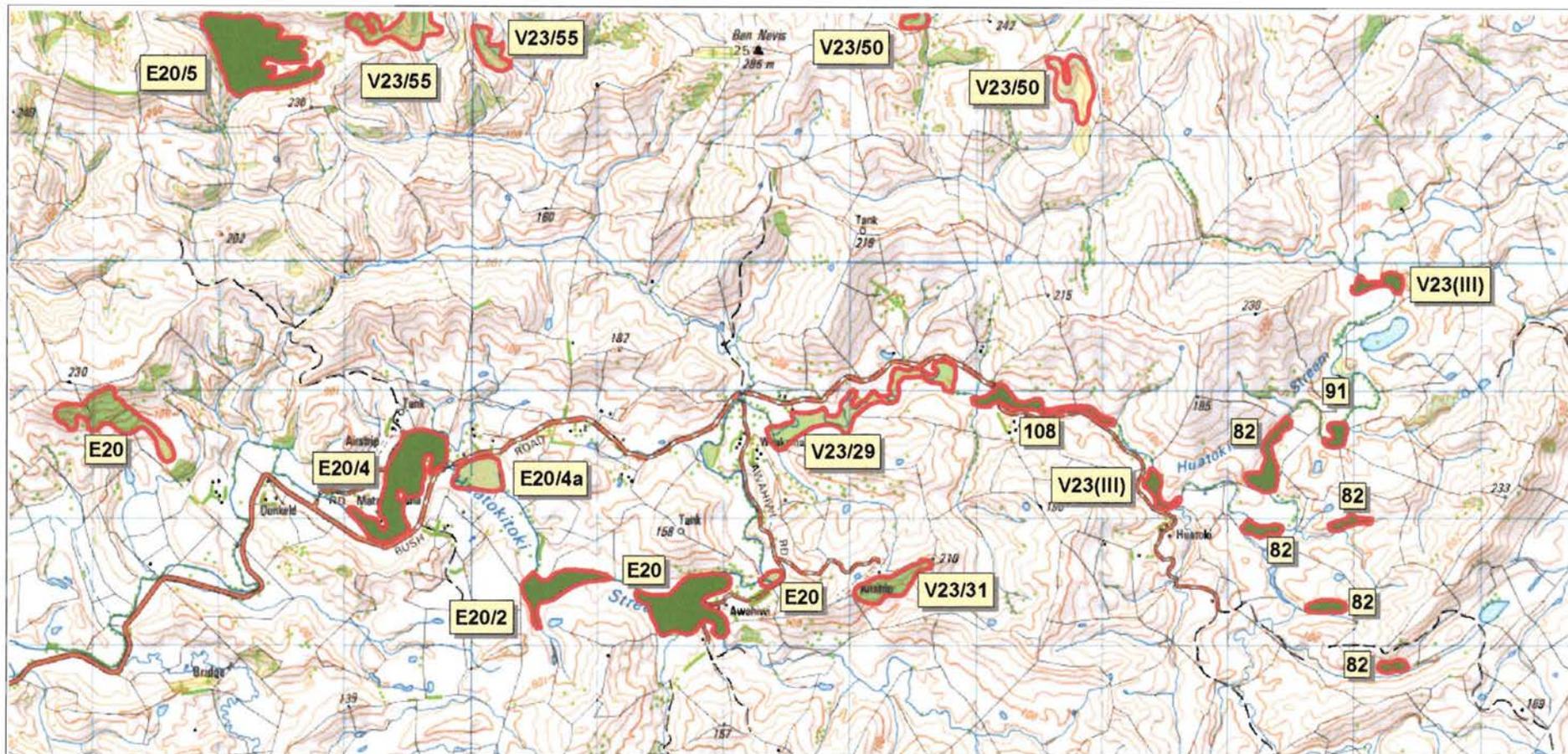
	Total ha	Protected ha	%	CHB %
RAPs	107	73	68	14
Non RAPs	140	53	38	24*
Total	247	126	51	18

* includes Scenic Reserves

- first block protected 1992

The figures speak for themselves! Others with unprotected bush are seeking to add to them.

CASE STUDY - BUSH ROAD



Legend



Identified areas of native bush



Protected areas of native bush



Code used to link with PNA reports

Much of this grew from HBRC riparian work on the back of earlier DoC efforts, QEII covenanting and a local hope that the road's name would not be a hint of the past.

Who knows what the flow-on effect of new approvals in CHB will be? Protecting 115 hectares annually for the next 20 years would bring the rest of lowland CHB up to Bush Road levels. How would this be judged against national efforts?

(iii) A choice of covenants?

The cost-sharing with the QEII covenants allows limited Crown dollars to be spread further. This form of partnership between the HBRC and QEII has proven popular with farmers, for which much credit must go to the HBRC's funding and encouragement.

Increasing demand for funds could see a re-evaluation of priorities, especially at a national level. Often one of the immediate changes is to increase the minimum size of covenants because small blocks have high per hectare costs. In CHB's case, to preserve the district's biodiversity, a mosaic of these small remaining blocks is vital.

Increasing funding to QEII would appear to be a cost-effective way of looking after the future, that is one dollar to QEII attracts more than another two from the Hawke's Bay community.

(iv) Other options

A number of landowners have protected their bush without covenants. Others have indirectly provided cover crops with forestry. Purists may not see either as valid protection, however these should not be discounted as revegetation occurs in both instances. Additionally signatories to the Forest Accord have agreed not to cut native bush.

SUMMARY

- Less than 3% cover in native bush, many of the remnants in scattered blocks and mostly in private ownership
- Vegetation typical of the Ruahine ecological district is well-represented
- Enhancement of this cover will not occur without landowner support.
- Rules – do not prevent degradation by removing livestock & pests
 - imply that those beyond the land have something to lose
 - do not result in enhancement
- The cost of protection is high, especially for these small blocks. Despite this, the rate of protection is increasing.
- Seed banks mean native bush areas in lowland CHB have the ability to quickly regenerate
- Most of recent work has been in partnership with the HBRC and QEII.
- There is a high degree of respect for the calibre and enthusiasm for field staff within Hawke's Bay.
- QEII covenants offer the nation and the landowner a cost-effective means of legal protection
- There is a risk that increased enthusiasm for covenanting could be stifled by lack of funds

This project has given me the confidence to say that talk among farming circles is matched by action, that native bush and thereby biodiversity in CHB does have a future without rules.

There is no question the nation wants a future containing some of the past. What is debatable is the nation's desire to fund a fair share. Excusing this with a lack of dollars is understandable and would be fine, except when matched against the likes of America's Cup and tourism gifts or an extra \$164 million for the arts. To put this funding in perspective last year QEII had available for new fencing NZ wide some \$220,000. Are our priorities right?

Politicians attempting to ride the green wave washing the country would do well to avoid driving a wedge between those on the ground (that is those who will decide to protect their bush), and those able to assist.

Politicians have two roles: first, to foster protection through encouragement rather than rules, and the second to ensure the value the nation places on its biodiversity is matched with funding.

Awareness is the key and it drives enthusiasm. Fostering new levels of awareness will do more than rules.

If the focus is on protection that allows native seeds and seedlings to express themselves within retired areas, then current voluntary work is a success, spreading the costs and creating a win:win environment.

ACKNOWLEDGEMENTS

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CHB District Council: John Glengarry, Megan Annear
DoC staff: John Adams, Pat Bonis, Neale Grant, Chris Ward
Earnslaw One: Katie Mayes
Eckhoff, G. PNA study report, Kelloggs, 1997.
Hawke's Bay Regional Council staff: Garth Eyles, Neil Faulknor & technical mapping staff Darrel Hall and Mary Mo
QEII staff: Marie Taylor

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Walls and Taylor, QEII memo, 1998

In writing this project I have drawn from experience as a farmer with QEII covenants, involvement as a District Councillor, hearing submissions for the CHB District Plan, as the Huatokitoki Landcare Group co-ordinator, and in another life, working with the Rural Bank, approving successful LDEL write-offs, including several of 600 hectares, and lending for further clearance.

APPENDICES

Appendix A: Unprotected Lowland Bush Areas in Central Hawke's Bay*

Table 8: Unprotected lowland bush areas in CHB

Hectares	RAP		Non RAPs		Total	
	Total ha	No.	Total ha	No.	Total ha	No.
1-10	10	4	263	34	273	38
11-20	152	10	406	24	558	34
21-30	132	5	282	12	414	17
31-40	303	8	147	4	450	12
41-50	89	2	90	2	179	4
51-60	0	0	120	2	120	2
61-70	70	1	280	4	350	5
71-80	73	1	240	3	313	4
81-90	0	0	0	0	0	0
91-100	0	0	300	3	300	3
>100	2345	5	616	4	2961	9
Total	3174	36	2744	92	5918	119

- these are only the areas recorded in the PNA reports
- these are the identified areas, they may be in several separate blocks
- the average size is 50 hectares
- taking out the areas larger than 100 hectares, there are 110 areas averaging 27 hectares, which is more typical of what remains
- going a step further, 101 (85%) are 40 hectares or smaller, averaging 17 hectares, even though comprising 29% of the total identified bush cover

Appendix B – Letter from DoC to Thomsens

Appendix C: Costs of Native Bush Protection

Table 9: Protection Costs, Initial and On-going per hectare

	Initial Costs					On-going Costs (net present costs)					Total Cost
	Fence	Survey	Legal	Pest	Total \$/ ha	R&M	Pest	Weed	Lost Income	Total \$/ha	
	1200	200	30	10	1440	25	50	0	365	440	1880
DoC covenant											
National \$- DoC	1200	200	30	10	1440	25	50	0	0	75	1515
Regional \$ HBRC	0	0	0	0	0	0	0	0	0	0	0
Land-owner \$	0	0	0	0	0	0	0	0	365	365	365
QEII covenant											
National \$ QEII	400	135	30	0	565	0	0	0	0	0	565
Regional \$ HBRC	400	65	0	10	475	0	10	0	0	10	485
Land-owner \$	400	0	0	0	400	25	40	0	365	430	830

Note:

- These numbers are a guide only, highlighting points that protection is not cheap and involves on-going costs.
- The cost-sharing of the two types of covenant
- No allowance has been made for weed control. This will be site-specific and more obvious once stock are removed.
- All of these costs are dwarfed when better grazing land is involved eg: assume - \$500/ha EFS and 50% grazing. The net present cost is \$3057/ha.

1. Initial Costs

(i) QEII – Hawke’s Bay (source HBRC)

Year	Area (ha)	No.	Av. Size	Cost	Cost/ha \$
1997/98	40	3	13.3	27,457	686
1998/99	82	13	6.3	130,022	1586
1999/00	121	11	11	265,613	2192
2000/01	242	16	15.1	302,921	1252
Total	485	43	11.3	726,013	\$1497

(ii) QEII Individual Covenants – CHB (source QEII)

Year	Area ha	Fence \$/ha	Other \$/ha	Total \$/ha
1998	12.4	903	263	1166
1999	8.6	696	389	1085
2000	11.2	830	217	1047
2000	33.3	1113	226	1339
2000	16.6	1115	221	1337
2000	60	701	51	751
2000	3	1002	644	1646
Averages	20.7	876	174	1049

(iii) DoC Individual Covenants – Hawke’s Bay (source DoC)

Year	Area ha	Cost/ha \$
1999	5	1870
1999	8	1807
2000	120	472

For the purposes of this exercise, and after allowing for an increase in fencing costs I will use: Fencing \$1200/ha
 Survey \$200/ha
 Legal \$30 /ha

Pest costs – (source A. Beer, HBRC)
 Reduce possums to less than 5%: \$9-13/ha
 For this study \$10/ha.

Development Analysis

B1/1R

(To be completed by the appraiser when a development loan is recommended)

APPLICANT:

TYPE OF FARM (Dairy, Sheep, other): Sheep & Cattle

1 DEVELOPMENT

Estimated completion date / /

- (a) Erect dwelling (new dwelling only) \$
- (b) Other buildings (includes shepyards, repairs and additions to other buildings) \$
- (c) Additional stock and plant (associated with development) \$
- (d) Fencing \$ 10,000
- (e) Topdressing \$ 5,000
- (f) Clearing and grassing (includes drainage, lime fertiliser) \$ 23,000
- (g) Horticulture (includes plants, shelter, trellis, etc.) \$
- (h) Sundry (includes water supply, access tracks) \$ 2,000

TOTAL DEVELOPMENT \$ 40,000

4 Proposal

65ha covered in softwoods and tauhinu with some open areas - northerly facing high altitude with natural water supply.

Five year lease due for renewal this year or to be purchased by on DPL but only after fencing of boundary is completed.

Preposal is to fence the boundary, subdivide in two and root rake and track 35-40ha of the lighter bush - no exact costings are available.

Estimates:	Root raking and clearing	\$20,000
	Seeds	3,000
	Fencing	10,000
	Fertiliser 30t	5,000
	Labour	<u>2,000</u>
		\$40,000

Applicant has proven his ability to successfully clear and develop this class of land.

16.11.1
This was part of B1/2 Summary Loan Report.