

# Rapid assessment of ecological condition and trend of conservation areas in Hawke's Bay

Geoff Walls  
6 Fitzroy Road  
Napier

Published by  
Department of Conservation  
Head Office, PO Box 10-420  
Wellington, New Zealand

This report was commissioned by East Coast/Hawke's Bay Conservancy

ISSN 1171-9834

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Reference to material in this report should be cited thus:

Walls, G., 1999

Rapid assessment of ecological condition and trend of conservation areas in Hawke's Bay. *Conservation Advisory Science Notes No. 242*, Department of Conservation, Wellington.

Keywords: Assessment techniques, ecological condition, ecological trend, conservation areas, Hawke's Bay

# Summary

Nine conservation areas in Hawke's Bay were assessed using a rapid method for determining ecological condition and trend developed for the purpose. It was found that conservation management is largely achieving its aim in accessible lowland reserves and at local showpieces in the forest parks, but that otherwise it is failing. Scaling up of management is required in most areas, or at least status quo: any scaling down will result in ecological deterioration.

The rapid assessment technique is regarded by those who have trialled it in the field as useful, versatile and user-friendly. It focuses on ready indicators of browse, competition, predation and weed invasion. It is particularly valuable where resources and skills for more intensive conventional baseline survey and monitoring are lacking. It is recommended for use in annual assessment of all Hawke's Bay conservation areas, and for investigation as a tool for wider application.

## 1. Introduction

In the Department of Conservation's Strategic Business Plan for 1998-2002, entitled "Restoring the Dawn Chorus", the very first of the Key Steps Forward (page 10) is:

*"1. Better Information  
Putting in place better programmes for monitoring and reporting on the ecosystems, species, sites and facilities we manage and measuring our effectiveness."*

This report (commissioned by the Hawke's Bay Area of the East Coast/Hawke's Bay Conservancy under External Unprogrammed Science Advice contract 1998-99/2) directly addresses this issue of fundamental importance to conservation management. The Conservancy is ill-equipped with the wherewithal to effectively monitor the ecological condition and trend of the areas in its custodianship, despite its painful awareness of the national and regional biodiversity conservation values they contain.

I was requested to develop a rapid ecological assessment technique, apply it to assess the ecological condition, trend and management needs of a selection of areas in Hawke's Bay, and train field staff in its use. I determined to make it as practical and meaningful to the local scene as possible, and also to make it even more widely applicable to the Department. This document reports on the process and the results.

## 2. The method

The method revolves around a four-page field form (Appendix 1). It is designed to be self-explanatory and straightforward, for use on-site.

The first page outlines the area and its ecosystem/habitats, who did the assessment, and when.

The second page focuses on the vegetation: its canopy composition; the condition of each vegetation tier; the ecological trend of each tier; the regeneration within each tier; special plants (rare, threatened, local, distribution limits, anomalies); and the threats to the vegetation, impacts upon it and management needs. The magnitude of the threats and impacts and their urgency for management are subjectively quantified.

The third page focuses on the fauna: the relative abundance, condition and trend of birds, bats, reptiles, frogs, fish and invertebrates; special fauna; and management needs (as for the vegetation, but pertaining particularly to the fauna).

The final page first focuses on specific indicators of ecological condition and trend relevant to the area being assessed. Examples are: highly palatable plants, good food plants for birds, rare species, seedlings, epicormic shoots, possum sign, tracking, bark stripping, sensitive fauna, rampant weeds, visitor numbers, water quality, erosion, vegetation structure and native bird population/composition. The condition and trend of each indicator is assessed, and monitoring techniques suggested. Figures 1-15 illustrate a selection of the indicators used (all photos were taken by Geoff Walls).

Then various aspects of conservation management history over the last 10 years are assessed as to their effectiveness (on a visual scale of 0-3: 0 being ineffectual, \*\*\* being most effective). Future management needs are recommended: to be scaled up; status quo; to be scaled down.

Last, but not least, the priority of the area for conservation management (baseline survey, monitoring, animal pest control, weed control, visitor management, etc.) is assessed (on a scale of low, moderate, high), the degree of urgency is likewise assessed, and when and how often these management activities should take place is judged.

The context for evaluation should be an idealistic ecological one: in other words, ecological condition and trend should be rated using very well managed healthy systems such as off-shore islands and mainland islands as baselines for comparison. Priority and urgency for management may be assessed within the local context (such as Conservancy, Area or Field Centre), but my aim is that they be assessed in the wider context of biodiversity conservation in New Zealand. It is then the responsibility of conservation managers to make judgements about the allocation of management resources based on that information.

## 3. The assessments

The following are verbal distillations of the assessments of the nine areas selected for focus in this study. At each area the blank field forms were filled out during and at the end of the inspection. I have subsequently converted the field forms into electronic form (Appendix 2).

### 3.1 WHITE PINE BUSH

White Pine Bush is the most popular bush reserve near to Napier. It receives a huge number of human visitors, most of whom stick to the defined excellent tracks and make little impact. A solitary North Island brown kiwi lived in the forest (dominated by big old podocarps and lowland broadleaved trees) in the late 1980s. A few mistletoes (*Tupeia antarctica*) cling tenuously to their ageing putaputaweta hosts on one edge. Nikau palms are common.

Goats, possums and farm stock have had free play in the reserve in the past. The stock have been reasonably well fenced out, although sheep were present when I visited. The goats have been well controlled of late. The possums are trapped twice a year: clearly an inadequate control technique, especially for such a high-profile conservation area. Their impact can be seen in browsed seedlings, saplings, epicormic shoots, tree fuchsia foliage, supplejack shoots, rewarewa flowers and mistletoes, and in the poor condition of the titoki canopy and lack of kiekie fruit (Figures 1-5). It is recommended that bait stations be used instead, which would have the bonus of also controlling rodents.

### 3.2 WAIPATIKI SCENIC RESERVE

This is one of the few coastal forest reserves in Hawke's Bay. A feature is its wealth of nikau. Otherwise, kanuka and tawa are dominant. There is a good walking track system, but its use is fairly slight.

Until recently, the reserve was riddled with goats and possums. Both are now in low numbers, thanks to the efforts of Department of Conservation staff. The consequent forest recovery is quite graphic, evident in the appearance of seedlings, supplejack shoots and epicormic tree shoots (growths from tree bases). Nikau is even spreading out into rank grass areas (Figure 6). There is a way to go until the forest and its fauna is back to good condition, but the current management regime is leading it in that direction.

### 3.3 EARTHQUAKE SLIP CONSERVATION AREA

The 1931 Napier Earthquake shook a great mass off the high cliffs between Ridgemount and Waikari, creating a new sweep of coastal land there. This has

become a conservation area. Formerly farmed, it is now regenerating in a dense blanket of manuka (Figure 7), and appears to be a valuable breeding area for little blue penguins. Unfortunately, feral goats are still common enough, despite recent control operations, to totally prevent the regeneration of broadleaved native trees and shrubs. The sole remnant of coastal karaka-titoki forest, clinging to an elevated slope, is rapidly falling apart through wind, exposure and possum browse, and any seedlings that grow are quickly snapped off by goats (Figure 8).

It is recommended that the efforts to reduce goat numbers be continued, that bait stations be installed to protect the forest remnant, and that the exposure there be maintained and regularly remeasured. Baseline surveys should be done for penguins, lizards and invertebrates.

### 3.4 BALLS CLEARING SCENIC RESERVE

Balls Clearing Scenic Reserve is a Hawke's Bay showpiece. It is one of the most impressive podocarp forests in New Zealand: not large, but with a towering elegance imparting a cathedral feel. Bird song there - and there is plenty - has a particular resonance. Long-tailed bats base themselves in the bush, and *Dactylanthus taylorii* used to be present (it still could be). The big podocarps are around 400 years old, and sadly each new gale topples another one or two. There is nothing to be done about this except to retain the shelterbelt plantings and keep the excellent pest management regime going. Years of bait station possum control show in the prolific regeneration on the forest floor and the numerous birdlife.

In the long term, restoration of the central clearing should be on the conservation agenda. Formerly naturally clothed in a regionally unique community of red tussock, montane shrubs (including the apparently-gone *Olearia hectorii*) and subalpine herbs, it was carved up for farming in quite recent times. Restoration would require raising of the water table to former levels and planting.

### 3.5 HUTCHINSON SCENIC RESERVE

Hutchinson Scenic Reserve is near Balls Clearing, and somewhat overshadowed by it. Part of the problem is that its heart, formerly a great forest of podocarps and beeches, was severely burnt, leaving successive management agencies wary of letting forest regrow there (so they have grazed it, a well-meaning but destructive practice that continues to this day).

The ungrazed areas are clothed in forest and managed slightly differently. The western area has good fences and assiduous animal pest control. As a result, forest regeneration is vigorous and the vegetation and birdlife are in good (and improving) condition. The eastern area is not quite so well looked after: stock are penetrating the fences and regeneration is less. This is the area of the biggest podocarps and a recent discovery of *Dactylanthus taylorii* (yet

to be intensively followed up). Sycamore is the weed to watch (and nip in the bud) in both areas.

The central grazed area is fast losing its native trees, due to exposure and lack of regeneration. I see no good reason why it should not be retired from grazing (progressively if necessary) and encouraged to regenerate in native forest. This would help the long-term viability of the other areas, as well as recreate a reserve of stature.

### 3.6 EASTERN KAWEKA FOREST PARK (LITTLES CLEARING-MAKAHU SADDLE-BOULDER STREAM)

This part of the Kaweka Forest Park is very special. It still has populations of NI brown kiwi, NI kaka, kakariki, NZ falcon and the two mistletoes *Alepis flavida* and *Peraxilla tetrapetala*. It is the only part of the forest park readily accessible to the public. Yet this assessment shows its conservation management to be largely inadequate in most respects, despite the effort devoted to it.

The vegetation in the area assessed is only in fair condition, relatively stable and with some regeneration. However, plants palatable to deer and possums are in low numbers, in average condition and not increasing, and the serious weed *Pinus contorta* is still reproducing vigorously (Figures 9-12). The exceptions are within the enclosure at Littles Clearing and the *Peraxilla tetrapetala* plants protected from possums by cages and bait stations. The bait station regime of the last few years has been a tremendous success, rescuing the mistletoe population from the jaws of extinction, but it is very limited in area. A distinctive population of *Peraxilla tetrapetala* in the old red beeches between Makahu Saddle and Boulder Stream requires the same protection. Otherwise it may disappear almost as soon as it is discovered. Regular monitoring of the mistletoes is crucial.

How to conserve and restore the populations of the rare birds is another matter. It requires a regime of good predator and browser control and active monitoring. It also requires a change in public attitude. The area has long been the preserve of deer hunters, who view it as primarily a resource for their chosen use. However, it is also an area with a long history of scientific endeavour aimed at ecological restoration. If the latter heritage could be emphasised and drawn upon, and if the restoration methods learnt from the Boundary Stream Mainland Island were applied, then Eastern Kaweka Forest Park could be transformed from a place with a pervading air of ecological despair into one of true magic.

### 3.7 MONCKTON SCENIC RESERVE

Monckton Scenic Reserve is one of a suite of small reserves on the inland alluvial system of Central Hawke's Bay. It contains a remnant of native forest flanking a meandering stream. Essentially the forest is in good heart, due to

the animal pest control regime. Indications are that possums are present, but in low numbers, and ungulates are absent (Figures 13, 14). However, there are serious weeds (old man's beard, Japanese honeysuckle and cotoneaster) to be dealt with, and windthrow of beech trees is progressively disrupting the forest and creating places for more weeds.

Survey for bats, lizards, invertebrates, stream life and the mistletoe *Tupeia antarctica* (recorded in 1989 but not during this assessment) should be done to provide benchmark information.

### 3.8 EASTERN RUAHINE FOREST PARK (SWAMP TRACK-SUNRISE TRACK)

This area is probably the most popular part of the Ruahine Range, due mostly to its excellent walking track that gives ready access to the tops and allows even the modestly mobile to experience the uplands. Swamp Track loops around a wet toeslope flat containing a small area of kahikatea forest. Sunrise Track climbs lower slopes clad mainly in red beech, before ascending higher through mountain beech forest to the alpine zone. Red mistletoe (*Peraxilla tetrapetala*), kakariki, kereru, pahautea or mountain cedar (*Libocedrus bidwillii*) and Hall's totara are features of the climb.

The fences seem to regularly let cattle into the lower forest. There are relatively few deer or possums there, as shown by the prolific regeneration of tree fuchsia and wineberry along Swamp Track and the better condition of broadleaf there (Figure 12).

Higher up, deer and possums are more numerous, though not greatly so. Most of the known red mistletoes along Sunrise Track are protected with bait stations, and one is featured with a cage and interpretive panel. However, this is the only sustained pest control: the rest of the forest is left to its own devices and poisoned aerially every few years. This is inadequate to protect the native fauna and rare flora in the long term, and it comes too late for some trees (Figure 15). It is recommended that regular monitoring of vegetation (perhaps via a series of permanent plots), birds and mistletoes take place, and that baseline surveys be done of mistletoes, bats, lizards and invertebrates.

### 3.9 MOHI BUSH: TRAINING SESSION/GROUP ASSESSMENT

On 23 December 1998, five field staff and I trialed the rapid ecological assessment technique at Mohi Bush Scenic Reserve on the Maraetotara Plateau. This was both a training session for the field staff and a test of the practical usefulness of the technique for the Hawke's Bay area. My 10-year-old son Finn came with us.

The field staff were: Grant Craill, representing Puketitiri Field Centre; Kay Griffiths and Peter Abbott, representing Ongaonga Field Centre; Alan Lee, rep-



representing Ahuriri Field Centre; Brendan Christensen, representing Boundary Stream Mainland Island. They constituted an intelligent pragmatic user group, accustomed to the realities of field conservation management and wary of having yet another "system" and "form-filling exercise" foisted on to them.

To my delight, the staff quickly grasped the approach and methodology, applied it with ease in the field and universally welcomed it as filling a vital need for the area (Figure 7). They could see every sense in regularly monitoring the ecological condition and trend of the conservation areas in their care, with a minimum of fuss and in a very meaningful way, and expressed thorough support for this method. They all lamented the lack of capacity and ability to do this as part of their normal area work by more conventional and labour-intensive means (such as vegetation plots, bird counts, photopoints). They wondered whether other conservancies were engaged in such rapid assessments, and whether this method might form the basis for a national standard. They made a few minor design suggestions for the form, which I have incorporated into the final design in this report.

Finn also quickly latched on to the technique and was able to readily apply it in the field.

We collectively assessed the ecological condition and trend of Mohi Bush. We deemed it in remarkably good condition, due to its effective fences and bait station regime over the last eight or so years. This reserve was one of the first to be treated with bait stations for possum control in the country, and it shows. The abundance of forest-floor regeneration (producing an understorey now up to 3 m tall, and a wealth of seedlings and ferns), the great number of unbrowsed supplejack shoots, the vibrancy of the tui and kereru populations and the good health of the canopy were regarded as the key indicators.

Concerns were expressed at the apparent lack of small native birds (rifleman, fantail and riroriro), and the lack of current knowledge of the bats, lizards and invertebrate life (apart from tree weta, which are subject to a Victoria University study). The staff recommended baseline survey as a matter of high priority and urgency, and subsequent monitoring of these animals (as well as the vegetation indicators) as a matter of moderate priority and urgency.

This exercise was a welcome verification of the actual and potential value of this rapid ecological field assessment technique, and of its versatility and ready field application.

## 4. Conclusions and recommendations

- It is possible to rapidly assess the ecological condition and trend of a wide spectrum of conservation areas in Hawke's Bay. The technique

developed and used in this study provides a ready measure of management effectiveness. It is a valuable substitute for more intensive conventional monitoring where there is either a lack of benchmark (baseline) survey/monitoring or a lack of survey/monitoring resources.

- The rapid assessment technique appears versatile enough for wider application. Its focus on easily recognised sensitive indicators of browse, competition, predation and weed invasion (or lack of them) is ecologically universal and widely appreciated. Nothing would please me more than if the technique became widely practised (as long as there was due acknowledgement of its origins!).
- The rapid assessment technique appears to be user-friendly, judging by the responses of those who have trialed it. However, I regard it as a prototype still, that could be refined through wider use.
- The ecological assessments of nine Hawke's Bay conservation areas have revealed many current successes in conservation management, but significant inadequacies. The successes are mainly in the small accessible reserves, where browsers are mostly well under control; also in localised mistletoe protection in the forest parks. The failures are mainly to do with predator, rodent and weed control; also in baseline survey and monitoring effort. They are most stark in the big forest park tracts and at Earthquake Slip.
- The assessments indicate the need to either scale-up management or at least retain the status quo. No scale-downs were indicated.
- It is recommended that rapid ecological assessments of all Hawke's Bay Area conservation areas be carried out annually, using this technique.
- It is further recommended that the technique be investigated for wider use, particularly where resources for survey and monitoring are tight.

## 5. Acknowledgements

I would like to thank the following people for their encouragement and help with this study:

Ken Hunt (Department of Conservation, Napier);  
Chris Ward (Department of Conservation, Gisborne);  
Alan Lee and Hans Rook (Department of Conservation, Ahuriri);  
Brendan Christensen (Department of Conservation, Boundary Stream);  
Grant Craill (Department of Conservation, Puketitiri);  
Kay Griffiths and Peter Abbott (Department of Conservation, Ongaonga);  
Sue Scheele and Finn Scheele, Napier.

## Appendix 1. Blank rapid assessment forms

### RAPID ASSESSMENT FORM FOR ECOLOGICAL CONDITION AND TREND

Sheet 1 of 4

<b>Location (name, details):</b>  <b>Protective status/designation:</b>	<b>Grid reference:</b>  <b>Area (ha):</b>  <b>Ecological District:</b>  <b>Managing agency:</b>																																																																																																																			
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Cliff, Bluff, Gorge	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																		
Swamp, Marsh, Bog	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																		
Lake, Pond, Lagoon	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																		
River, Stream, Riverbed	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																		
Sandy coast, Dunes	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																		
Rocky coast	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																		
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>																																																																																																																		

RAPID ASSESSMENT FORM FOR ECOLOGICAL CONDITION AND TREND

<b>VEGETATION</b>					
<b>Canopy cover (%):</b> <input type="checkbox"/> 0-5 <input type="checkbox"/> 5-25 <input type="checkbox"/> 25-50 <input type="checkbox"/> 50-75 <input type="checkbox"/> 75-100					
<b>Canopy composition (underline dominant species):</b>					
<b>Vegetation condition (health):</b>					
	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>Don't know</u>	<u>Comments</u>
Canopy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Subcanopy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Understorey/Undergrowth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ground cover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>Notes:</u>					
<b>Vegetation trend:</b>					
	<u>Improving</u>	<u>Stable</u>	<u>Deteriorating</u>	<u>Don't know</u>	<u>Comments</u>
Canopy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Subcanopy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Understorey/Undergrowth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ground cover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>Notes:</u>					
<b>Regeneration:</b>					
	<u>None</u>	<u>A little</u>	<u>Moderate</u>	<u>Much</u>	<u>Main species/Comments</u>
Canopy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Subcanopy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Understorey/Undergrowth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ground cover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Epicormic shoots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>Notes:</u>					
<b>Special plants (rare, threatened, local, distribution limits/anomalies, etc.):</b>					
<u>Species</u>	<u>No. (estimate)</u>	<u>Condition (as above)</u>	<u>Trend (as above)</u>	<u>Main threats/Comments</u>	
<u>Notes:</u>					
<b>Threats, Impacts and Management urgency:</b>					
	<u>Minor</u>	<u>Major</u>	<u>Urgent</u>	<u>Not urgent</u>	<u>Comments</u>
Deer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Goat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Possum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rabbit, Hare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sheep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cattle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rat, Mouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vine weeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shrub, Tree weeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Herb/Grass weeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Human visitor impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Survey/Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>Notes:</u>					

RAPID ASSESSMENT FORM FOR ECOLOGICAL CONDITION AND TREND

<b>FAUNA</b>					
<b>Overall fauna:</b>					
	<u>Rel. abundance</u> <sup>1</sup>	<u>Condition</u> <sup>2</sup>	<u>Trend</u> <sup>3</sup>	<u>Main threats/Comments</u>	
Native birds					
Exotic birds					
Bats					
Native reptiles					
Native frogs					
Exotic frogs					
Native fish					
Exotic fish					
Native land inverts					
Exotic land inverts					
Native aquatic inverts					
Exotic aquatic inverts					
Other (specify)					
<u>Notes:</u>					
<b>Special fauna (rare, threatened, local, distribution limits/anomalies, etc.):</b>					
<u>Species</u>	<u>No. (estimate)</u>	<u>Condition (as above)</u>	<u>Trend (as above)</u>	<u>Main threats/Comments</u>	
<u>Notes:</u>					
<b>Management needs:</b>					
	<u>Minor</u>	<u>Major</u>	<u>Urgent</u>	<u>Not urgent</u>	<u>Comments</u>
Deer control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Goat control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pig control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Possum control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rabbit, Hare control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mustelid, Cat control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rat, Mouse control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weed control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Human visitor management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>Notes:</u>					

<sup>1</sup> None; Few; Moderate; Many

<sup>2</sup> Good (healthy, thriving); Fair (okay); Poor (depleted, struggling); Don't know

<sup>3</sup> Improving; Stable; Declining; Don't know (?)

RAPID ASSESSMENT FORM FOR ECOLOGICAL CONDITION AND TREND

<b>SPECIFIC CONDITION AND TREND INDICATORS FOR SITE/AREA</b>				
[Examples: highly palatable plants, good food plants for birds, rare species, seedlings, epicormic shoots, possum sign, tracking, bark stripping, sensitive fauna, rampant weeds, visitor numbers, water quality, erosion, vegetation structure, bird population.....]				
<u>Indicator</u>	<u>Condition</u> <sup>4</sup>	<u>Trend</u> <sup>5</sup>	<u>Monitoring technique</u>	<u>Comments</u>

<b>MANAGEMENT HISTORY, CURRENT REGIME AND FUTURE NEEDS</b>						
<u>Control Programme</u>	<u>&gt;10 yrs ago Effectiveness</u>	<u>3-10 yrs ago Effectiveness</u>	<u>Last 3 years Effectiveness</u>	<u>Current Effectiveness</u>	<u>Future Needs</u>	
	(o * ** ***)	(o * ** ***)	(o * ** ***)	(o * ** ***)	Scale up	Scale down
Ungulate Pig Possum Mustelid/Cat Rodent Weed Fencing Visitor impact Other (specify)						
<b>Notes:</b>						

<b>PRIORITY FOR MANAGEMENT</b>							
<u>Management Need</u>	<u>Priority</u>			<u>Urgency</u>			<u>When/Frequency</u> <sup>6</sup>
	<u>Low</u>	<u>Mod</u>	<u>High</u>	<u>Low</u>	<u>Mod</u>	<u>High</u>	
Baseline survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Animal pest control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weed control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Visitor management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<sup>4</sup> Good (healthy, thriving); Fair (okay); Poor (depleted, struggling); Don't know (?)

<sup>5</sup> Improving; Stable; Declining/Deteriorating; Don't know (?)

<sup>6</sup> Monthly, Seasonally, Annually, 2-yearly, 5-yearly, 10-yearly, Ongoing, etc.