FORMAK Site Assessment - *Tirohanga Tuatahi*
Field instructions

Preparation

Field team one or two

- Can be done relatively easily with one. Having two people allows one to record, and also means that decisions on classification under different site assessment criteria can be discussed.

Planning Checklist

Have you:

- Defined the scope of the site you are assessing
- Determined your approximate assessment route from a map or aerial photograph where possible.

Equipment Checklist

- ☐ FORMAK Site Assessment Field Instruction
- ☐ FORMAK Visual Guide
- ☐ FORMAK Header Guide
- ☐ FORMAK Site Assessment Form
- ☐ Small tape measure – to measure thumb & arm length (or measure and recorded before you leave home).
- ☐ Binoculars (optional – but a good idea)
- ☐ NZMS 260 series map of the area.
- ☐ GPS (optional – but use it if you have one)
- ☐ Aerial Photograph – if available
- ☐ Clipboard
- ☐ Pencils
- ☐ Rubber

Overview Site

What: *A visual overview of the site form a nearby vantage point. The nature of the site and how it fits into the landscape are recorded.*

Why: *How the site relates to other nearby native forest areas, land uses etc is very important in defining how it may respond to management, and what threats it faces. For example some pests may be much easier to control in a small isolated area. Edge dieback and lack of regeneration in a small remnant may be very serious.*

Get an Overview

1. Locate yourself in the best position to get an overview of the site and the surrounding countryside.

Complete the header

2. Complete the "Location" header (see also FORMAK Header Guide) on the Site Assessment Form. If you are using a GPS you will need to record this position once you are close to the centre of the site.
3. Complete "Management" section of the Site Assessment Form.
4. Sketch the proposed route on the Site Assessment Form.

You will need to check this and the route notes at the end of the site assessment and edit it if necessary to record any deviations from your planned route.

Assess Landscape

5. From your overview point, and referring to the images and explanations in the FORMAK Visual Guide, choose the appropriate classification for "size", "shape", "nearby forest" and "corridors" on the Site Assessment Form. Note any particularly important features.

6. Depending on your view, you may also be able to start filling in information on "Vegetation" (canopy and emergent species). The Vegetation section is toward the back of the Site Assessment Form.

View edge

7. View the edge as much as you can from your vantage point, then move to the edge of the forest area.

On the Forest Edge

What: *The edge of the forest area is examined and key aspects of its condition visually rated.*

Why: *Condition of the edge can be very important to protecting small remnants. Key threats such as weeds will generally show up first at the edge of the forest.*

Walk the Edge

8. Walk around and view as much of the edge as necessary to get a general picture of its condition. Your walk through route may mean that you look at part of the edge, then walk through the site to another edge before completing this section of the assessment.

Fill in part of form

9. Referring to the images and explanations in the Visual Guide, choose the appropriate classification for each heading in the "On the Forest Edge" section of the Site Assessment Form. Note any particularly important features, weed species etc.

Moving Through The Forest

Enter the Forest

10. Taking the route that you have planned through the area, move into the forest, stopping once you are approximately 20 paces inside the forest.

Doing Simple Counts

What: *A simple count of understorey stems is made every 20 paces as you walk through the forest. The presence of animal faecal pellets, ground cover, and the number of tree species above you are also noted. A "basal area sweep" is undertaken using your thumb to measure the area covered by tree stems.*

Why: *These counts provide some simple measures, in addition to the purely visual judgements of the rest of the site assessment. Potentially allowing more reliable comparison between sites and over time. The parts of the count are all important parameters of forest condition and diversity. The "thumb count" is a version of point sampling that is widely used in production forest management to measure basal area – the cross sectional area of tree stems. This helps identify whether the site has a full tree cover.*

Every 20 paces

11. Approximately every 20 paces as you walk through the forest, stop and do some simple "counts".

Boot is centre of count

12. Where the toe of your right boot lands is the centre of the count.

Arm is circle

13. Counts are done within the approximate circle of your outstretched arm

Ground cover

14. What is the most abundant *ground cover*? Choose from Leaf litter and deadwood (L), Greenery – including ferns and moss (G), Soil (S), and Rock (R)

Animal pellets

15. Are there any animal faecal pellets (droppings). Tick if pellets are present for any of the species on the form. See FORMAK Visual Guide to identify pellets.

Canopy trees above

16. How many different tree species (types of foliage) are present above you (again in a vertical cylinder of your outstretched arms).

Canopy height

17. What is the *height* of the top of the vegetation above you.

Understorey

18. How many *small seedlings* are there – i.e seedlings between your ankle and knee.

19. How many *large seedlings* are there - i.e seedlings between your knee and shoulder.

20. How many *saplings* are there – i.e taller than your shoulder, but with a main stem at shoulder height that is thinner than your thumb. Hold your thumb directly against the stem to check the thickness

21. *NOTE* – when a seedling or sapling stem is clearly joined to another stem above the ground, the multiple stems are counted as one plant.

Browse

22. How much animal *browse* is there on the combined small and large seedlings (all seedlings between shoulder and ankle height) – none, some, or lots. (see FORMAK Visual Guide for pictures of animal browse).

Thumb Count

23. Do a thumb count to assess tree basal area (area of the site covered by tree trunks).

24. Measure the distance from your eye to your thumb & the width of your thumb.

25. Start facing in the direction of your travel. Hold your arm outstretched at right angles in front of your body with your thumb upright

26. Slowly sweep your arm around in a full circle. As you sweep around count every tree stem that appears larger than your thumb (i.e its width at shoulder height is not obscured by your thumb)

27. Tree stem size is checked against your thumb in this way at approximately shoulder height on the tree. Where a tree has multiple stems at this height – each stem is assessed.

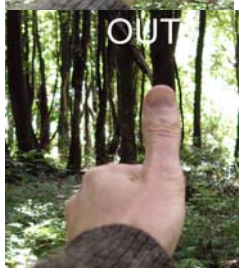
28. Make sure you record each part of the count under "Simple Count" at the back of the Site Assessment Form.

20 paces & repeat

29. Take another 20 paces on your assessment route and then do another simple count as set out above.

Do 10 counts

30. Repeat these counts until you have done at least 10 or you have completely covered the site (e.g. with very small sites).



Moving through the forest (continued)

What: *The interior of the forest is walked through and a range of aspects of forest condition and threats are visually rated. Images and descriptions are provided in the FORMAK Visual Guide for reference.*

Why: *It provides a broad general assessment of the condition and threats to the forest site. This allows us to know what sort of site it is for possible comparison with other sites. We can also identify any particular aspects of condition that were particularly good or poor, and any key threats the site faces.*

Walk through, assessing forest

31. Continue walking through the forest on your planned route. As you move through the forest, keep referring to the different categories to be assessed under "Moving Through the Forest", and "Threats" on the Site Assessment Form. Also refer to the images in the FORMAK Visual Guide.

Look in canopy gaps

32. As you move around the forest, look for canopy gaps – that is open gaps in the canopy, where you can see open sky, that are 3m or more in diameter.

33. Look at the understorey immediately below these canopy gaps and refer to the FORMAK Visual Guide. Once you have checked a number of canopy gaps, choose the appropriate classification for each heading in the form.

Birds look & listen

34. As you are moving through the site, looking at the edge and moving through the forest, keep your eyes and ears alert for birds. Mark the birds you see or hear on the "Birds" section at the back of the Site Assessment Form and identify how common they are on the site.

Vegetation

35. Identify the main trees present. Estimate the approximate percentage cover for each species. Do this separately for emergent trees (that stick out above the canopy), canopy trees, and the understorey (below the canopy). Don't try to include all the species – just the main ones.

Fill in the form

36. As you get a general understanding of each of the categories in the assessment form, choose the appropriate classification for each heading in the form. Remember to refer to the images in the FORMAK Visual Guide. Note any particularly important features, weed species etc.

Final Check

Before Leaving

37. Before leaving the site, check back through the checklist form to make sure it has been completed and all criteria assessed and classified.