Assessing native groundcover

The Land Management Framework maintains and extends existing land management activities undertaken on low conservation grasslands in NSW. This fact sheet provides guidance to landholders about how they can self-assess the conservation value of native grasslands and other native groundcover on their own property.

Overview

The Land Management Framework allows landholders to assess the conservation value of groundcover on Category 2 - regulated land. Native groundcover is low conservation value if:

1. less than 50 % of the vegetation cover is comprised of native species, and
2. at least 10% of the area is covered with vegetation (whether dead or alive).

What method should I use?

A simple, reasonably reliable and easily learned method of measuring the proportion of native and non-native groundcover across an area is the step point method. This is the simplest and preferred method to use when assessing groundcover.

You may also use the quatrat method, however this method requires a quadrat and more technical knowledge to apply. If you are unsure about using this method, please contact Local Land Services.

Step point method

1. Prepare a field sheet like the example provided on page 3 to record your observations.
2. Identify a patch that is representative of the native groundcover within the proposed clearing area.
3. Walk 100 steps in a straight line (transect) across the selected patch.
4. At each step, record the groundcover type at the tip of your boot, using these categories:
   - native vegetation – grasses, sedges, rushes, herbs and low shrubs (Column A), or
   - non-native vegetation – grasses, sedges, rushes, herbs, and low shrubs (Column B), or
   - other - bare ground, litter, rock, cryptogam (moss/ lichen) (Column C).
5. Repeat steps 1-4 in at least four other representative patches within the proposed clearing area, making sure to include any significant variability across the proposed clearing area.
6. Calculate the average of each column by dividing the total count for the column by the number of assessment lines.
7. To calculate the overall percentage of groundcover in the proposed clearing area, add the average from Column A and the average from Column B.
8. To calculate the percentage of the groundcover that is native vegetation, divide the average of Column A by the overall groundcover percentage from the previous step and then multiply by 100.

Want to know more?

We're here to help

Find us online: lls.nsw.gov.au

You'll find other land management resources including fact sheets

Call us: 1300 795 299 and ask for an officer to advise you on land management

Email us: slm.info@lls.nsw.gov.au

See us: drop into your nearest Local Land Services office

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Quadrat method

This method uses a square frame (quadrat) of at least 70 centimetres x 70 centimetres (see Figure 1 - Quadrat).

A quadrat is easily assembled using four thin pieces of PVC pipe cut to equal lengths and joined with tight-fitting elbow joints.

1. Prepare a field sheet like the example provided on page 4, to record your observations.

2. Within the proposed clearing area, select at least five patches of groundcover that are representative of the groundcover across the proposed clearing area.

3. Within each representative patch, place the quadrat randomly 10 times.

4. At each quadrat placement estimate the:

- percentage of the quadrat that has vegetative groundcover (native and non-native groundcover), and record this in Column A (squares Q1 to Q10), and
- percentage of groundcover in the quadrat that is native, and record this in Column B (squares Q1 to Q10).

5. For each patch and for each column, add squares Q1 to Q10 and divide these totals by 10 to yield the:

- average percentage of groundcover (native and non-native) across the patch, and
- average percentage of native groundcover across the patch.

6. For the whole clearing area and for each column, add the averages from all patches and divide these totals by the number of patches to yield the:

- average percentage of groundcover (native and non-native) across the proposed clearing area, and
- average percentage of native groundcover across the proposed clearing area.

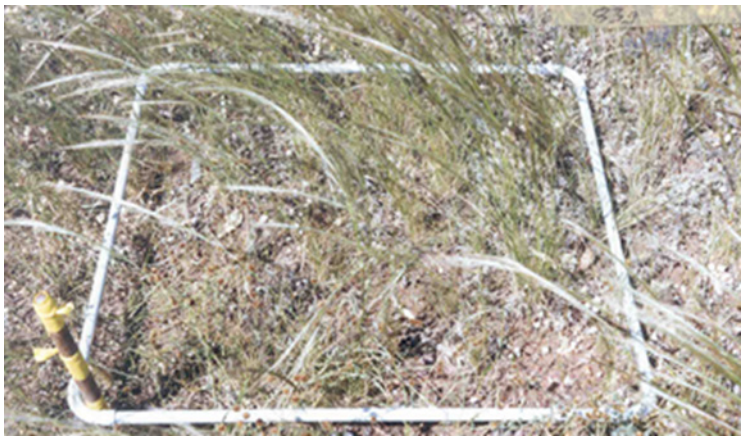

Figure 1. Quadrat

How and when should I conduct the assessment?

You must conduct their assessment under the following conditions:

1. in a scientific and objective manner,
2. at the time of year when the proportion of native groundcover is likely to be at its maximum, and
3. not if the groundcover has been significantly disturbed in the past six months, e.g. by fire or drought.

What records should I keep?

The following records must be kept for at least 5 years from the date of the clearing:

1. a map showing the proposed clearing area
2. a record of the date on which the assessment was made,
3. a statement of how the assessment and calculation was made, and
4. photographs that clearly show the type of groundcover in the mapped area.

What is groundcover?

The term native groundcover includes various types of non-woody (herbaceous) vegetation. Native groundcover is most often dominated by native grasses. In some areas such as native grasslands, the native groundcover grows on its own with no associated woody vegetation. In other areas, such as grassy woodlands, it grows as the ground layer accompanied by native trees and shrubs.

Step point method field sheet

Date of assessment: Assessor:

	Cover type			Total
	Column A Native	Column B Non-Native	Column C Bare ground and other	
Example Assessment line	(14)	(51)	(35)	100
Assessment line – patch 1				
Assessment line – patch 2				
Assessment line – patch 3				
Assessment line – patch 4				
Assessment line – patch 5				
Total count				
Average (Total count divided by the number of assessment lines)				

Average percentage of groundcover = Av. Column A + Av. Column B.

RESULT: _____ Is the result equal to or greater the 10% ground cover?

Average percentage of native groundcover as a proportion of total groundcover = Av. Column B ÷ (Av. Column A + Av. Column B) X 100

RESULT: _____ Is the result less than 50% native groundcover?

If the average groundcover of native plants is less than 50%, the groundcover is Low Conservation Value.

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Quadrat method field sheet

Date of assessment: Assessor:

	Cover type											
	Column A % overall groundcover						Column B % Native groundcover					
Patch1	Q1	Q2	Q3	Q4	Q5	Total	Q1	Q2	Q3	Q4	Q5	Total
	Q6	Q7	Q8	Q9	Q10	Average	Q6	Q7	Q8	Q9	Q10	Average
Patch 2	Q1	Q2	Q3	Q4	Q5	Total	Q1	Q2	Q3	Q4	Q5	Total
	Q6	Q7	Q8	Q9	Q10	Average	Q6	Q7	Q8	Q9	Q10	Average
Patch 3	Q1	Q2	Q3	Q4	Q5	Total	Q1	Q2	Q3	Q4	Q5	Total
	Q6	Q7	Q8	Q9	Q10	Average	Q6	Q7	Q8	Q9	Q10	Average
Patch 4	Q1	Q2	Q3	Q4	Q5	Total	Q1	Q2	Q3	Q4	Q5	Total
	Q6	Q7	Q8	Q9	Q10	Average	Q6	Q7	Q8	Q9	Q10	Average
Patch 5	Q1	Q2	Q3	Q4	Q5	Total	Q1	Q2	Q3	Q4	Q5	Total
	Q6	Q7	Q8	Q9	Q10	Average	Q6	Q7	Q8	Q9	Q10	Average
	Average across site						Average across site					

Average percentage of all plants (native and non-native) = Av. Column A.

RESULT: _____ Is the result equal or greater than 10% groundcover?

Average native groundcover as a proportion of total groundcover = Av. Column B ÷ Av. Column A X 100

RESULT: _____ Is the result less than 50% native groundcover?

If the average groundcover of native plants is less than 50%, the groundcover is Low Conservation Value.

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