



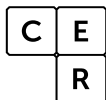
Australian Government

Clean Energy Regulator

Field guide

Replanting native forest and woodland ecosystems method

July 2026



Nature
Repair
Market

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Purpose

This guide describes the on-ground activities for the starting state assessment (SSA) under the Replanting Native Forest and Woodland Ecosystems Methodology Determination 2025.

It is intended to be used on-ground in combination with the method.



This guide does not cover every requirement of the SSA. We recommend referring to the method and guidance available on our website.



Using this guide

On-ground activities must be conducted as part of the SSA to establish the ecological starting state for the project and ground truth the reference ecosystem the project will aim to restore.

The SSA must be informed by a desktop analysis to map the project area and assess ecological and cultural values. Desktop analysis includes the use of existing data and virtual assessments of the project area, such as remote imagery, to support the field-based assessment.

The field survey and the ecosystem assessment process can only be undertaken by a suitably qualified person or persons (SQP). Other field related activities may be undertaken by either an SQP or a project proponent.

Information and data collected in the field must be included in the site assessment report or in a field data spreadsheet.



See the field data capture template to support consistent on-ground information recording. The template is available in both digital and printable formats for use in the field.



Indigenous land interests

Where Indigenous land interests apply, proponents are required to engage appropriately with the relevant Indigenous representatives on matters which could impact on-ground activities. The SQP and proponent should consider relevant outcomes from engagement when carrying out the field survey and on-ground activities.

A project area is subject to Indigenous land interests if the project area is or includes:

- a native title area
- land rights land
- an area subject to an Indigenous Land Use Agreement (ILUA)
- an area where a native title claim has been made but not yet determined.

See sections 28 and 29 of the method for more details.



Assessment of the project context



The activity area is an area of eligible land where the project proponent proposes to carry out environmental plantings.

This assessment must cover each activity area and where possible, a 500-metre-wide buffer around the perimeter of each activity area.

The below assessments can be done by a SQP or a project proponent. Identify and describe any:

- significant hydrological features that may affect, or be affected by, the project activities.
- threatened species or threatened ecological communities that occur or are likely to occur.
- potential threats that could affect the likelihood of the project outcome being achieved. Section 34 requires assessment of threats from:
 - » non-native animal and plant species
 - » contaminants, including biological or chemical and contaminant sources
 - » significant natural disturbances, such as wildfire, drought, flood or disease.

- areas within each activity area that contain native trees or shrubs with a diameter at breast height (DBH) of less than 5 centimetres that have regenerated from natural sources, including soil seed stock, root stock or lignotubers.



For any natural regeneration within activity areas, record:

- the number of native plant species which have regenerated from natural sources and have a DBH of less than 5cm
- the approximate age and approximate number of such plants of each species or genus.

It is recommended that the assessment of natural regeneration, threatened species and threatened ecological communities be undertaken by an SQP.



Ecosystem assessment

The ecosystem assessment must be carried out in accordance with section 30 of the method. The whole of the ecosystem assessment can only be undertaken by an SQP.

The field survey must be conducted at, or as close as practicable to the optimal growth period to maximise potential to identify species.

Reference ecosystem

Use on-ground observations to confirm whether potential reference ecosystems identified from desktop analysis are accurate and suitable to be used for the project. Where field observations indicate the desktop identified reference ecosystem is likely to be incorrect, apply the process set out in section 46 of the method to determine and assign the appropriate reference ecosystem.



Refer to the Nature Repair Market – reference ecosystems for the replanting method guidance for detailed information on how to identify the reference ecosystem.



Benchmark values

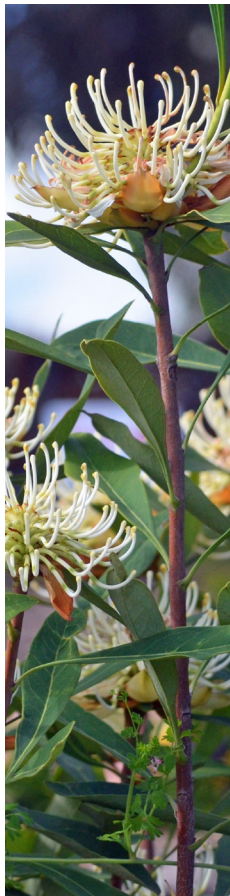
Benchmark values must be determined in accordance with section 30(1) of the method. Once reference ecosystems are assigned for the project, consider whether data from a source listed on the Approved Benchmark Source List (if available) is appropriate.

If data from the Approved Benchmark Source List is not appropriate or available, benchmark values must be determined in accordance with Schedule 2 of the method.

Benchmark survey process

Schedule 2 of the method sets out the process for establishing benchmark values where values from an approved benchmark source are not available or appropriate.

Benchmark sites must be selected for each reference ecosystem assigned to the project. Survey plots must be randomly selected within benchmark survey sites.



The point intercept method, quadrat method, plot survey and canopy height measurements must be carried out in the survey plots as required. This will depend on which ecosystem condition indicators or sub-indicators require benchmark values to be established.

Permanent sampling plots

Follow the steps in subsections (3)–(10) of schedule 5 to establish permanent sampling plots for each activity area. Verify and finalise the location of permanent sampling plots on-ground, adjusting locations where necessary to ensure plots are representative of the activity area.



If sub areas are used, there must be at least one permanent sampling plot within each sub-area

Permanent markers must be installed and unique identifiers assigned in accordance with Schedule 5. Marker placement must be consistent with safe access and culturally informed project design.

Any changes from preliminary plot locations must be documented and justified in the site assessment report.

Ecosystem condition

The following requirements must be undertaken on-ground as part of the ecosystem assessment process for each activity area.

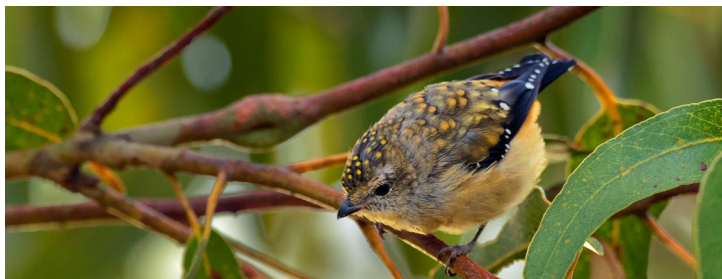
Canopy height

Measure canopy height in each permanent sampling plot.

To do this:

- select three or more representative native trees from the canopy layer
- measure their heights using a clinometer or hypsometer.

Where there are fewer than three representative trees within a permanent sampling plot, the canopy height must be recorded as zero. This measurement reflects the baseline ecosystem condition of the plot at the time the on-ground assessment is undertaken.



Point intercept method

The SQP must apply the point intercept method in each permanent sampling plot within each proposed activity area to assess plant species, the proportion of ground cover by category, and crown cover (canopy and mid-storey) for native and non-native species. The point intercept method must be applied along the centre line of the sampling plot, with plant cover recorded at **50 points** spaced at **1 metre** intervals.

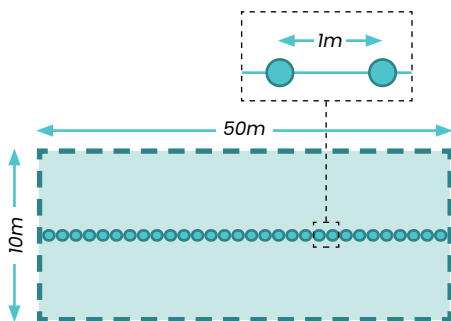


Figure 1. Diagram of a permanent sampling plot showing the layout and sampling points used for the point intercept method.



Refer to Schedule 3 of the method, as applied through Schedule 5(6), for ground cover categories and **more detail about** the application of the point intercept method

Quadrat method

The SQP must apply the quadrat method to each permanent sampling plot in each proposed activity area to identify the plant species and abundance, and to assess the proportion of ground area covered by each plant species and ground cover categories A-H. Quadrat sampling must be undertaken along the centre line of the sampling plot, using 1 × 1 metre quadrats placed at 10 metre intervals, starting 5 metres from each end.

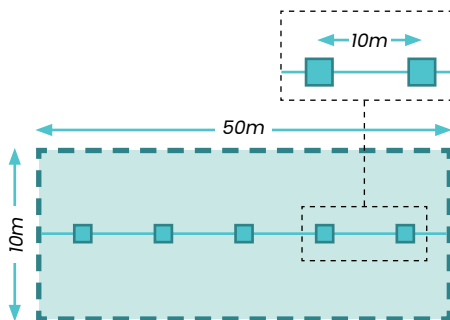


Figure 2. Diagram of a permanent sampling plot showing the location and placement of quadrats used for the quadrat method.



Refer to Schedule 4 of the method, as applied through Schedule 5(7), for more detail about the application of the quadrat method.

Plot survey

The SQP must apply the plot survey method in each permanent sampling plot, in accordance with Schedule 5(8) of the method, to survey the entire plot and identify and record the plant species present and the number of plant species.

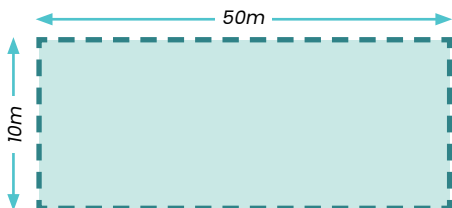


Figure 3. Diagram of a permanent sampling plot showing the plot area used for the plot survey.



Where a plant cannot be identified to species level during any survey method, the SQP must manage the unidentified species in accordance with section 4 of Schedule 5 of the method.

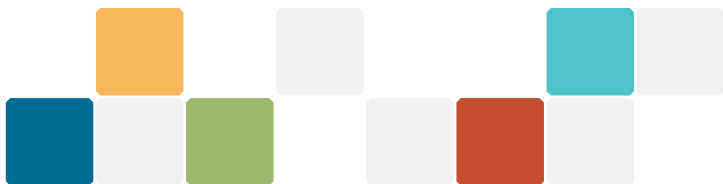


Photo survey

Take six photographs of each permanent sampling plot. Photographs must be taken down the centre line of either end of the sampling plot, towards the opposite end and facing 90° and 270° to the centre line of the plot. See schedule 5(3) of the method for photo survey requirements.

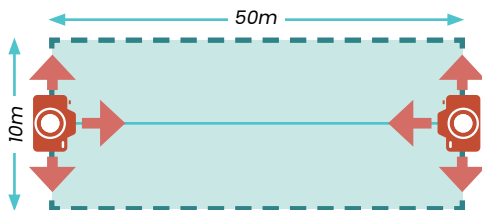


Figure 4. Diagram of a permanent sampling plot showing the required photo locations and directions along and across the centre line.



Historic drivers of change

The project proponent or SQP must assess the historic drivers of change associated with the biodiversity of native species within the project area, in accordance with section 31 of the method.

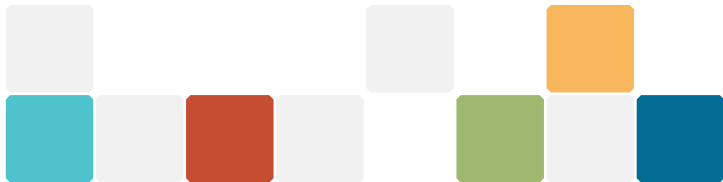
Historic drivers of change should be assessed using remote imagery, on-ground inspection and any other relevant information





Assessment must be informed by, but is not limited to:

- clearing undertaken in any activity area within the 10 years preceding the assessment
- mechanical or chemical damage to, or destruction of, native vegetation in any activity area within the 3 years preceding the assessment
- cultivation or other activities involving significant soil disturbance in any activity area within the 3 years preceding the assessment
- natural disturbances (including fire, flood, or drought) that materially affected the ecosystem condition in any activity area within the 10 years preceding the assessment.



Checklist for an SQP

Steps

Field survey was conducted at, or as close as practicable to, the optimal growth period.

Desktop-identified reference ecosystems have been validated or reassigned where necessary.

Establish permanent sampling plots for each activity area.

Canopy height was measured for each permanent sampling plot.

Point intercept method was completed for each permanent sampling plot.

Quadrat surveys were completed for each permanent sampling plot.

Plot survey method was completed for each permanent sampling plot.

Select the appropriate benchmark value from the approved benchmark source.
or
Establish a benchmark value in accordance with Schedule 2.

Checklist for an SQP or proponent

Steps	
Six photographs were taken for each permanent sampling plot.	
Natural regeneration data (species, age, abundance) was identified and recorded where present.	
Threats to the project were verified and refined on ground.	
Significant hydrological features were verified and refined on ground.	
Threatened species and threatened ecological communities were verified and refined on ground.	
Historic drivers of change were verified and refined on ground.	

Contact us

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