

# Carbon + Biodiversity Pilot

## Planting Protocol: Eyre Peninsula NRM Region (South Australia)



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# Acknowledgement of Country

We acknowledge the Traditional Owners of Country throughout Australia and their continuing connection to land, sea and community. We pay our respects to them and their cultures and to their elders past, present and emerging.

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# Introduction

This document details the eligibility, design, establishment and maintenance conditions that apply to environmental planting projects under the Carbon + Biodiversity Pilot Program (C+B Pilot). It is intended to complement the program guidelines available on the [C+B Pilot website](#).

The conditions that apply to projects in the Eyre Peninsula Natural Resource Management (NRM) region are contained in Tables 1-4 below in the third column, titled 'C+B Pilot conditions – Eyre Peninsula (SA)'. The conditions fall into two categories: mandatory (expressed in the tables as 'must') and recommended (expressed as 'should'). All projects must comply with the mandatory conditions. Compliance with the recommended conditions is not mandatory. Words and phrases in *italics* have defined meanings, which are provided below the first usage of the relevant word or phrase and in the Glossary below the tables.

Further advice on any of the conditions listed here can be obtained from the Department of Agriculture, Water and the Environment, at [agstewardship@awe.gov.au](mailto:agstewardship@awe.gov.au).

To assist proponents, relevant requirements that apply to environmental planting projects under the Emissions Reduction Fund (ERF) are provided in the second column, titled 'Emissions Reduction Fund requirements'. For more information on ERF eligibility visit the [Clean Energy Regulator's website](#). For information on the environmental plantings method under the ERF click [here](#). You can also contact the Clean Energy Regulator by email at [enquiries@cleanenergyregulator.gov.au](mailto:enquiries@cleanenergyregulator.gov.au) or by phone on 1300 553 542.

People interested in participating in the C+B Pilot should contact their regional NRM group for advice on the establishment and management of plantings. For the Eyre Peninsula, your NRM group is:

Landscape South Australia - Eyre Peninsula  
w: <https://landscape.sa.gov.au/ep/home>  
e: [EPLBAdmin@sa.gov.au](mailto:EPLBAdmin@sa.gov.au)  
ph: 08 8688 3111 (Port Lincoln) / 08 8625 3144 (Ceduna)

**Table 1. Eligibility conditions**

Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
Area	Must consist of more than a single row of plantings.	The aggregate area of <i>plantings</i> in a project <b>must</b> be between 5-200 hectares.
Newness and additionality	<ul style="list-style-type: none"> <li>The plantings <b>must</b> be new and planting <b>must</b> not commence until the project is registered under the ERF.</li> <li>The plantings <b>must</b> not be required to be carried out under a law of the Commonwealth, a State or a Territory.</li> <li>The project <b>must</b> not be used to meet a statutory obligation to offset the adverse impacts of another development.</li> </ul>	<p>No relevant eligibility conditions.</p> <p>*In applying to participate in the C+B Pilot, proponents <b>must</b> not include the cost of management actions that are required to be carried out under a law of the Commonwealth or a State or Territory, or are already funded under another Commonwealth, State, Territory or local government environment program.</p>
Land use history	<ul style="list-style-type: none"> <li>The planting area <b>must</b> have been clear of forest for at least 5 years.</li> <li>The planting area <b>must</b> not contain woody biomass or invasive native scrub that needs to be cleared in order for the planting to occur, other than a known weed species.</li> <li>The planting area <b>must</b> not have been previously illegally cleared of native forest, or have contained a wetland that was illegally drained.</li> <li>The planting area <b>must</b> not have been legally cleared of native forest, or have contained a wetland that was legally drained, within the previous 7 years (or 5 years if there has been a change of ownership).</li> </ul>	No relevant eligibility conditions.
Regulatory approvals	<p>Proponents <b>must</b> obtain all relevant regulatory approvals that are necessary to enable the project to be undertaken.</p> <p>Regulatory approvals are approvals required under a law of the Commonwealth, a State or a Territory relating to the environment, water or land use and development.</p>	<p>Projects <b>must</b> be able to be registered as an eligible offsets project under the ERF's <i>Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2014</i>.</p>
Consents from other parties	<p>Proponents <b>must</b> obtain the written consent of all eligible interest holders to the registration of the project under the ERF.</p> <p>Eligible interest holders are people who hold eligible interests in the land on which the project is located.</p> <p>Eligible interests cover a range of interests held in relation to land, including estates and other registered proprietary interests (e.g. leases,</p>	No relevant eligibility conditions.

Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
	easements and covenants), and mortgages and charges held over the land by a bank, financial institution or other party.	
NRM specific requirements	If the project area is covered by a regional NRM plan, the application for registration under the ERF <b>must</b> be accompanied by a statement about whether the project is consistent with the plan.	No relevant eligibility conditions.

**Table 2. Planting design conditions**

Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
Prohibited planting areas	See Table 1, Land use history.	<p><i>Plantings <b>must</b> not occur in:</i></p> <ul style="list-style-type: none"> <li>• areas that did not naturally support <i>trees</i> and <i>shrubs</i> (e.g. some wetlands, grasslands);</li> <li>• in ecological communities listed as threatened under relevant State, Territory or Commonwealth legislation (e.g. Natural Temperate Grassland); or</li> <li>• <i>utility easements</i>.</li> </ul> <p><i>Utility easements</i> are areas of land that utility providers are legally entitled to use and access for the purposes of providing utility services (e.g. electricity, gas, telecommunications and sewerage).</p>
Plant species composition	<p>Plantings <b>must</b> consist of a mixture of tree and shrub species that:</p> <ul style="list-style-type: none"> <li>• are native to the local area of the planting; and</li> <li>• are sourced from seeds from within the natural distribution of the species and are appropriate to the biophysical characteristics of the area of the planting.</li> </ul> <p>Plantings may be a mix of trees, shrubs, and understorey species that reflect the structure and composition of the local native vegetation community.</p>	<p><i>Plantings <b>must</b> be either a <i>local vegetation community planting</i><sup>^</sup> or a <i>simple mixed native planting</i>.</i></p> <p><i>A local vegetation community planting is a planting that:</i></p> <ul style="list-style-type: none"> <li>• as far as practical given the <i>planting density</i>, <i>tree proportion</i> and crown cover requirements, reflects the structure and composition of the relevant local vegetation community or communities*;</li> <li>• consists of at least two species of <i>trees</i> and six species of <i>shrubs</i> from that vegetation community or those communities.</li> </ul> <p><i>A simple mixed native planting is a planting that:</i></p> <ul style="list-style-type: none"> <li>• as far as practical given <i>planting density</i>, <i>tree proportion</i> and crown cover requirements, performs similar ecological functions to the relevant local vegetation community or communities and generates benefits for local native biodiversity; and</li> <li>• consists of at least two species of <i>trees</i> and six species of <i>shrubs</i> that are native to the local area.</li> </ul> <p><i>Plantings should consist of at least fifteen species if possible.</i></p> <p><sup>^</sup> <i>Local vegetation community plantings will receive higher <i>biodiversity benefit scores</i>, all else being equal.</i></p> <p><i>*See Appendix A and B for resources to assist in identification of relevant vegetation communities.</i></p>



Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
		<p><i>Trees</i> are woody plants that at maturity are generally more than 2m tall and either have a single <i>stem</i> with branches well above the base or, if multi-<i>stemmed</i> from the base (or within 20cm from ground level), their largest <i>stem</i> typically has a diameter greater than 5cm measured 130cm above the ground.</p> <p>A <i>stem</i> is the ascending axis of a plant and is generally the main structural component of the above-ground portion of <i>trees</i> and <i>shrubs</i>.</p> <p><i>Shrubs</i> are woody plants that are:</p> <ul style="list-style-type: none"> <li>generally less than 2m tall if single-<i>stemmed</i>; or</li> <li>if multi-<i>stemmed</i> from the base (or within 20cm from ground level), are generally less than 2m tall or, if more than 2m tall, their largest <i>stem</i> typically has a diameter less than 5cm measured 130cm above the ground.</li> </ul> <p><i>Plantings</i> should include <i>ground cover species</i> where possible. Ground cover <i>plantings</i> <b>must</b> reflect the structure and composition of the local vegetation community.</p> <p><i>Ground cover species</i> are herbaceous (non-woody) plants, including grasses and forbs.</p> <p>Proponents should consider the following with respect to species composition:</p> <ul style="list-style-type: none"> <li>drought resilience and the potential effects of climate change;*</li> <li>the availability of tubestock and seed from local nurseries and seed suppliers;</li> <li>that a diverse and dense mid-storey provides benefits for native birds; and</li> <li>that ground cover plants require effective control of introduced plant species to achieve high survival rates.</li> </ul> <p>*For further information on considering climate change in your <i>plantings</i> see the publication <i>Climate ready revegetation: A guide for natural resource managers</i> available on the <a href="#">web</a>.</p>
Stem density and tree proportion	<p>Plantings <b>must</b>:</p> <ul style="list-style-type: none"> <li>be no more than 5m apart, measured from stem-to-stem; and</li> </ul>	<p><i>Tree</i> and <i>shrub</i> <i>plantings</i> <b>must</b>:</p> <ul style="list-style-type: none"> <li>be no more than 5m apart, measured from stem-to-stem;</li> </ul>

Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
	<ul style="list-style-type: none"> <li>have a stocking density of at least 400 stems per hectare.</li> </ul> <p>*Stocking densities affect the way carbon stocks are modelled. Three model calibrations are available to estimate carbon stocks, which depend on the type of planting and stocking density:</p> <ul style="list-style-type: none"> <li>belt high (high calibration) – <b>must</b> be a belt planting with &gt;1500 stems per hectare;</li> <li>belt low (middle calibration) – <b>must</b> be a belt planting with between 400-1500 stems per hectare; and</li> <li>block (low calibration) – <b>must</b> be a block planting with ≥400 stems per hectare.</li> </ul>	<ul style="list-style-type: none"> <li>have a <i>stocking density</i> of at least 400 stems per hectare;</li> <li>have a <i>tree proportion</i> of between 50% and 70%;</li> <li>be planted such that each 0.2 hectare portion of the <i>planting area</i> has <i>forest potential</i>.</li> </ul> <p>To avoid doubt, <i>groundcover species</i> are not included in stem counts for these purposes.</p> <p><i>Tree proportion</i> means the proportion of individual live <i>trees</i> relative to the total of individual live <i>trees</i> and <i>shrubs</i> in a <i>planting</i>.</p> <p>A 0.2 hectare portion of a <i>planting area</i> has <i>forest potential</i> if the planted <i>trees</i> have the potential to reach 2m or more in height and provide crown cover of at least 20% of the portion.</p>
Dimensions of planting	<p>Plantings can be either belt or block plantings.</p> <ul style="list-style-type: none"> <li>Belt plantings are plantings in a belt configuration that are ≤40m wide, are at least 40m from the nearest other planting (stem-to-stem) and are not affected by material competition from adjacent trees.</li> <li>Block plantings are non-belt plantings, other than plantings consisting of a single row.</li> </ul>	<p>Individual <i>planting areas</i> <b>must</b> be at least 0.25 hectares (2500m<sup>2</sup>).</p> <p>The average width of <i>plantings</i> in a belt configuration <b>must</b> be at least 30m (stem-to-stem) on the short axis of the <i>planting</i>.</p>
Distance from other vegetation, including plantings	<p>The distance to other vegetation determines whether plantings are able to be modelled as belt plantings. Belt plantings <b>must</b> be at least 40m from the nearest other planting (stem-to-stem) and they <b>must</b> not be affected by material competition from adjacent trees. Adjacent trees are trees that lie within 20m of the stems of the closest project tree. There are rules for when adjacent trees are deemed to be causing material competition.</p>	No additional conditions.
Surrounding vegetation in the landscape	<p>No requirement.*</p> <p>*Proximity to other vegetation affects whether plantings meet the definition of belt plantings and can apply the belt calibrations when modelling abatement.</p>	No additional conditions.

Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
Fire risk	No requirement.	<p><i>Planting areas:</i></p> <ul style="list-style-type: none"> <li>• <b>must</b> not be within 50m of buildings used for residential or commercial purposes; and</li> <li>• should not be within 50m of any other buildings.</li> </ul>
Regulatory compliance	See Table 1, Regulatory approvals.	<i>Plantings must</i> be sited, established and managed in accordance with all applicable Commonwealth and State laws relating to planning, environment and heritage.
Workplace health and safety	No requirement.	Proponents should prepare a workplace health and safety plan for their project.
Cultural heritage	No requirement.	In siting, establishing and managing <i>plantings</i> , proponents should consider cultural heritage impacts and follow relevant Commonwealth, State and local guidelines concerning the protection and management of cultural heritage sites. Contact your regional NRM group for further information.

**Table 3. Establishment conditions**

Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
Establishment method	Plantings <b>must</b> be established using propagated seedling stock (tubestock) or direct seeding.	No additional conditions
Site preparation – weed control	Not specified.	Where weed control is carried out using herbicides, the herbicides <b>must</b> be applied in accordance with all applicable Commonwealth and State laws and the manufacturer's instructions.  Where significant perennial weeds (e.g. Lincoln Weed, Horehound) are found at a site, initial control should be undertaken during the summer prior to <i>planting</i> .
Site preparation – soil	Not specified.	Soil preparation <b>must</b> not be done by deep-ripping in <i>planting</i> areas with significant biodiversity or natural or cultural heritage values, including areas that contain remnant native vegetation, old native <i>trees</i> , patches of native grass or sites of Indigenous cultural significance.
Site preparation – total grazing pressure	Not specified.	All livestock grazing <b>must</b> be excluded until the <i>tree plantings</i> have become established (approximately 1.5m tall).  Grazing and other significant disturbance by vertebrate pests (e.g. mice, rabbits, goats, deer and pigs), invertebrate pests and overabundant native species (including kangaroos and wombats) should be managed where they present a threat to the establishment of the site.  Total grazing pressure, including from livestock, vertebrate pests and overabundant native species (including kangaroos and wombats) should be managed where they present a threat to the establishment of plants prior to and/or during <i>planting</i> or direct seeding, and be undertaken in a manner that is consistent with applicable Commonwealth, State and local government laws and guidelines.
Timing	Not specified.	<i>Plantings</i> should be undertaken as soon as possible after the first rainfall in Autumn, except for sites prone to waterlogging which should be in late winter/early spring.
Tree protection	No requirement.  *Where grazing or another event kills the plantings in ≥5% of the planting area, the proponent is required to notify the Clean	<i>Plantings</i> should be protected from livestock and other herbivores. If fencing is used: <ul style="list-style-type: none"> <li>the top strand of wire around <i>plantings</i> <b>must</b> not be barbed to</li> </ul>

Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
	Energy Regulator and take actions to mitigate the impacts of the disturbance. This may require the area to be replanted. Proponents will also be required to re-stratify the carbon estimation area.	<p>reduce the chance of wildlife entanglement; and</p> <ul style="list-style-type: none"> <li>it should be erected prior to <i>planting</i> or direct seeding.</li> </ul>
Watering	No requirement.	Proponents should consider watering <i>plantings</i> , particularly tubestock <i>plantings</i> , at the time of establishment.

**Table 4. Maintenance**

Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
Longevity	<ul style="list-style-type: none"> <li>Plantings <b>must</b> not be harvested other than for ecological purposes.</li> <li>Plantings <b>must</b> be maintained for a permanence period of either 25 or 100 years, which commences when the first ACCUs are issued to the project. Proponents get to choose whether to have a 25- or 100-year permanence period.</li> </ul>	<p>Plantings <b>must</b> be protected and maintained for the <i>C+B permanence period</i>.</p> <p>The <i>C+B permanence period</i> means the 25-year period commencing on the day the project is registered under the ERF.</p>
Remedial planting	<p>Replanting may be required if:</p> <ul style="list-style-type: none"> <li>an event kills the plantings in ≥5% of the planting area; or</li> <li>mortality results in stem densities falling below 400 stems per hectare.</li> </ul>	<p>Throughout the <i>C+B permanence period</i>, each 0.2 hectare portion of the <i>planting area</i> <b>must</b> have either <i>forest potential</i> or <i>forest cover</i>.</p> <p>Remedial <i>plantings</i> <b>must</b> be established in a <i>planting area</i> if mortality results in a 0.2 hectare portion of a <i>planting area</i> no longer having <i>forest potential</i> or <i>forest cover</i>.</p> <p>A 0.2 hectare portion of a <i>planting area</i> has <i>forest cover</i> if the planted <i>trees</i> are 2m or more in height and provide crown cover of at least 20% of the portion.</p> <p>Remedial <i>plantings</i> <b>must</b> be established in a <i>planting area</i> if:</p> <ul style="list-style-type: none"> <li>it was originally designed to reflect the structure and composition of the relevant local vegetation community or communities; and</li> <li>mortality results in the <i>planting</i> no longer reflecting the structure and composition of the relevant local vegetation community or communities.</li> </ul> <p>Remedial <i>plantings</i> <b>must</b> be established in a <i>planting area</i> if:</p> <ul style="list-style-type: none"> <li>it was originally designed to perform similar ecological functions to the relevant local vegetation community or communities and generate benefits for local native biodiversity; and</li> <li>mortality results in the <i>planting</i> no longer performing similar ecological functions to the relevant local vegetation community or communities and generating benefits for local native biodiversity.</li> </ul>
Fallen timber	Up to 10% of fallen timber can be used per calendar year for personal use. Fallen debris can be removed for fire protection.	All fallen timber <b>must</b> be left within the <i>planting</i> . Any fallen timber that is moved from firebreaks, access tracks or fences <b>must</b> be placed within the <i>planting area</i> .

Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
Thinning	Is permitted for ecological purposes, but may affect the method of carbon estimation that is used.	<p><i>Thinning</i> is not allowed, unless:</p> <ul style="list-style-type: none"> <li>the <i>planting</i> was originally designed to reflect the structure and composition of the relevant local vegetation community or communities and the <i>thinning</i> is necessary to ensure the <i>planting</i> achieves this objective; or</li> <li>the <i>planting</i> was originally designed to perform similar ecological functions to the relevant local vegetation community or communities and generate benefits for local native biodiversity and the <i>thinning</i> is necessary to ensure the <i>planting</i> achieves this objective; and</li> <li>approval is obtained from the Department of the Agriculture, Water and the Environment before the <i>thinning</i> commences.</li> </ul>
Total Grazing Pressure post-establishment	Livestock grazing is permitted if it does not affect forest cover.	<p>Total grazing pressure should be managed where necessary – and particularly in the first three years after <i>planting</i> – to protect the present and future biodiversity value of the site.</p> <p>Livestock grazing:</p> <ul style="list-style-type: none"> <li><b>must</b> not be undertaken until the <i>plantings</i> have become established (approximately 1.5m tall);</li> <li><b>must</b> be limited to pulse or crash grazing; and</li> <li><b>must</b> not be undertaken if it has a material adverse impact on the survival of the <i>plantings</i>.</li> </ul> <p>Management of overabundant native vertebrate species (including kangaroos and wombats) should be undertaken only where they present a threat to the establishment and future biodiversity value of the site. Where possible, preventative control measures (e.g. fencing and guards) should be prioritised over lethal control.</p> <p>All vertebrate pest and overabundant native vertebrate species management <b>must</b> be undertaken consistent with applicable Commonwealth, State and local laws and guidelines.</p> <p>Fences and other <i>tree</i> protection measures should be well maintained to ensure the exclusion of livestock and other overabundant native vertebrates.</p>

Consideration	Emissions Reduction Fund requirements	C+B Pilot conditions – Eyre Peninsula (SA)
Invertebrate pest control	No requirement.	Invertebrate pests should be managed where necessary to protect the present and future biodiversity value of the site. Where pest control is carried out using pesticides, the pesticides <b>must</b> be applied in accordance with all applicable Commonwealth and State laws and the manufacturer's instructions.
Fire	No requirement. Prescribed burning is permitted but the greenhouse gas emissions from these burns <b>must</b> be accounted for and if it kills the plantings, steps <b>must</b> be taken to mitigate the impacts (this may include replanting).	Prescribed burning is permitted but the greenhouse gas emissions from these burns <b>must</b> be accounted for and if it kills the <i>plantings</i> , steps <b>must</b> be taken to mitigate the impacts (this may include replanting).
Watering		Proponents should consider watering <i>plantings</i> , particularly tubestock <i>plantings</i> , during the first summer after <i>planting</i> if there is inadequate rainfall.
Ongoing consistency with NRM plans	If a registered ERF project is changed and, as a consequence, it becomes inconsistent with an applicable regional NRM plan, the proponent <b>must</b> notify the Clean Energy Regulator within 90 days.	No additional conditions.



# References

*Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2014* (Cth)  
<https://www.legislation.gov.au/Details/F2018C00118>.

Department of Environment Regulation. 2016. A Guide to Preparing Revegetation Plans for Clearing Permits. Government of Western Australia.

Department of Sustainability and Environment 2006. Revegetation planting standards – Guidelines for establishing native vegetation for net gain accounting. Victorian Government, Department of Sustainability and Environment, East Melbourne.

Greening Australia. Undated. A Revegetation Guide for Temperate Riparian Lands. Department of Sustainability, Environment, Water, Population and Communities and Landcare Australia.

Hancock, N., Harris, R., Broadhurst, L. and Hughes, L. 2018. Climate-ready revegetation. A guide for natural resource managers. Version 2. Macquarie University, Sydney.

Lindenmayer, D.B. 2018. Ten lessons in 20 years: Insights from monitoring fauna and temperate woodland revegetation. *Ecological Management and Restoration*, 19(S1): 36-43.

Lindenmayer, D.B., Knight, E.J., Crane, M.J., Montague-Drake, R., Michael, D.R., MacGregor, C.I. 2010. What makes a good restoration planting for woodland birds? *Biological Conservation*, 143:289-301.

Lindenmayer, D.B., Blanchard, W., Crane, M., Michael, D., Sato, C. 2018. Biodiversity benefits of vegetation restoration are undermined by livestock grazing. *Restoration Ecology*, 26(6): 1156-1164.

Munro, N.T., Lindenmayer, D.B., Fischer, J. 2007. Faunal response to revegetation in agricultural areas of Australia: A review. *Ecological Management & Restoration* 8(3): 199-207.

NESP Threatened Species Recovery Hub. 2021. What makes an effective planting for supporting biodiversity on farms? How-to Guide. National Environmental Science Program.

NSW Biodiversity Conservation Trust. 2019. Restoring Native Vegetation. Guidelines for Assisted Regeneration and Revegetation. NSW Government.

Vegetation Matters. 2014. North Burnett Riparian Revegetation Guidelines. Burnett Catchment Care Association.

# Glossary

## Defined terms under the C+B Pilot

**C+B permanence period** means the 25-year period commencing on the day the project is registered under the ERF.

**ERF** means the Emissions Reduction Fund. The Emissions Reduction Fund is a voluntary offset certification scheme established under the *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth).

**Forest cover**—in relation to the C+B Pilot, a 0.2 hectare portion of a planting area has forest cover if the planted trees are 2m or more in height and provide crown cover of at least 20% of the portion.

**Forest potential**—in relation to the C+B Pilot, a 0.2 hectare portion of a planting area has forest potential if the planted trees have the potential to reach 2m or more in height and provide crown cover of at least 20% of the portion.

**Ground cover species** means species of herbaceous (non-woody) plants, including grasses and forbs.

**Local vegetation community planting** means a planting that:

- as far as practical given the planting density, tree proportion and crown cover requirements, reflects the structure and composition of the relevant local vegetation community or communities; and
- meets the minimum local tree and shrub species requirements outlined in Table 2.

**Planting** means:

- (a) as a verb, to put or set in the ground tree, shrub and (where relevant) ground cover species using propagated seedling stock or direct seeding; and
- (b) as a noun, an area of trees, shrubs and (where relevant) ground cover species established using propagated seedling stock or direct seeding.

**Planting area** means the area of land on which plantings are established under the C+B Pilot in accordance with the requirements of the Planting Protocol.

**Stocking density** means the number of live individual trees or shrubs per hectare in a planting area.

**Shrub** means a species of woody plant that:

- is generally less than 2m tall if single-stemmed; or
- if multi-stemmed from the base (or within 20cm from ground level), is generally less than 2m tall or, if more than 2m tall, its largest stem typically has a diameter less than 5cm measured 130cm above the ground.

**Simple mixed native planting** means is a planting that:

- as far as practical given planting density, tree proportion and crown cover requirements, performs similar ecological functions to the relevant local vegetation community or communities and generates benefits for local native biodiversity; and
- meets the minimum local tree and shrub species requirements outlined in Table 2.

**Stem**, in relation to the C+B Pilot, means the ascending axis of a plant and is generally the main structural component of the above-ground portion of trees and shrubs.

**Thinning** means the selective removal of trees or shrubs for any purpose.

**Tree**, in relation to the C+B Pilot, means a species of woody plant that at maturity is generally more than 2m tall and either has a single stem with branches well above the base or, if multi-stemmed from the base (or within 20cm from ground level), its largest stem typically has a diameter greater than 5cm measured 130cm above the ground.

**Tree proportion** means the proportion of individual live trees relative to the total of individual live trees and shrubs in a planting.

**Utility easement** means an area of land that utility providers are legally entitled to use and access for the purposes of providing utility services (e.g. electricity, gas, telecommunications and sewerage).

## Summary of key defined terms relevant to the ERF Environmental Plantings Method

*Set out below is a summary of key terms and phrases that are used in, or in relation to, the ERF's Environmental Plantings Method. Where only a summary is provided, references are provided to the statutory instrument(s) where the full definition can be obtained. Readers should note that terms and phrases that are defined under the ERF do not necessarily have the same meaning under the C+B Pilot. Key terms and phrases that have different meanings under the C+B Pilot are marked below with an asterisk (\*).*

**Belt plantings** are plantings in a belt configuration that are at least 40m wide, are at least 40m from the nearest other planting (stem-to-stem) and are not affected by material competition from adjacent trees. For the full definition, see *Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2014*.

**Block plantings** are non-belt plantings, other than plantings consisting of a single row. For the full definition, see *Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2014*.

**Eligible interest**, in relation to an offset project under the ERF, refers to a range of interests held in relation to land, including estates and other registered proprietary interests (e.g. leases, easements and covenants), and mortgages and charges held over the land by a bank, financial institution or other party. For the full definition, see sections 43, 44, 45 and 45A of the [\*Carbon Credits \(Carbon Farming Initiative\) Act 2011\*](#) (Cth).

**Eligible interest holder**, in relation to an offset project under the ERF, means a person who holds an eligible interest in the land on which the project is located.

**Forest** means land of a minimum area of 0.2 of a hectare on which trees:

- (a) have attained, or have the potential to attain, a crown cover of at least 20% across the area of land; and
- (b) have reached, or have the potential to reach, a height of at least 2 metres.

**Forest cover\***—land has **forest cover** if the vegetation on the land includes trees that:

- (a) are 2 metres or more in height; and
- (b) provide crown cover of at least 20% of the land.

**Forest potential\***—land has **forest potential** if:

- (a) the land has an area of at least 0.2 hectares; and
- (b) the vegetation on the land includes trees that have the potential:
  - (i) to reach 2 metres or more in height; and
  - (ii) to provide crown cover of at least 20% of the land.

**FullCAM** means the Full Carbon Accounting Model, a calculation tool used by the Australian Government to model Australia's greenhouse gas emissions from the land

sector and to model emissions and removals from vegetation projects under the ERF. For further information, see [here](#).

**Planting** means:

- (a) as a verb, to put or set in the ground species that are eligible under the *Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2014* using:
  - (i) propagated seedling stock; or
  - (ii) direct seeding, including in rows or broadcast;for the purposes of growing project trees;
- (b) as a noun, an area of project trees established using direct seeding or propagated seedling stock.

**Regulatory approval**, in relation to an offset project under the ERF, means an approval, licence or permit (however described) that:

- (a) relates to, or to an element of, the project; and
- (b) is required under a law of the Commonwealth, a State or Territory that relates to:
  - (i) land use or development; or
  - (ii) the environment; or
  - (iii) water.

**Shrub\*** means a perennial plant that has primary supporting structures consisting of secondary xylem and that does not have, or have the potential for its stem diameter to be measured at breast height (DBH), where DBH is defined as 130 centimetres in height.

**Stem** means the ascending axis of a plant and the main structural component of the above-ground portion of trees and shrubs.

**Stocking density\*** means the number of live individual trees or shrubs per hectare in a carbon estimation area and/or the number of live individual seedlings or seeds per hectare at establishment.

**Tree\*** means a perennial plant that has primary supporting structures consisting of secondary xylem and that has, or has the potential to for its stem diameter to be measured at 130 centimetres height (i.e. DBH).

**Tree proportion** means the proportion of individual live trees relative to the total of individual live trees and shrubs in a mixed-species environmental planting.

# Appendix A: Guidance in identifying the relevant local vegetation communities for your planting

This Appendix sets out some sources for information on natural vegetation in your region. The sources selected are generally the most up to date, which are accessible online. It is not a comprehensive list, and most parts of Australia are covered by numerous published guides and studies that can also help with plant species selection, particularly for simple mixed native plantings. Sources of native plants and seeds, such as nurseries, can also help, as can your local Natural Resource Management body or Landcare group.

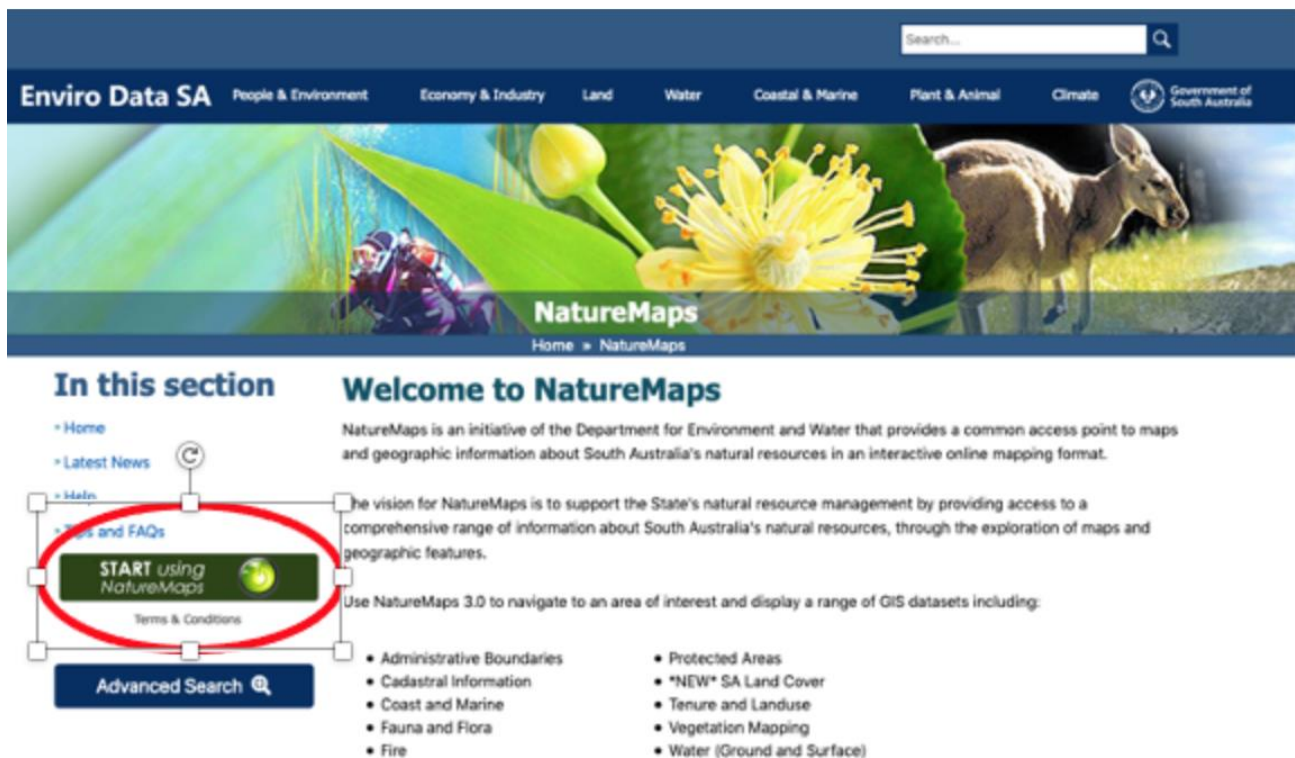
If you have confidence in your understanding of the natural vegetation across your planting areas you may not need more information to decide on an appropriate species mix. For example, if there are enough paddock trees or roadside patches and other reminders of the native vegetation you might have enough to design a local vegetation community planting that closely reflects local ecosystems.

But even if you know your local plants, the data described here, plus other local sources, should be consulted to confirm natural combinations of species in your region, and confirm the scientific names and natural range for species you might know best by a common name. The [Atlas of Living Australia](#) is a valuable national resource for biodiversity information.

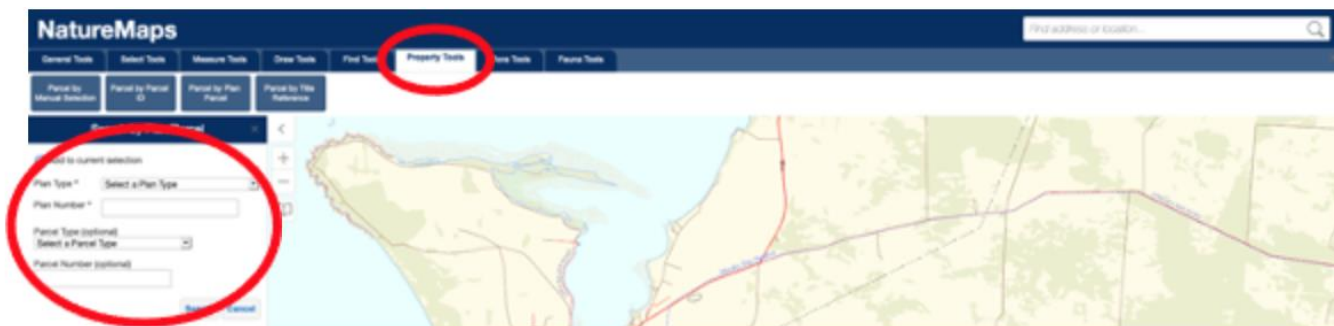
Below you will find guidance on using the South Australian government's "NatureMaps". This initiative of the Department for Environment and Water that provides a common access point to South Australia's natural resource maps including vegetation communities, and can be used to identify the vegetation associations relevant to your property.

To access vegetation mapping:

1. Go to <https://data.environment.sa.gov.au/NatureMaps/Pages/default.aspx> and click on "Start using NatureMaps".

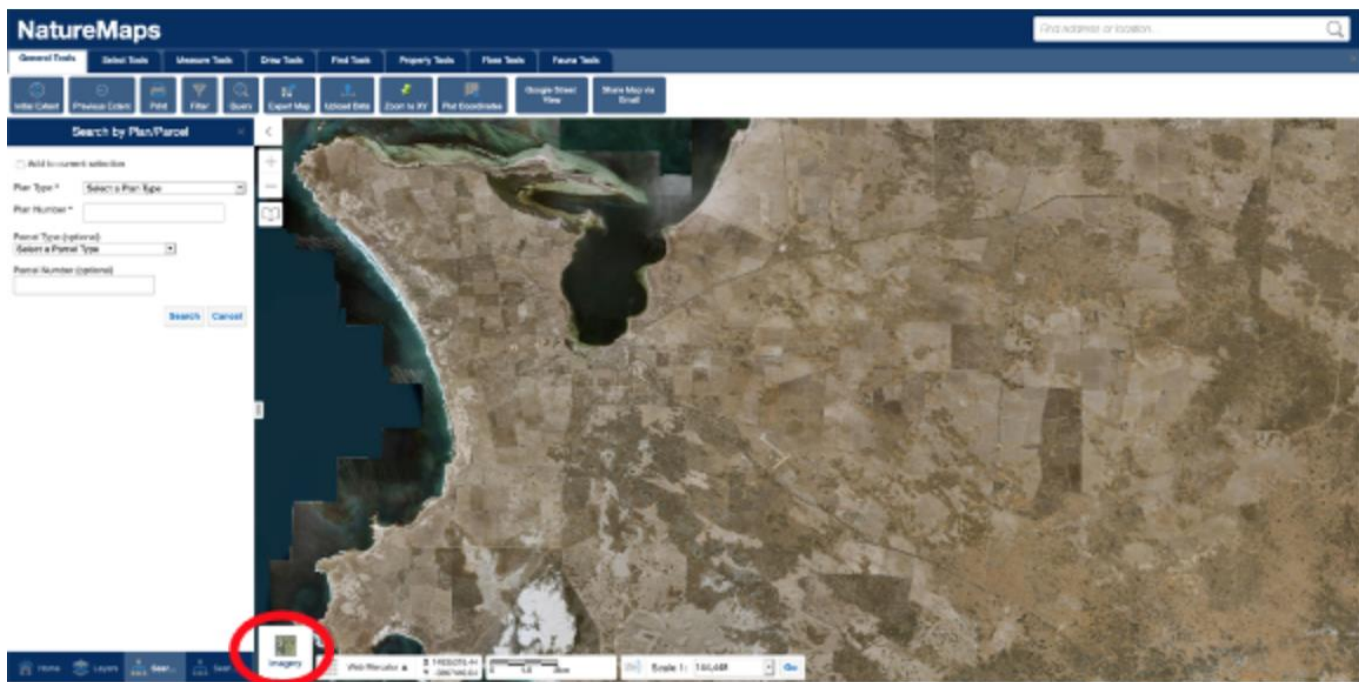


2. Use the map controls to locate your planting area(s).
3. By clicking on the 'Property Tools' tab at the top of the map, you can also enter an address or lot and plan number to find your property quickly.

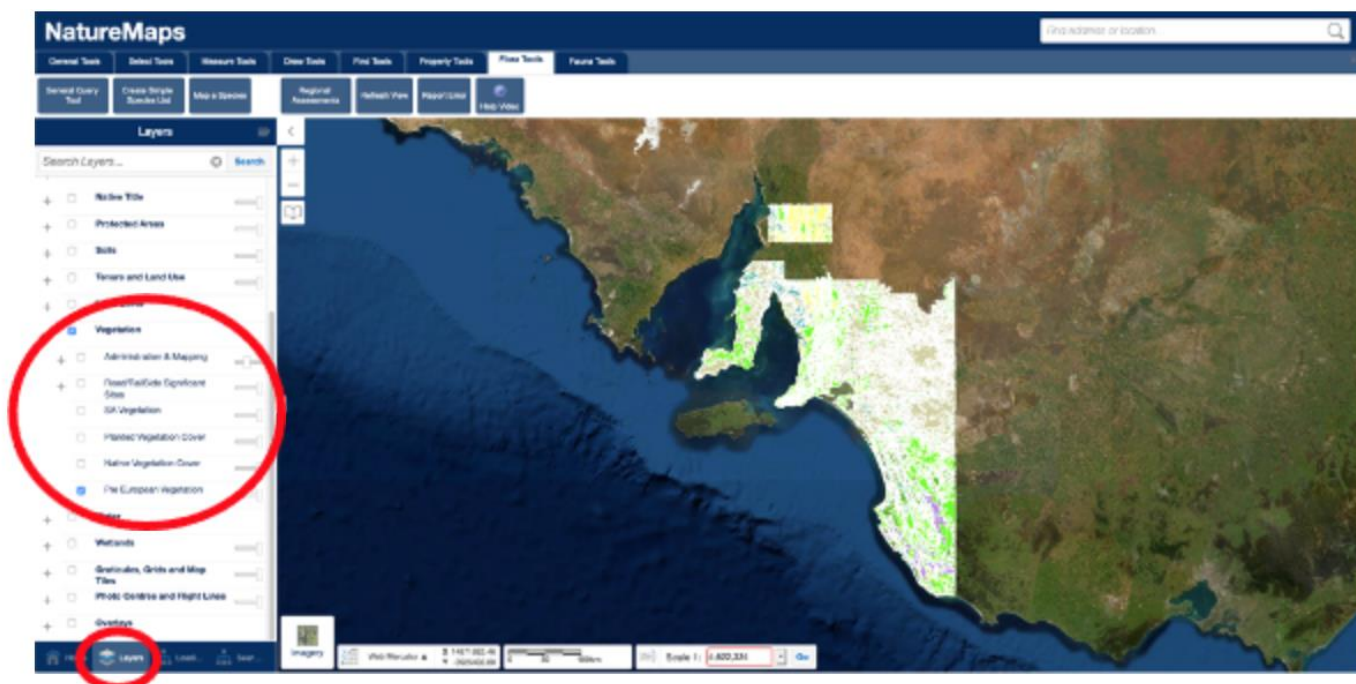


4. An aerial photo base map can be selected at the bottom left of the map labelled as 'Imagery'.





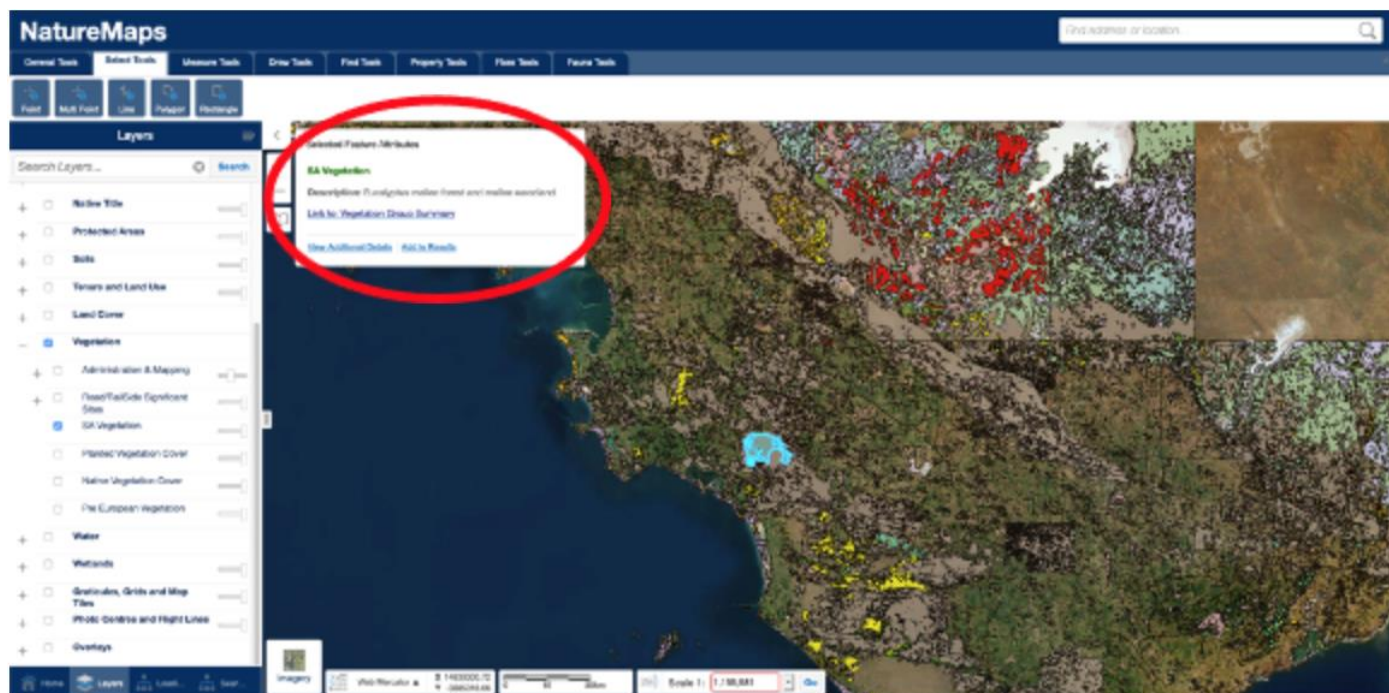
5. To add vegetation layers to the map, select 'Layers' at the bottom left of the screen and expand the 'Vegetation' subheading. A layer of Pre-European vegetation is present, but coverage is limited to part of the state.



6. The 'SA Vegetation' layer provides maps of the current extents of native vegetation communities. By clicking on the nearest community to your proposed planting area, a pop-up box will provide the identity of that vegetation community. In the example below – the vegetation patch (highlighted in bright blue) is *Eucalyptus mallee* and mallee woodland. By clicking on the 'Link to: Vegetation Group Summary' in the popup box,



species lists for the vegetation groups in that patch will open in a new tab in your browser.



### Vegetation Group Summary

#### First Vegetation Group in Patch

<b>Vegetation Group Code:</b> EP2004
<b>Structural Formation Description (NVIS Level 2):</b> (nvsi structural formation table) mid mallee woodland
<b>Sub-Formation Description (NVIS Level 4):</b> (dominant genus/genera of dominant species and the equivalent structural formation description for each stratum described for vegetation group) +Eucalyptus (mixed) mid mallee woodland\Melaleuca (mixed) shrub\Acrotriche (mixed) shrub
<b>Sub-Association Description (NVIS Level 6):</b> (species, growth form, height, cover information for each stratum for vegetation group) U1+ ^^Eucalyptus diversifolia ssp. diversifolia,Eucalyptus leptophylla\^tree mallee\6\i;M1 ^^Melaleuca uncinata,Melaleuca lanceolata+/-Melaleuca acuminata ssp. acuminata\^shrub\3\unknown;G1 ^^Acrotriche patula,Dodonaea hexandra+/-Triodia irritans\^shrub,hummock grass\1\unknown
<b>SA Vegetation Description:</b> (description of species and structure for each stratum for vegetation group) Eucalyptus diversifolia ssp. diversifolia, Eucalyptus leptophylla mid mallee woodland over Melaleuca uncinata, Melaleuca lanceolata, +/-Melaleuca acuminata ssp. acuminata mid shrubs over Acrotriche patula, Dodonaea hexandra, +/-Triodia irritans low shrubs
<b>Environmental Description :</b> Plains; outcropping calcrete and calcareous surface strew

#### Second Vegetation Group in Patch

<b>Vegetation Group Code:</b> EP2202
<b>Structural Formation Description (NVIS Level 2):</b> (nvsi structural formation table) mid mallee woodland
<b>Sub-Formation Description (NVIS Level 4):</b> (dominant genus/genera of dominant species and the equivalent structural formation description for each stratum described for vegetation group) +Eucalyptus (mixed) mid mallee woodland\Melaleuca (mixed) shrub\Triodia hummock grass
<b>Sub-Association Description (NVIS Level 6):</b> (species, growth form, height, cover information for each stratum for vegetation group) U1+ ^^Eucalyptus leptophylla+/-Eucalyptus dumosa\^tree mallee\6\i;M1 ^^Melaleuca lanceolata+/-Melaleuca acuminata ssp. acuminata\^shrub\4\unknown;G1 +/-^Triodia irritans\^hummock grass\1\unknown
<b>SA Vegetation Description:</b> (description of species and structure for each stratum for vegetation group)
<b>Environmental Description :</b> Various landforms; sandy/loamy soils, calcareous and lateritic strew recorded

# Questions and feedback

Any questions or feedback about this document should be sent to [agstewardship@awe.gov.au](mailto:agstewardship@awe.gov.au) or you can contact the [Department of Agriculture, Water and the Environment](#) on 1800 329 055.